Department of Medicine

ANNUAL REPORT
July 1, 2019 – June 30, 2020

Submitted by:
Polly E. Parsons, MD
E.L. Amidon Chair and Professor
Department of Medicine

Date: September 30, 2020
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair’s Executive Summary</td>
<td>3</td>
</tr>
<tr>
<td>Department of Medicine Standing Committees</td>
<td>6</td>
</tr>
<tr>
<td>Medical Service – UVMMC Practice Sites</td>
<td>17</td>
</tr>
<tr>
<td>Department of Medicine Arrived Clinic Visits</td>
<td>17</td>
</tr>
<tr>
<td>Graduate Medical Education</td>
<td>20</td>
</tr>
<tr>
<td>Cardiovascular Division</td>
<td>28</td>
</tr>
<tr>
<td>Dermatology Division</td>
<td>46</td>
</tr>
<tr>
<td>Endocrinology Division</td>
<td>52</td>
</tr>
<tr>
<td>Gastroenterology &amp; Hepatology Division</td>
<td>61</td>
</tr>
<tr>
<td>General Internal Medicine</td>
<td>67</td>
</tr>
<tr>
<td>Geriatric Medicine Division</td>
<td>74</td>
</tr>
<tr>
<td>Hematology/Oncology Division</td>
<td>77</td>
</tr>
<tr>
<td>Hospital Medicine Division</td>
<td>103</td>
</tr>
<tr>
<td>Immunobiology Division</td>
<td>111</td>
</tr>
<tr>
<td>Infectious Diseases Division</td>
<td>119</td>
</tr>
<tr>
<td>Nephrology Division</td>
<td>133</td>
</tr>
<tr>
<td>Pulmonary and Critical Care Medicine Division</td>
<td>141</td>
</tr>
<tr>
<td>Rheumatology and Clinical Immunology Division</td>
<td>163</td>
</tr>
<tr>
<td>Research Funding</td>
<td>168</td>
</tr>
</tbody>
</table>
Department of Medicine
Annual Report 2019-2020

Chair’s Executive Summary

The Department of Medicine had another incredible and challenging year: We faced the COVID epidemic and the challenges it brought to all aspects of our lives. The creativity, resilience and commitment of the entire department as we continue to face the challenge is truly remarkable. Within days faculty and staff transformed clinical care, education and research and we continued to celebrate the numerous achievements and recognition awards of our faculty, staff and housestaff.

We welcomed 26 faculty over the past year (July 1, 2019-June 30, 2020), with an additional eight faculty already hired to start later in 2020 and early 2021. These faculty have joined the divisions of Cardiology, Dermatology, Endocrinology, General Internal Medicine, Geriatrics, Hematology Oncology, Hospital Medicine, Pulmonary & Critical Care Medicine, and Rheumatology and are working not only at UVMMC but also in our network affiliate sites. Across the department telemedicine was rapidly incorporated into practice to provide care. The pandemic impact on skilled nursing facilities was profound and our Geriatrics division with support from their colleagues in GIM provided extraordinary compassionate care to their patients in those settings. In the Spring a new clinic was opened for our General Internal Medicine practice in Essex, VT and over the year, as the number of medicine in-patient beds increased, the Hospital Medicine division expanded and stretched to accommodate the sustained high inpatient census.

Education is a core mission for the department. Faculty continue to teach and mentor in innovative new programs at UVM as well as at our affiliate sites. To further enhance and integrate our education mission, the Education Council, chaired by Kathryn Huggett, PhD., met monthly to review education topics, issues, and initiatives. Faculty continue to be highly engaged in the Teaching Academy: Dr. Amanda Kennedy was recognized as a Distinguished Educator, and Drs. Kelsey Donovan, Eric Ganguly, Emily Hadley-Strout, Jennifer Kelly and Tina Thornton were all inducted as members. Three faculty, Drs. David Chen, E. Rosy Hill and Macaulay Onuigbo completed the 2018-19 Teacher Academy Medical Education Fellowship Program. In recognition of their substantial contributions to education, The Larner College of Medicine Class of 2019 honored Drs. Josh Farkas and David Kaminsky with the Alpha Omega Alpha Honor Society Faculty Award and Drs. Florian Foerg and David Rand with the Clinical Teacher of the Year Award. Dr. Tania Bertsch received the 2019 Frederick Morin Educational Leadership Award and Dr. Richard Pinckney received the CMIE Educator of the Year, 2018-2019: The Department E. L. Amidon recipient was Dr. Andrew Hale and the Mark A. Levine MD Award recipient was Dr. Mohit Jindal. Dr. Patricia King won the Curriculum Innovation Award from the Class of 2022.

The Department continues to be a nationally/internationally recognized leader in research with contributions to new scientific knowledge. The breadth and depth of research throughout our divisions continues to be a testament to our talented investigators. Key grant awards include: Dr. Halle Sobel’s project entitled “Increasing the Pipeline of MAT Prescribers: DATA Waiver Training for All Vermont Medical Students at The Larner College of Medicine”; Dr. Daniel Weiss’s project entitled, “Clinical Development of a Novel Pleural and Tracheal Sealant”; Dr. Ralph Budd’s project entitled “Ligands for Human Synovial Gamma/Delta T Cells”; and Dr. Katharine Cheung’s project entitled “A Randomized Clinical Trial of a Communication Tool to Improve Access to Palliative Care for Patients with End-stage Renal Disease”. Faculty submitted a record number of grant applications this year including twenty-four COVID-19 related proposals since the on-set of the pandemic.
In recognition of their contributions to research Dr. Neil Zakai received the Dean’s Excellence in Research Award (Mid-Career Investigator); Dr. Matthew Poynter received the Dean’s Excellence in Research Award for Research Mentorship; Dr. C. Matthew Kinsey was named the UVMHNMG Junior Researcher of the Year; Dr. Renee Stapleton was named the UVMHNMG Senior Researcher of the Year; and Dr. Timothy Plante received the Bloomfield Early Career Professorship in Cardiovascular Research. Members of our faculty received new patents and licenses and are the founders of start-ups.

In aggregate, members of the department including students, residents, fellows (MD and PhD) published in high impact journals, as detailed within this report. They were asked to lead and serve on NIH study sections and advisory councils, FDA review panels and editorial boards. They were invited from around the world to present at scientific meetings and to be visiting professors, and they were elected to leadership in national societies. They also received significant recognition from their national and international colleagues: Dr. Glenn Goldman was elected as president of the American College of Mohs Surgery; Dr. Halle Sobel was elected as President, New England Chapter of Society of General Internal Medicine; and Dr. Anne Dixon received the Distinguished Achievement Award from the American Thoracic Society.

For their overall contributions, Dr. Jennifer Gilwee was inaugural winner of the LCOM Dean’s Faculty Award for Professionalism and Dr. Glenn Goldman inducted as the inaugural Rogers and Nancy Follansbee Professor of Medicine. It is impossible to list all of the significant contributions of all of our faculty, trainees, students and staff but they can be found throughout this report. Without the incredible dedication, expertise and excellence of our entire department we could not succeed.

Physician Leader and Chair            Polly E. Parsons, MD
Vice Chairs                           Kathryn Huggett, MD
                                          Charles Irvin, PhD
                                          Benjamin Suratt, MD
                                          Allen Repp, MD
Director                              Allen Mead
Director, GIM & Geriatrics            Tammy Stockton, RN
Director, Hematology/Oncology         Jake Hammond
Supervisor, Med Ops Support Svcs.     Laurie St.Gelais
Financial Administrator              Jessica Hendela
Grants Manager                        Tina Mazuzan
Financial Associate                  Marlene Frank
HR Administrator                     Bridget Tully
Staff Assistant                      Lisa Pitrowiski

Department of Medicine, University of Vermont Division Chiefs
R. Budd, MD, Immunobiology
B. Libman, MD, Rheumatology
W. Kemper Alston, MD, Infectious Diseases
G. Goldman, MD, Dermatology
J. Schnure, MD, Endocrinology, Metabolism, & Diabetes
B. Littenberg, MD, General Internal Medicine Research
J. Gilwee, MD, General Internal Medicine & Geriatrics
C. Holmes, MD, Interim, Hematology/Oncology
A. Dixon, MD, Pulmonary and Critical Care Medicine
D. Schneider, MD, Cardiovascular
R. Solomon, MD, Nephrology
R. Zubarak, MD, Gastroenterology
Total faculty: 221
By rank –
Assistant Professors: 112
Associate Professors: 48
Professors: 53
Clinical Practice Physicians: 6
Faculty Scientists: 2

By gender – 97 female; 124 male
By track –  Tenured: 25
Research Scholar Pathway: 5
Tenure Pathway: 12
Clinical Scholar Pathway: 164
Education Scholar Pathway: 7
Clinical Practice Physician – 6
Faculty Scientist: 2

Faculty Actions:
FALL 2019 – Ten (10) promotions; 8 annual review reappointments
SPRING 2020 – 32 full reappointments; 5 annual review reappointments; 10 volunteer pathway faculty reappointments.

Promotions (7/1/20):

Dennis Beatty – to Associate Prof. CSP
Narandra Bethina – to Associate Prof. CSP
Eric Ganguly – to Professor, CSP
Jennifer Gilwee – to Associate Prof. CSP
Todd Holmes – to Professor, CSP
Amanda Kennedy – to Professor, Edu
Prema Menon – to Associate Prof, CSP
Cindy Noyes – to Associate Prof. CSP
Kristen Pierce – to Professor, CSP
Marios Prikis – to Associate Prof, CSP
Department of Medicine – Standing Committees

**Medicine Credentials Committee – updated**

G. Goldman, Chair  
A. Dixon, MD  
M. Lazarovich, MD  
B. Libman, MD  
S. Mills, MD  
K. Pierce, MD  
S. Reddy, MD  
H. Rehman, MD  
D. Schneider, MD  
J. Schnure, MD  
R. Solomon, MD

Committee Mission:  
The mission of the Medicine Credentials committee is two-fold. First, the committee is charged with maintaining an up to date policy and procedure / rules and regulations for the Medicine Health Care Service. Second, the committee is charged with ensuring that faculty receive appropriate initial and ongoing performance evaluations to assist the medical staff office with credentialing.

**Quality Assurance Committee – Cardiac Catheterization Laboratory – updated**

P. Gogo, Chair  
H. Dauerman  
K. Carey  
E. Terrien  
S. Willis (Beausoleil)

Committee Mission:  
The purpose of the committee is to ensure high quality in the processes of care of the cath lab to ensure excellent outcomes. Some goals are to eliminate outliers, reduce variation, and enhance performance. The QA monthly meeting provides rapid turnover feedback mechanisms. The committee is committed to educational opportunities for the staff and incorporating practice standards and guidelines into the laboratory operation. Internal, regional, and national comparative data is included that address cognitive knowledge, procedural skill, clinical judgment, and procedural outcomes.
Fellowship Directors Education Committee – updated
D. Kaminsky, Chair
F. Keating
N. Ferrentino
G. Garrison
M. Gilbert
P. Gogo
B. Libman
M. Pasanen
K. Pierce
P. Spector
W. Weise
J. Sprague

Committee Mission:
The primary mission of the Fellowship Directors’ Education Committee is to provide a forum and improve the training, education and overall experience for all Fellows throughout the UVMMC and to support, and develop the potential of each Fellow; in doing so, the Fellows will become an asset to the medical community providing outstanding care and contributions.

Resident Research Committee – updated
A. Kennedy, Chair
K. Cheung
D. Kaminsky
C. Lyon
M. Pasanen
R. Pinckney
J. Sprague
D. Weiss
N. Zakai

Committee Mission:
Responsibilities of the Committee are, in general, to provide guidance and resources for residents and fellows, along with their mentors, performing scholarly research projects. More specifically, the Committee has the following duties:

1) Explain the research project process to new R2s at their annual R2 retreat in July
2) Conduct R2 Research Evenings every fall, where each R2 and their mentor present their project to the Committee to ensure feasibility and receive any pertinent advice/feedback
3) Review residents’ proposals for travel to national meetings to present abstracts that have been accepted, so that limited travel funds can be awarded
4) Serve on a discussion panel for medical students interested in research
5) Review R3 and fellow abstracts every spring to select the abstracts that will be presented orally and via poster on Resident Research Day and Fellow Research Day
6) Select winners of the R3 research (Harriet Dustan) and mentor awards annually for presentation at the resident graduation dinner
Clinical Competency Committee – updated

H. Sobel, Chair
J. Bartsch
R. Clouser
S. Eldakar-Hein
C. Farnham
R. Murat
E. Ganguly
F. Keating
K. Parker
M. Pasanen
J. Powelson
D. Rand
E. Wahlberg
K. Wahlberg

Committee Mission:
The mission of the Clinical Competency Committee is to ensure that the graduates of our training program have the necessary knowledge, skills and attitudes to provide excellent patient care and to promote quality and improvement in the health care system. The Clinical Competency Committee meets a minimum of twice yearly to assess resident progress towards independent practice using the Milestones as a platform. This committee is responsible for issues pertaining to resident promotion, remediation and dismissal. The committee is also responsible for preparing a complete summative evaluation report, based on a review of all available evaluations, for each resident semi-annually.

Housestaff Selection Committee – updated
Shaden Eldakar-Hein, MD - Chair
M. Antkowiak
J. Bartsch
L. Burgess
M. Degirmenci
F. Foerg
E. Ganguly
G. Garrison
M. Gilbert
S. Grant
A. Hale
N. Hodde
W. Hopkins
D. Kaminsky
C. Lyon
R. McEntee
P. Menon
C. Noyes
M. Pasanen
Committee Mission:
The Housestaff Selection Committee is responsible for the recruitment of Internal Medicine Residents. This includes a careful review of applications from candidates, interviews of the invited candidates and, finally the compilation of the rank list for Match Day. As we receive over 1300 applications for residency, and interview over 200 applicants, this committee serves a critical role in the success of the residency.

Program Evaluation Committee – updated

M. Pasanen, MD - Chair
J. Powelson (Chief Resident)
E. Wahlberg, MD (Chief Resident)
K. Wahlbert (Chief Resident)
S. Wayne, MD
A. Kumar, MD
M. Antkowiak, MD
S. Khan, MD
B. Depo, MD
D. Correa De Sa, MD
E. Strout, MD
S. Eldakar-Hein, MD
A. Hale, MD
E. Riser, MD
M. Barry, MD
J. Bartsch, MD
E. Ganguly, MD
R. McEntee, MD
H. Sobel, MD
R. Murat – Program Administrator
C. Farnham – Program Administrator

Committee Mission:
The Program Evaluation Committee meets 1–2 times per month. This committee actively participates in planning, developing, implementing and evaluating all educational activities of the program. This includes reviewing and making recommendations for revision of competency-based curriculum goals and objectives. It also includes addressing areas of noncompliance with ACGME standards and reviewing the program annually using the evaluations of faculty, residents and others. This culminates in an annual report which summarizes a systematic evaluation of the curriculum and renders the official written Annual Program Evaluation.

Quality Assurance Committee – Medicine Health Care Service – updated
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Allen Repp, MD</td>
<td>Committee Chair</td>
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<tr>
<td>Allen Mead, MHSA</td>
<td>Administration</td>
</tr>
<tr>
<td>Pam Stevens, RN, MSN</td>
<td>Jeffords Institute for Quality</td>
</tr>
<tr>
<td>Amanda Kennedy, PharmD</td>
<td>Dept. of Medicine Quality Scholar</td>
</tr>
<tr>
<td>Stephen DeVo, MPH, MS</td>
<td>Dept. of Medicine Quality Program Project Director</td>
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<tr>
<td>Peter VanBuren, MD</td>
<td>Cardiovascular Medicine</td>
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<tr>
<td>Melanie Bui, MD, PhD</td>
<td>Dermatology</td>
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<tr>
<td>Juan Pablo Perdomo Rodriguez, MD</td>
<td>Endocrinology and Diabetes</td>
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<tr>
<td>Richard Zubarik, MD</td>
<td>Gastroenterology and Hepatology</td>
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<tr>
<td>Michael Latreille, MD</td>
<td>General Internal Medicine and Geriatrics</td>
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<tr>
<td>Lynn Wilkinson, D</td>
<td>Geriatric Medicine</td>
</tr>
<tr>
<td>Farrah Khan, MD</td>
<td>Hematology and Oncology</td>
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<tr>
<td>Preetika Muthukrishnan, MD</td>
<td>Hospital Medicine</td>
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<tr>
<td>Maria Burnett, MD</td>
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<tr>
<td>Timothy Whitman, DO</td>
<td>Infectious Disease</td>
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<tr>
<td>Jeffrey Rimmer, MD</td>
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<tr>
<td>Macaulay Onuigbo, MD</td>
<td>Nephrology</td>
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<tr>
<td>Gil Allen, MD</td>
<td>Pulmonary Disease and Critical Care</td>
</tr>
<tr>
<td>Scott Legunn, MD</td>
<td>Rheumatology and Clinical Immunology</td>
</tr>
<tr>
<td>Kramer Wahlberg, MD</td>
<td>Chief Residents</td>
</tr>
<tr>
<td>Louis Bassett Porter, MD</td>
<td>Residents</td>
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<tr>
<td>Maria Airoldi, RPh</td>
<td>Pharmacy</td>
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<tr>
<td>Susan Bellemare, RN</td>
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<tr>
<td>Julie Morse, RN</td>
<td>Nursing</td>
</tr>
</tbody>
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**Committee Mission:**
To monitor, assess and continuously improve the quality and safety of health care provided by the Medicine Health Care Service at UVMMC.

**Faculty Engagement Committee – updated**

J. Kelly, Chair  
K. Cheung  
E. Goncharuk  
F. Khan  
M. Kokoszynska  
A. Nevaers  
C. Noyes  
J. Pierson  
S. Reddy  
M. Sandoval  
T. Thornton  
M. Zeglin  
L. Pitrowiski – Admin support

Committee Mission:  
We are tasked with facilitating interaction between the different divisions in Medicine. We sponsor gatherings at different times of the year and encourage meeting events between divisions. Our goal is to “open up” the department, to encourage inter divisional discourse, and promote mentorship.

**Medical Grand Rounds Education Program Committee – updated**

R. Budd, MD  
C. Irvin  
T. Jetton  
S. Lidofsky  
K. Wahlberg  
M. Wood  
M. Takla  
B. Everett  
M. LaMantia  
A. Repp

Committee Mission:  
The Grand Rounds Committee reviews the format for Grand Rounds and its speakers to insure that it is scientifically sound, presenting up-to-date information, and assisting the medical residents and medical students in becoming familiar with the research going in within the Department. We also review candidates nominated for the Tisdale Lectureship.

**Scientific Integrity Committee – updated**

R. Budd, Chair  
C. Irvin
Committee Mission:
Scientific Integrity Committee advises the Chair on issues related to policies for reviewing possible scientific fraud.

**Medicine Operations Committee**

F. Keating, Chair  
J. Kelly  
N. Bethina  
S. Patil  
S. Grant  
D. Haddock  
T. Holmes  
J. Powelson  
L. Smith  
A. Kumar  
R. Zubarik  
R. Clouser  
A. Mead

Committee Mission:  
The Department of Medicine Operations Committee serves to improve operational efficiency and cross-divisional collaboration. To that end, the committee reviews operational data and compares practices across the Divisions, and advises the Departmental leadership (Chair and Unit Chiefs) regarding operational matters.

**Department of Medicine Faculty Development Committee- updated**

The Faculty Development is composed of 1-2 faculty from each division in the Department of Medicine and meets monthly. The charge of the committee is to work with the Chair, Department of Medicine on matters related to faculty development, including faculty mentoring, career development, and promotion. The committee serves as a forum for junior and mid-level faculty to discuss faculty development within the DOM and to foster new initiatives to support the DOM faculty. Current efforts include the development and dissemination of:

- Faculty mentoring and career development support tools  
- Promotion dossier (Green Sheet) guidance and a standardized Larner College of Medicine CV format  
- Metrics and guidelines for career development and promotion within the Clinical Scholar Pathway  
- Mechanisms to recognize and address faculty burnout  
- The Quarterly Faculty Development newsletter for the DOM

The current membership of the committee is listed below. Please contact Joseph Pierson or your divisional representative with questions.
<table>
<thead>
<tr>
<th>Member</th>
<th>Division/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Pierson, MD</td>
<td>Chair</td>
</tr>
<tr>
<td>Lisa Pitrowiski</td>
<td>Administration</td>
</tr>
<tr>
<td>Zail Berry, MD</td>
<td>Geriatric Medicine</td>
</tr>
<tr>
<td>Maura Barry, MD</td>
<td>Hematology/Oncology</td>
</tr>
<tr>
<td>Narandra Bethina, MD</td>
<td>Rheumatology</td>
</tr>
<tr>
<td>Jason Botten, PhD</td>
<td>Immunobiology</td>
</tr>
<tr>
<td>Garth Garrison, MD</td>
<td>Pulmonary &amp; Critical Care Medicine</td>
</tr>
<tr>
<td>Nicholas Ferrentino, MD</td>
<td>Gastroenterology</td>
</tr>
<tr>
<td>Juan Perdomo Rodriguez</td>
<td>Endocrinology</td>
</tr>
<tr>
<td>Farrah Khan, MD</td>
<td>Hematology/Oncology</td>
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<tr>
<td>Rony Lahoud, MD</td>
<td>Cardiology</td>
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<tr>
<td>Jason Bartsch, MD</td>
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<tr>
<td>LeeAnna Burgess, MD</td>
<td>Hospitalist Medicine</td>
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<tr>
<td>John Miller, MD</td>
<td>Primary Care Medicine</td>
</tr>
<tr>
<td>Kristen Pierce, MD</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>Marios Prikis, MD</td>
<td>Nephrology</td>
</tr>
<tr>
<td>Christine Weinberger, MD</td>
<td>Dermatology</td>
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Department of Medicine Reappointment, Promotions, and Tenure Committee

The Reappointment, Promotions, and Tenure Committee is composed of 3 subcommittees: The Tenure Pathway and Promotions Subcommittee, The Clinical Scholar Evaluation and Reappointment Subcommittee, and The Volunteer Pathway Reappointment Subcommittee. Each are composed of selected faculty from the divisions of the Department of Medicine. All three subcommittees participate in the Spring RPT cycle which addresses faculty reappointments, while the Tenure Pathway subcommittee also meets for the Fall RPT cycle as well to evaluate faculty going up for promotion.

The current membership of the committee is listed below. Please contact Ben Suratt with questions.

**Tenure Pathway and Promotions Subcommittee**

<table>
<thead>
<tr>
<th>Member</th>
<th>Division/Position</th>
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<tbody>
<tr>
<td>Jason Bates, PhD</td>
<td>Chair</td>
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<tr>
<td>Harold Dauerman, MD</td>
<td>Cardiology</td>
</tr>
<tr>
<td>Christopher Huston, MD</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>Benjamin Littenberg, MD</td>
<td>GIM</td>
</tr>
<tr>
<td>Caroline Lyon, MD</td>
<td>Hospitalist Medicine</td>
</tr>
<tr>
<td>Charles Maclean, MD</td>
<td>GIM</td>
</tr>
<tr>
<td>Joseph Pierson, MD</td>
<td>Dermatology</td>
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<tr>
<td>Renee Stapleton, MD, PhD</td>
<td>Pulmonary &amp; Critical Care Medicine</td>
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**Committee Mission:**

The mission of the Department of Medicine Tenure Pathway and Promotions Subcommittee is to provide support to the RPT Chair in the preparation of summary information required for reappointment and promotion of Department of Medicine faculty members on the Tenure Track Pathway, and for promotion dossiers of faculty on all promotion tracks. The Committee is charged with reviewing the content of dossiers, assembled by each faculty member under consideration and corresponding unit director, and with writing summaries that highlight accomplishments in the areas of teaching, research and scholarship, and service to the institution and beyond. Each summary will also serve to generate constructive feedback to the faculty member under consideration, so that the goals for future promotion can be achieved. The Subcommittee will meet at least once during the faculty review cycle to finalize the summaries, which will then be forwarded by the Subcommittee Chair to the RPT Committee Chair.
Clinical Scholar Evaluation and Reappointment Subcommittee

<table>
<thead>
<tr>
<th>Member</th>
<th>Division/Position</th>
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<tbody>
<tr>
<td>Kristen Pierce, MD</td>
<td>Chair</td>
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<tr>
<td>Tanya Bertsch, MD</td>
<td>GIM</td>
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<tr>
<td>Shaden Eldakhar-Hein, MD</td>
<td>Hospitalist Medicine</td>
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<tr>
<td>Matthew Gilbert, DO</td>
<td>Endocrinology</td>
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<tr>
<td>Peter Kaufman, MD</td>
<td>Hematology/Oncology</td>
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<tr>
<td>Chi-Chi Lau, MD</td>
<td>Rheumatology</td>
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<tr>
<td>Doris Strader, MD</td>
<td>Gastroenterology</td>
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<tr>
<td>Peter Van Buren, MD</td>
<td>Cardiology</td>
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<tr>
<td>Timothy Whitman, DO</td>
<td>Infectious Disease</td>
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Volunteer Pathway Reappointment Subcommittee

<table>
<thead>
<tr>
<th>Member</th>
<th>Division/Position</th>
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<tbody>
<tr>
<td>Claudia Berger, MD</td>
<td>Chair</td>
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<tr>
<td>Roberta O’Brien, MD</td>
<td>GIM</td>
</tr>
<tr>
<td>Garth Garrison, MD</td>
<td>Pulmonary &amp; Critical Care Medicine</td>
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</table>

Committee Mission:

The mission of the Department of Medicine Volunteer Pathway Reappointment Subcommittee is to provide support to the RPT Chair in the preparation of summary information required for reappointment of Department of Medicine faculty members on the Volunteer Pathway. The Committee is charged with reviewing the content of dossiers, assembled by each faculty member under consideration and corresponding unit director, and evaluating eligibility of the faculty member for reappointment on the Volunteer Pathway. The Subcommittee will meet at least once during the faculty review cycle to finalize the recommendations, which will then be forwarded by the Subcommittee Chair to the RPT Committee Chair.
Research Committee

R. Budd, MD  
M. Poynter, PhD  
M. Toth, PhD  
J. Gupta, PhD  
A. Atherly, MD  
M. Cushman, MD  
M. Bui, MD PhD  
S. Lidofsky, MD PhD  
R. Solomon, MD  
A. Repp, MD  
C. Lyon, MD  
T. Mazuzan – Staff  
M. Rowen – Staff

Committee Mission:  
The Department of Medicine’s Research Committee is Chaired by the Vice Chair for Research with faculty representation from each Division/Center and financial/operations leadership staff. The committee meets monthly to discuss a wide range of issues pertaining to the research mission and activities of the department’s faculty. A major focus of the committee is to advise the Chair on decisions that impact the research endeavors of the department’s faculty. Other topics include the development and review policies and procedures relating to research, funding requests, new funding opportunities, changes in Federal policies, dissemination of information and setting new initiatives to enhance the research activities of the department.

Quality Assurance Committee – Dermatology – updated

T. Holmes, MD  
G. Goldman, MD  
C. Weinberger, MD  
M. Bui, MD  
A. Fischer, MD  
K. Morley, MD

Committee Mission:  
Our mission is to ensure quality care and promote continuous quality improvement of services and processes in order to fulfill the needs and expectations of the patients we serve.
Medical Service
Ambulatory Care Visits: 212,084 (151,373 specialty care and 60,711 primary care)
Work RVUs: 565,278 work RVUs

UVMMC Practice Sites:
Ambulatory Care Center – Medicine has a presence in five Modules:
- Medicine: Infectious Disease (including Travel Medicine), Rheumatology and Clinical Immunology, and Pulmonary (including PFTs), Lung Cancer Multidisciplinary Clinic
- Dermatology including Mohs Surgery (occupying two modules)
- Cancer Center: Hematology/Oncology, Breast Care Center and Multidisciplinary Clinic, Vermont Regional Hemophilia Treatment Center, Thrombosis Center, and
- Surgery: Gastroenterology

University Health Center
- Nephrology
- Sleep Medicine

Tilley Drive, South Burlington
- Cardiology and Cardiac Rehabilitation, Oncology Rehabilitation, Pulmonary Rehabilitation
- Endocrinology, Osteoporosis, and Endocrine Clinical Research

Fanny Allen Hospital
- Memory Clinic
- Vermont Lung Center (Pulmonary Research)

General Internal Medicine:
- Burlington (University Health Center)
- South Burlington
- Essex Junction
- Williston

UVMMC Outreach Sites:
Vermont
Brattleboro (BMH) – Infectious Disease
St. Albans (Northwestern Medical Center) – Nephrology, Cardiology, and Endocrinology
St. Johnsbury (Northeastern Medical Center) - Infectious Disease
Barre (Central Vermont) – Nephrology, Dermatology, Pulmonary, Hem/Onc
Rutland (Rutland Regional) – Nephrology, Cardiology, Infectious Disease
Middlebury (Porter) – Cardiology, Hem/Onc
Newport (Newport Memorial) – Nephrology

New York
Malone (AHMC) - Cardiology
Massena (MMH) – Cardiology
Plattsburgh (CVPH) – Cardiology, Infectious Disease, Dermatology

Nursing Homes and Other Locations:
The Department also participates in many multidisciplinary clinics:

**Department of Medicine Multidisciplinary Clinics and Case Conferences/Tumor Boards** (examples of participants in parentheses)

**Active**

- Maternal Fetal Medicine/Gestational Diabetes (Endocrine, Women's)
- Upper GI MDC and Tumor Board (Gastroenterology, Hematology/Oncology, Radiation Oncology, Pathology, Radiology, Surgery)
- Lung MDC and Tumor Board (Pulmonary, Surgery, Radiation Oncology, Hematology/Oncology, Pathology, Radiology)
- Breast MDC and Tumor Board (Hematology/Oncology, Radiology, Surgery, Radiation Oncology, Pathology)
- Hem Malignancy Conference (Hematology/Oncology, Pathology)
- Brain Tumor Board (Hematology/Oncology, Surgery, Radiology, Radiation Oncology)
- Sarcoma Tumor Board (Hematology/Oncology, Orthopedics, Radiology, Pathology, Radiation Oncology)
- ENT Tumor Board (Hematology/Oncology, Surgery, Radiation Oncology)
- GU MDC and Tumor Board (Hematology/Oncology, Surgery, Pathology)
- Melanoma Tumor Board (Dermatology, Surgery, Hematology/Oncology, Pathology)
- Familial Cancer Program Conference (Genetic counseling, medical oncology, pathology, surgical oncology, ob/gyn).
- Geriatrics/Memory Center (Geriatrics and Neurology)
- Interstitial Lung Disease (Pulmonary and Rheumatology)
- Cystic Fibrosis (Pulmonary, Endocrinology, Social Work, Nutritional Services)
- Bone Metabolism (Endocrinology and Rheumatology)
- Stone Clinic (Nephrology and Urology)
- Transplant Clinic (Nephrology and Transplant Surgery)
• Oncology Rehabilitation (Hematology/Oncology, Cardiology, Physical Therapy)
• Pulmonary Rehabilitation (Pulmonary, Cardiology, and Physical Therapy)
• Heart Failure (Cardiology and Primary Care)
• TAVR (Cardiology and Surgery)
• Accredited Stem Cell Transplant Program (Hematology and Pathology/Laboratory)
• Pediatric Hemophilia Clinic (Hematology/Oncology and Pediatrics)
• Weight management clinic (Endocrinology and Bariatric Surgery)
• Teledermatology (Colchester Family Medicine and Dermatology)
• Telemedicine (Infectious Disease and Brattleboro Memorial Hospital)

Under Development
• Hepatitis C e-consults (Gastroenterology and General Internal Medicine)
1. Leadership

Mark Pasanen, M.D., FACP – Program Director
Shaden Eldakar-Hein, M.S., M.D., FACP – Associate Program Director
Halle Sobel, M.D., FACP – Associate Program Director
Kate Parker, Christine Farnham and Rosanne Murat – Program Administrators

2. Summary of Program Highlights 2019-2020

Enhancements to Curriculum:
We continue to refine our didactic education, having switched to an academic half-day model in 2015. Residents are split into two cohorts (first-year residents and senior residents), allowing our curriculum to be targeted at the learner level. In addition, as part of this change, we encouraged our faculty to develop more interactive teaching methods – which continues to be well-received by both faculty and residents. The switch to an academic half-day model allowed for a more comprehensive curriculum, including robust Improvement Science and Wellness initiatives. We are now in the process of updating our Resident-As-Teacher curriculum, to assure an optimal learning environment for all learners. In addition, over the past 18 months, we have successfully moved Morning Report to Noon Report to allow for increased attendance, and better engagement. Of course, the biggest change of the past year has been the need to adapt to on-line learning due to gathering restrictions in place to protect our residents, patients and others from COVID-19. After a brief period, we were able to successfully transition all of structured teaching to an interactive, tele-education environment.

Board Preparation:
Our comprehensive curriculum supports our residents as they prepare for the ABIM certification exam. Our 3-year pass rate remains at 95%, which is above the national average. We continue to provide MKSAP for all of our residents, and utilize MKSAP questions in many of our teaching sessions. In addition, we provide all residents with subscriptions to NEJM Knowledge (+), a mobile question-based board review product with an adaptive learning interface as part of our commitment to ABIM Board success.

Continuity Clinic Update:
With the leadership of Drs. Halle Sobel and Rich Pinckney – along with a core of faculty preceptors, small group learning sessions are extremely well received by residents – all part of a comprehensive 3-year curriculum. Residents are educated on practice management, patient safety and quality improvement and continue to complete personal practice improvement projects. At the core of the experience is providing care for a diverse population of primary care patients. Residents are assigned to either the UVMMC Adult Primary Care site in Burlington or the Burlington VA clinic (under the leadership of Drs. Jonathan Cohen and Gretchen Gaida-Michaels). In addition, we have incorporated the Yale Ambulatory Curriculum, which focuses on common primary care issues, into the formal educational experience.

Wellness:
Our Resident Wellness Committee has the the goal of promoting resiliency by creating opportunities for our residents to engage in activities with each other and our community. Events in the past have included attending a Lake Monsters game, picking apples and making cider, paddle-boarding, paint-and-sip, along with dinners at the Hope Lodge (cooked and served by our residents). This has been a huge challenge for the latter part of the year, given the need to remain socially-distanced, so the committee continues to look for unique opportunities to promote wellness.

Improvements in Evaluation/Assessment:
With leadership from Dr. Sobel, our robust Clinical Competency Committee reviews all of our residents at least bi-annually, providing milestone-based evaluations and feedback. In addition, this group provides insight and guidance
for residents who benefit from more structured support. Over the past year, we have refined our evaluations, with the goal of getting the most important information in the most efficient way possible.

Recruitment:
With leadership from Dr. Eldakar-Hein, we had another fabulous resident recruitment cycle. Given the significant increase in the number of programs each student applies to, recruitment is a major undertaking. Therefore, we have increased the number of resident candidates we interview, with numerous faculty volunteering their time. The outcome of all this effort was another incredibly successful recruitment season.

Procedural/Ultrasound Training:
One of our priorities over the past few years has been to improve our resident procedural and ultrasound skills. We have improved our ultrasound elective, and have recently added a digital repository for collected images, significantly increasing our capacity to review images and provide feedback. In addition, we continue to collaborate with colleagues in the Department of Medicine and other departments with the goal of getting our residents opportunities to perform desired procedures.

3. List of All Residents (as of July 1, 2019 – Graduating Residents and Match Results below)

PGY-3
Calvin Gilkey
Edwin Goncharuk
Benjamin Irvine
Darren Knox
Daniel Krakauer
Yao Li
Steven O’Neill
Katherine Peterson
Louis-Bassett Porter
Elly Riser
Brendan Thoms
Shawn Wayne
Andrew Wilks
Christopher Wargo
Scott Young
University College Cork, Ireland
University of New England College of Osteopathic Medicine
University of Wisconsin School of Medicine and Public Health
University of Wisconsin School of Medicine and Public Health
Virginia Tech Carillion School of Medicine
Albany Medical College
West Virginia University School of Medicine
University of New England College of Osteopathic Medicine
Pennsylvania State University School of Medicine
University of Washington School of Medicine
Imperial College of Medicine, United Kingdom
University of Wisconsin School of Medicine and Public Health
Tufts University School of Medicine
University of Queensland, Australia
University of Washington School of Medicine

PGY-2
Categorical
Eric Anderson
Jennifer Bergeron
Kenyon “KC” Bolton
Benjamin Depo
Matthew Gervais
J. Curtis Gwilliam
Sundas Khan
Carrie Mahurin
Emily McPherson
Jacob Neuwirth
Jacqueline Parker
Kevin Qin
Samantha Steinmetz-Wood
Andrew Wall
Joshua Zimmer
Medical College of Wisconsin
Tufts University School of Medicine
Robert Larner, MD, College of Medicine at the University of Vermont
State University of New York Upstate
Pennsylvania State University College of Medicine
Robert Larner, MD, College of Medicine at the University of Vermont
Lewis Katz School of Medicine at Temple University
University of North Dakota School of Medicine and Health Sciences
University of New England School of Osteopathic Medicine
University of New England College of Osteopathic Medicine
Weill Cornell Medicine
University of Toledo College of Medicine and Life Sciences
Royal College of Surgeons in Ireland
Albany Medical College
Quillen College of Medicine at East Tennessee State University
Chief Medical Residents
Elizabeth Wahlberg      University of Washington School of Medicine
Kramer Wahlberg        University of Washington School of Medicine
Julia Powelson         University of Alabama School of Medicine

4. Resident and Faculty Awards

- The Harriet P. Dustan, M.D. Award  
  Elly Riser, M.D.

- The Frank L. Babbott, M.D. Memorial Award  
  Elly Riser, M.D.

- Richard E. Bouchard, M.D. Excellence in Primary Care Award  
  Daniel Krakauer, MD

- Richard E. Bouchard, M.D. Excellence in Primary Care Award  
  Brendan Thoms, MD

- E.L. Amidon, M.D. Award  
  Outstanding Teacher of the Year Subspecialty Medicine  
  William Hopkins, M.D.

- Mark A. Levine, M.D. Award  
  Outstanding Teacher of the Year General Internal Medicine  
  Lee-Anna Burgess, M.D.

5. Resident presentations at local/regional/national meetings and publications

Resident Research Day: May 22, 2020

Oral Presentations:
Andrew Wilks, MD, MS  
Bleeding risk in a cohort of ambulatory cancer patients receiving prophylactic anticoagulation for venous thrombosis prevention  
Andrew Wilks MD, MS, Daniel Douce MD, Steven Ades MD, MSc, Mary Cushman MD, MSc, Neil Zakai MD, MSc, Chris Holmes MD, PhD

Louis-Bassett Porter, MD  
Improving utilization of antimicrobials and anticoagulants in patients hospitalized for a malignant hematologic condition with use of a checklist  
Louis-Bassett Porter, MD, Hanaa Shihadeh, BS, Bradley Tompkins, MPH, MS, Kim Dittus, MD, PhD

Elly Riser, MD, MPH  
Training Future Physicians to Provide Evidence-Based Care for Individuals with Opioid Use Disorder: The Addiction Medicine Curriculum at the Larner College of Medicine  
Elly Riser, MD, MPH, Sanchit Maruti, MD, John Brooklyn, MD, Stephen G. DeVoe, MPH, MS,
Leigh Ann Holterman, PhD, Jacqueline Drouin, MPA, Halle Sobel, MD

**Poster Presentations:**
Calvin Gilkey, MD
*When Can I Leave? A Retrospective Cohort Study Exploring if Day and Time of Admission are Associated with Length of Stay or Mortality in Hospitalized Adults*
Calvin Gilkey, MD, Bradley Tompkins, MPH, MS, Allen Repp, MD, MSc

Edwin Goncharuk, DO
*Biochemical Liver Testing Among Diabetics in Primary Care: Incidence and Influence on Screening for Advanced Hepatic Fibrosis*
Brendan Everett, MD, Edwin Goncharuk, DO, Maia Stamieszkin, APRN, Steven Lidofsky, MD, PhD

Ben Irvine, MD
*Bachmann’s Bundle Pacing on the Burden, Recurrence, and Incidence of Atrial Arrhythmias*
Margaret Infeld MD, MS, Charles D. Nicoli BS, Sean Meagher BS, Shawn Wayne MD, Bradley Tompkins MPH, MS, Benjamin Irvine MD, Omkar Betageri MD, Nicole Habel MD, Markus Meyer MD, Daniel L. Lustgarten MD, PhD

Darren Knox, MD
*Factors leading to appropriate follow-up of lung nodules discovered incidentally on CT chest during hospitalization; a single-site study*
Darren Knox, MD, Arjun Patel, MS, BS Bradley Tompkins, MPH, MS, Shaden Eldakar-Hein, MD, MS

Dan Krakauer, MD
*Guideline Adherence for Patients Hospitalized with Neutropenic Fever at the University of Vermont Medical Center: An Observational Study*
Daniel Krakauer, MD, Kaileen Cruden, BS, Allen Repp, MD, MSc

Jim Li, MD
*Appropriateness of prescriptions for factor Xa inhibitors apixaban and rivaroxaban at discharge: A retrospective cohort study*
Jim Yao Li, MD, Bradley Tompkins, MPH, MS, Allen Repp, MD, MSc

Steve O’Neill, MD
*The Effect of Patient Educational Attainment on Cardiac Rehabilitation Adherence and Benefits of Cardiac Rehabilitation*
Steven O’Neill, MD, Diann E. Gaalema, PhD, Patrick Savage, MS, Hypatia A. Bol, PhD, Deborah Denkmann, BSN, Philip A. Ades, MD

Katherine Peterson, DO
*The Impact of a Best Practice Advisory on Inpatient Use of Piperacillin-Tazobactam*
Katherine L. Peterson, DO Bradley J. Tompkins, MPH, MS, John W. Ahern, PharmD, Lindsay M. Smith, MD

Brendan Thoms, MBBS, PhD
*Use of an Educational Leaflet and Patient-directed Exercises in the Management of Chronic Lower Back Pain*
Brendan Thoms, MBBS, PhD and ChiChi Lau, MD

Brendan Thoms, MBBS, PhD
*“Do they need a hospital bed?” - A 6-month audit of patients managed under observation status by the internal medicine teaching service*
Brendan L. Thoms, MBBS PhD and Steve Grant, MD

Christopher Wargo, MBBS, PhD
Assessment of Patient Factors Impacting Internal Medicine Service 30 Day Readmission Rates at the UVM Medical Center
Christopher Wargo, MBBS, PhD and Mark Pasanen, MD

Shawn Wayne, MD
The Effect of Multiple Radiofrequency Ablation for Atrial Fibrillation on Left Atrial Pressure and Compliance
Margaret Infeld, MD, MS, Charles Nicoli, BS, Shawn Wayne, MD, Sherrie Khadanga, MD, Timothy Plante, MD, MHS, Bradley Tompkins MPH, MS, Daniel Correa de Sa, MD, Peter VanBuren, MD

Scott Young, MD
Right Ventricle Dysfunction & Exercise Tolerance In Pulmonary Rehabilitation - A Retrospective Study
Scott K. Young, MD, Bradley Tompkins, MPH, MS, Charlotte C. Teneback, MD

Vermont ACP Scientific Meeting October 2019

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Title</th>
<th>Category</th>
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<tbody>
<tr>
<td>Elly Riser, MD</td>
<td>A Fatal Case of Pembrolizumab-Induced Myasthenia Gravis</td>
<td>Clinical Vignette</td>
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<tr>
<td>Sundas Khan and Benjamin Depo</td>
<td>A Pathway for Optimizing Post-Splenectomy Care</td>
<td>Research</td>
</tr>
<tr>
<td>Edwin Goncharuk</td>
<td>When the PPI Doesn’t work</td>
<td>Clinical Vignette</td>
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<tr>
<td>Aurasch Moaven</td>
<td>A Case of Reactive Arthritis Secondary to Intravesicular BCG Therapy</td>
<td>Clinical Vignette</td>
</tr>
<tr>
<td>Dash Porter</td>
<td>Retrospective Review of Appropriate Use of Antimicrobials and Anticoagulants in Patients Hospitalized for a Malignant Hematologic Condition</td>
<td>Research</td>
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Publications:


**National/Regional Presentations:**


**Sundas Khan, MD and Ben Depo, MD**

* A Pathway for Optimizing Post-Splenectomy Care
  - Poster presentation at the 2019 Vermont ACP Chapter Meeting, October 11, 2019, Stowe, VT
  - Poster presentation at the National American College of Chest Physicians Meeting, Los Angeles, CA, April 2020

  - Poster presentation at American Society of Clinical Oncology, Chicago, IL, May 2020

**Elly Riser, MD**

* A Fatal Case of Pembrolizumab-Induced Myasthenia Gravis
  - Poster Presentation at the 2019 Vermont ACP Chapter Meeting, October 11, 2019, Stowe, VT
  - Poster Presentation – 2020 ACP National Conference, April 24, 2020 (Posted presented virtually due to COVID-19 pandemic)

* The relationship between psychostimulant use and cardiovascular disease
  - Oral presentation at the American Academy of Forensic Sciences 72nd Annual Scientific Meeting, February 17, 2020, Anaheim, CA

**Aurasch Moaven, MD**

* A Case of Reactive Arthritis Secondary to Intravesicular BCG Therapy
  - Poster Presentation at the 2019 Vermont ACP Chapter Meeting, October 11, 2019, Stowe, VT


**Irvine B.** Morbidity and Mortality Review. Case presentation at Medicine Grand Rounds at the University of Vermont Medical Center. Feb 24th, 2020.

**Bolton, KC.** Morbidity and Mortality Review. Case presentation at Medicine Grand Rounds at the University of Vermont Medical Center. Dec 13th, 2019.

**Porter, LB.** Morbidity and Mortality Review. Case presentation at Medicine Grand Rounds at the University of Vermont Medical Center. Nov 22nd, 2019.

**Qin, K.** Morbidity and Mortality Review. Case presentation at Medicine Grand Rounds at the University of Vermont Medical Center. Oct 25th, 2019.

**Wilks, A.** Morbidity and Mortality Review. Case presentation at Medicine Grand Rounds at the University of Vermont Medical Center. Sept 6th, 2019.
Department of Medicine Quality Showcase May 8, 2020:


Benjamin Depo, MD*, Sundas Khan, MD*, Jean Dejace, MD, Laura Catoe, NP, Timothy Whitman, DO, Bradley Tompkins, MPH, MS, Carlos Marroquin, MD, Jennifer Gratton, RN, Ajai Malhrota, MD, Andrew Hale, MD * co-first authors. A Pathway for Optimizing Post-Splenectomy Care.


Kramer Wahlberg, MD, Maria Burnett, MD, Andrea Desautels,* Kathy Leahy,* Preetika Muthukrishnan, MD, Kate Purcell,* Allen B. Repp, MD, MSc,. Partnering with Patients in a Quality Improvement Curriculum for Internal Medicine Residents. Constance van Eeghen, DrPH, MHSA, MBA, Elizabeth Wahlberg, MD, Amanda G. Kennedy, PharmD, BCPS.

KC Bolton, MD, Stephen G. DeVoe, MPH, MS, Jennifer Hauptman, MSW, LICSW, Amanda G. Kennedy, PharmD, BCPS, Marissa Madden, RN, Naomi Hodde, MD Gauging oncology inpatient experience before and during Covid-19 visitor restrictions: Implementation and preliminary results of a pre-discharge questionnaire.

KC Bolton, MD and Kramer Wahlberg, MD Improving the resident experience: Development of a SharePoint intranet site to streamline administration and learning in an internal medicine program.

6. Graduating Residents – where are they going/ which fellowships

Calvin Gilkey Hospitalist, Central Vermont Medical Center
Edwin Goncharuk Chief Medical Resident, University of Vermont Medical Center
Benjamin Irvine Chief Medical Resident, University of Vermont Medical Center
Darren Knox Hospitalist, Gundersen Health System
Daniel Krakauer Palliative Care Fellow, Ohio State University Medical Center
Yao Li Hospitalist, University of Vermont Medical Center
Steven O’Neill Hospitalist, Good Samaritan Regional Medical Center
Katherine Peterson Fellowship, Infectious Disease, University of Vermont Medical Center
Louis-Bassett Porter Hospitalist, Central Vermont Medical Center
Elly Riser Hospitalist, University of Vermont Medical Center
Brendan Thoms Fellowship, Rheumatology, University of Vermont Medical Center
Shawn Wayne Chief Medical Resident, University of Vermont Medical Center
Andrew Wilks Fellowship, Hematology/Oncology, University of Massachusetts
Christopher Wargo Primary Care, University of Vermont Medical Center/Essex
Scott Young Hospitalist, University of Washington Medical Center

Chief Medical Residents
Elizabeth Wahlberg  Primary Care, University of Vermont Medical Center/South Burlington
Kramer Wahlberg  Fellowship, Cardiology, University of Vermont Medical Center
Julia Powelson  Hospitalist, University of Vermont Medical Center

7. MATCH RESULTS - Spring 2020

PGY-1

Categorical

Siddique Akram University of Wisconsin School of Medicine and Public Health
Vishwanath Anekonda University of Washington School of Medicine
Tanesha Beebe Loyola University Chicago Stritch School of Medicine
Maria Bryan - PC University of Minnesota Medical School
Brendan Campbell George Washington University School of Medicine and Health Sciences
Kyle Crooker University of Kansas School of Medicine – Wichita
Brendan Ferraro Lewis Katz School of Medicine at Temple University
David Jackson University of New England College of Osteopathic Medicine
Ali Jandal University of Wisconsin School of Medicine and Public Health
Colton Jensen University of Iowa Roy J. and Lucille A. Carver College of Medicine
John Lamb Mercer University School of Medicine – Savannah
Eleanor Stedman - PC Robert Larner, M.D., College of Medicine at the University of Vermont
Nicholas Tooley Michigan State University College of Human Medicine - Grand Rapids
Sarah Wachtel - PC Albany Medical College
Danielle Wall Robert Larner, M.D., College of Medicine at the University of Vermont

Preliminary

Hannah Porter University of Pittsburgh School of Medicine
Daniel De Los Santos Robert Larner, M.D., College of Medicine at the University of Vermont
Gregory Johnston Robert Larner, M.D., College of Medicine at the University of Vermont
Agnes Bacopulos (Neurology) New York Medical College
Kristin Bartman (Neurology) Central Michigan University COM
Kaley Kinnamon (Neurology) University of Kansas School of Medicine
Lauren Skogsholm (Neurology) University of Connecticut School of Medicine

Preliminary Anesthesia shared with Surgery

Jack Chan Albany Medical College
Jason Dixon University of Connecticut School of Medicine
Edwin “Taylor” Haring University of Oklahoma College of Medicine
Brett Heber Kansas City Univ of Medicine & Biosciences College of Osteopathic Medicine
Britta Kilgus Robert Larner, M.D., College of Medicine at the University of Vermont
Matthew “Matt” Nowland Frank H. Netter, M.D. School of Medicine at Quinnipiac University
The 2019-2020 academic year will be a year that changed the professional and personal lives of everyone because of the COVID-19 pandemic. The cardiovascular division pulled together and developed protocols enabling continued care of patients during a time of active transmission of COVID-19 in Vermont. As infection transmission slowed in Vermont, the division served the needs of our patients by rapidly expanding clinical activities. While we have learned the value of telehealth, our experience has emphasized that much of cardiovascular care requires direct patient contact.

The Division experienced transitions during this academic year. Drs. Mark Capeless and John Fitzgerald retired. Mark has left an indelible mark on the cardiovascular division. He developed our electrophysiology section and was the Director of our fellowship training program for many years. John transitioned from private practice to be the primary cardiologist serving Northwestern Medical Center in St. Albans. Drs. Markus Meyer and Johannes Steiner left the University of Vermont for new opportunities. Markus was recruited to an endowed Chair at the University of Minnesota that will enable him to concentrate his efforts on research advances. Johannes will lead the mechanical support team in Oregon. We miss each of them but wish them the best in their next steps.

Transitions create opportunities for the infusion of new individuals who will expand our capabilities. During the summer of 2020 we will add 2 new cardiologists focused on heart failure care. Dr. Trace Barrett has joined our division. In addition to expanding our heart failure team, Trace has a particular interest in invasive echocardiography to support structural heart procedures. Trace completed his training at the University of Vermont. Dr. Ahmed Harhash will also join our heart failure team. Ahmed completed training in advanced heart failure at Mid America Heart Institute. Dr. Tracy Hagerty joins our division and will be the primary cardiologist at Northwestern Medical Center. Tracy completed cardiovascular training at Washington University.

Education of the next generation of leaders in cardiovascular care is a core mission of the cardiovascular division. We graduated an outstanding class of fellows (Drs. Infeld, Nambiar, Silverman, and Barrett). This group authored 6 PubMed-indexed publications in 2019 and 2020 alone with several manuscripts still in preparation. Lakshmi Nambiar was recognized by the American College of Cardiology and her presentation garnered media attention in advance of the national scientific sessions. We are pleased that all 4 graduating fellows will continue on in academic settings, 3 in subspecialty fellowships in Vermont, South Carolina and New York in addition to Dr. Barrett joining the Vermont faculty. We are proud of the diversity of our training program. While female representation in US cardiovascular fellowship programs hovers just below 20%, the percentage of women-identified fellows in our program was 33%. Our fellowship Jeopardy team won the Northern New England Chapter of the American College of Cardiology Jeopardy Competition.

Scholarly activities complete the tripartite mission of the division. Clinical and translational research remain active with both investigator-initiated research as well as participation in multicenter clinical trials. The faculty of the cardiovascular division authored 46 scholarly publications during the past fiscal year.
Faculty

David J. Schneider, MD
Professor of Medicine
Director, Cardiovascular Division
Medical Director, Cardiovascular Services, University of Vermont Health Network
Research and clinical interests
- thrombosis
- platelet biology
- atherosclerosis/ischemic heart disease
- preventive cardiology

Aderonke Adeniyi, MD
Assistant Professor of Medicine
Research and clinical interests
- advanced heart failure
- pulmonary hypertension

Philip A. Ades, MD
Philip A Ades MD Endowed Professor of Cardiovascular Prevention
Director, Cardiac Rehabilitation
Research and clinical interests
- cardiac rehabilitation
- preventive cardiology
- ischemic heart disease

Mark Capeless, MD (retired, emeritus)
Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology

Kevin Carey, MD
Assistant Professor of Medicine
Research and clinical interests
- coronary intervention
- cardiac catheterization
- ischemic heart disease

Daniel Correa de Sa, MD
Assistant Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology
- catheter ablation
- pacemaker and ICD implantation
Harold L. Dauerman, MD
Professor of Medicine
Network Director, Interventional Cardiology, UVM Health Network
Research and clinical interests
- coronary and structural heart intervention
- vascular biology, PCI pharmacology
- systems of care and regional quality improvement programs

Timothy Garrand, MD
Interventional Cardiology
Clinical interests
- ischemic heart disease
- cardiac catheterization
- coronary intervention

Eric Gauthier, MD
Assistant Professor of Medicine
Clinical interests
- ischemic heart disease
- cardiac catheterization
- coronary intervention

Prospero B. Gogo, MD
Associate Professor of Medicine
Director, Cardiovascular Catheterization Laboratory
Director Interventional Cardiology Training Program
Research and clinical interests
- cardiac catheterization
- percutaneous coronary intervention
- percutaneous treatment of structural heart disease

William E. Hopkins, MD
Attending Cardiologist
Director, Adult Congenital Heart Disease Program
Clinical interests
- adult congenital heart disease
- genetic heart disease
- valvular heart disease
- echocardiography

Roger Ishac, MD
Assistant Professor of Medicine
Clinical interests
- ischemic heart disease
- cardiac catheterization
- coronary intervention
Tracy Hagerty, MD  
Assistant Professor of Medicine  
Clinical interests  
- general cardiology  
- syncope  
- pacemaker and defibrillator therapy

Friederike Keating, MD  
Professor of Medicine  
Director, Nuclear Cardiology and Stress Laboratory  
Program Director, Cardiovascular Fellowship  
Research and Clinical interests  
- multimodality imaging  
- medical education  
- cardiovascular disease in women  
- inpatient general cardiology

Robert J. Kelm, Jr., PhD  
Associate Professor of Medicine  
Associate Professor of Biochemistry  
Research interests  
- molecular biology of cell differentiation  
- mechanisms of cardiovascular remodeling  
- regulation of gene expression  
- protein-nucleic acid interactions

Sherrie Khadanga, MD  
Assistant Professor of Medicine  
Assistant Director, Cardiac Rehabilitation  
Research and clinical interests  
- cardiac rehabilitation  
- women and cardiovascular disease  
- systolic heart failure

Rony Lahoud, MD  
Assistant Professor of Medicine  
Research and clinical interests  
- cardiac catheterization  
- coronary intervention  
- structural heart disease  
- renal injury and recovery with coronary and structural procedures  
- optimal platelet therapy post coronary intervention

Martin M. LeWinter, MD  
Professor Emeritus of Medicine and Molecular Physiology and Biophysics
Research and clinical interests
- heart failure and cardiomyopathies
- cardiac hypertrophy
- heart failure with preserved ejection fraction
- effects of hypertension and diabetes on the myocardium
- pericardial disease

Robert Lobel, MD
Assistant Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology
- catheter ablation
- pacemaker and ICD implantation

Daniel Lustgarten, MD
Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology
- catheter ablation
- pacemaker and ICD implantation
- His bundle pacing

Richard L. Page, MD
Professor of Medicine
Dean, Robert Larner, M.D. College of Medicine
Research and clinical interests
- sudden cardiac death
- automated external defibrillators
- pharmacological therapy for atrial fibrillation

Peter S. Spector, MD
Professor of Medicine
Director, Cardiac Electrophysiology
Director, Electrophysiology Fellowship Training Program
Research and clinical interests
- catheter ablation
- atrial fibrillation

Jeffrey L. Spees, PhD
Professor of Medicine
Director, Stem Cell Core Facility
Research interests
- adult stem cell biology
- regenerative medicine
- repair of cardiac and CNS tissues
- vascular biology
Edward Terrien, MD
Associate Professor of Medicine
Director, Ambulatory Cardiovascular Clinic
Research and clinical interests
- coronary intervention
- cardiac catheterization
- peripheral vascular intervention
- ischemic heart disease

Nathaniel Thompson, MD
Assistant Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology
- catheter ablation
- pacemaker and ICD implantation

Marc D. Tischler, MD
Associate Professor of Medicine
Director, Echocardiography Laboratory
Co-Director, Cardiac MRI Laboratory
Research and clinical interests
- magnetic resonance imaging and echocardiography
- valvular heart disease
- ischemic heart disease
- congestive heart failure

Michael J. Toth, PhD
Professor of Medicine
Research interests
- skeletal muscle physiology
- cardiac rehabilitation
- aging
- physical disability
- muscle disuse

Peter VanBuren, MD
Associate Professor of Medicine
Associate Professor of Molecular Physiology and Biophysics
Director, Cardiovascular Care Unit
Director, Heart Failure Program
Associate Director Cardiovascular Training Program
Research and clinical interests
- specialist in heart failure
- echocardiography
- nuclear cardiology
Matthew W. Watkins, MD
Professor of Medicine
Director of Interventional Cardiology
Research and clinical interests
- interventional cardiology
- ischemic heart disease

Joseph Winget, MD
Associate Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology
- catheter ablation
- pacemaker and ICD implantation

Magdalena Zeglin, MD
Assistant Professor of Medicine
Research and clinical interests
- coronary artery disease
- interventional cardiology

Pierre Znojkiewicz, MD
Assistant Professor of Medicine
Research and clinical interests
- clinical cardiac electrophysiology
- catheter ablation
- pacemaker and ICD implantation

Fellows

<table>
<thead>
<tr>
<th>Trace Barrett</th>
<th>Cecile King</th>
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<tbody>
<tr>
<td>David Cleary</td>
<td>Matthew Kluge</td>
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<tr>
<td>Jan Denkmann</td>
<td>Drew Messerschmidt</td>
</tr>
<tr>
<td>Christine DeStephan</td>
<td>Lakshmi Nambiar</td>
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<tr>
<td>Nicole Habel</td>
<td>Newton Phuong</td>
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<tr>
<td>Jonathan Halevy</td>
<td>Brennan Rigby</td>
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<tr>
<td>Bhisham Harchandani</td>
<td>Ashwini Sharma</td>
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<tr>
<td>Margaret Infeld</td>
<td>Daniel Silverman</td>
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Nurse Practitioners and Physician Assistants

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<thead>
<tr>
<th>Cara DiMasi, APRN</th>
<th>Margaret MacDonald, NP</th>
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<tbody>
<tr>
<td>Gregory Ehle, PA</td>
<td>Allison Mack, APRN</td>
</tr>
<tr>
<td>Catherine Falduto, APRN</td>
<td>Cheryl McNeil, APRN</td>
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<tr>
<td>Susan Ann Hamlyn-Prescott, APRN</td>
<td>Deborah Moyer, APRN</td>
</tr>
</tbody>
</table>
Ann Laramee, APRN  
Nancy Strong, APRN

**Graduate Students, Post-doctoral Fellows, MD PhD Students**

**Martin M. LeWinter, MD**  
Lakshmi Nambiar  
Dan Silverman

**Jeffrey L. Spees, PhD**  
John McInnis, B.S.  
Nicholas Toker, B.S.  
Lucy Greetham, B.S.

**Michael J. Toth, PhD**  
Blas Guigni, CMB doctoral candidate  
Timothy W. Tourville, PhD, K08 mentee

**Leadership in Professional Societies**

**Prospero B. Gogo, MD**  
Vermont Chapter of the American College of Cardiology, Past Governor  
ABIM Item Writing Task Force for Interventional Cardiology  
ABIM Standards-setting for Interventional Cardiology

**Friederike Keating, MD**  
American College of Cardiology, Governor for VT and President of the Northern New England Chapter  
American College of Cardiology, Member, ACC Program Director and GME Steering Council  
American College of Cardiology, Member, Membership Committee  
American College of Cardiology, Organizer, Virtual Learning Panel  
ASNC, Member, Health Policy Council

**Robert J. Kelm, Jr., PhD**  
UVM Institutional Biosafety Committee, Chair  
Graduate Studies Committee, Department of Biochemistry, Chair  
Biochemistry Graduate Program, Director

**Rony Lahoud, MD**  
American College of Cardiology, Fellow  
Society of Cardiac Angiography and Intervention, Fellow, Member of Communications Steering Committee

**Martin M. LeWinter, MD**  
Council on Clinical Cardiology, American Heart Association, Fellow  
American College of Cardiology, Fellow  
Council on Circulation and Basic Cardiovascular Sciences, American Heart Association
Association of University Cardiologists, Fellow
International Academy of Cardiovascular Sciences, Fellow

Daniel Lustgarten, MD
Heart Rhythm Society, Fellow
American College of Cardiology Political Action Committee, Member
Paul Dudley White Society - Cardiology Division, Member

Richard L. Page, MD
Heart Rhythm Society, Past President
Association of Professors of Cardiology, Past President
American Clinical and Climatological Association, Councilor

Matthew W. Watkins, MD
Northern New England Cardiovascular Disease Study Group, Executive Board
Green Mountain Care Board, Vt. State health care reform program, Advisory Board
Green Mountain Care Board, Vt. State health care reform program for specialty practice, Technical Advisory Board

Editorships and Editorial Boards

Philip A. Ades, MD
Consulting Editor (former Editor-in-Chief): Journal of Cardiopulmonary Rehabilitation and Prevention
Reviewer: Circulation, JACC, JAMA Cardiology, JACC Heart Failure, Journal of Cardiopulmonary Rehabilitation and Prevention

Harold L. Dauerman, MD
Associate Editor, Journal of the American College of Cardiology

Prospero B. Gogo, MD
Reviewer: American Journal of Cardiology and Coronary Disease

Rony Lahoud, MD
Editorial Board: Cardiovascular Revascularization Medicine

Martin M. LeWinter, MD
Section Editor: Myopericardial Disease, Up-To-Date
Editorial Boards: Circulation, Heart and Vessels, Experimental and Clinical Cardiology, Current Cardiology Reviews, Heart Failure Reviews

Daniel Lustgarten, MD
Editorial Board: Journal of Innovations in Cardiac Rhythm Management

Richard L. Page, MD
Editorial Board: American Heart Journal
Section Editor: Cardiac Arrhythmias, Up-To-Date

**Peter Spector, MD**  
Editorial Board: *Journal of Cardiovascular Electrophysiology*

**Marc D. Tischler, MD**  

**Michael J. Toth, PhD**  

**Study Sections, National Advisory Boards, National/International Invited Talks**

**Harold L. Dauerman, MD**  
Data Safety and Monitoring Board for 5 National trials of renal denervation, percutaneous mitral intervention, percutaneous tricuspid intervention and coronary atherectomy  
Via the Harvard Clinical Research Institute and the Cardiovascular Research Foundation.

**Rony Lahoud, MD**  
Society of Cardiac Angiography and Intervention, Invited Speaker at 2019-2020 Annual Meetings

**Martin M. LeWinter, MD**  
Consultant, Kiniksa Therapeutics  
Consultant, SOBI Orphan Therapeutics  
“Acute and Recurrent Pericarditis”, lecture for Kiniksa Therapeutics sponsored conference

**Richard L. Page, MD**  
FDA Circulatory System Devices Panel, Past-Chair

**Michael J. Toth, PhD**  
National Institutes of Health, ZRG1 F10B-B, Ad hoc

**Major Faculty Honors and Awards**

**Sherrie Khadanga, MD**  
American Association of Cardiovascular and Pulmonary Beginning Investigator Award 2019  
Selected for the American College of Cardiology Leadership Academy Cohort IV

**Michael J. Toth, PhD**  
Distinguished Investigator, Cardiovascular Research Institute of Vermont
Grants

**Philip A. Ades, MD**
NIH: The National Institute of General Medical Sciences: Vermont Center on Behavior and Health (COBRE Grant). P20GM103644
Role: Associate Director

Case Management vs Financial Incentives on Cardiac Rehabilitation Participation in Low SES Individuals. R33HL143305
Role: Co-Principal Investigator

**Harold L. Dauerman, MD**
Impact of Nitric Oxide Generation on Acute Kidney Injury (with R. Solomon and R. Lahoud): Funded by Sonogenix, 49,000 dollars.

RUC-4, a novel intravenous antiplatelet agent, for patients with ST elevation myocardial infarction. A Phase II Trial. Sponsored by Celecor.
Role: National Steering Committee

Role: Site principal investigator. Grant funding 250,000 dollars

EVOlVE SHORT DAPT, A National Registry of 3 Months Dual Antiplatelet Therapy in Conjunction with SYNERGY Bioresorbable Polymer Drug Eluting Stent for Patients at High Risk of Bleeding, National Steering Committee. Funded by Boston Scientific.
Role: Site Principal Investigator. Grant funding 300,000 dollars

Transcatheter Aortic Valve Replacement to UNload the Left ventricle in patients with ADvanced heart failure: a randomized trial (TAVR UNLOAD. Funded by Edwards.
Role: Site principal investigator. Grant funding 250,000 dollars

CoreValveTranscatheter Aortic Valve Replacement in Patients at Low Risk for Surgical Aortic Valve Replacement. Funded by Medtronic.
Role: Site principal investigator. Grant funding 250,000 dollars

**Friederike Keating, MD**
NIH 1U01HL133817-01
Myocardial Ischemia and Transfusion (MINT)
Role: Site Principal Investigator

**Robert J. Kelm, Jr., PhD**
Atomwise, Inc. AIMS Award A19-363
Identification of Small Molecules Targeting Purine-Rich Element Binding Protein B
Role: Principal Investigator

UVM Cancer Center Pilot Project 2020
Evaluation of Purine-Rich Element Binding Protein B as a Druggable Target in Cancer Therapy
Role: Principal Investigator

**Sherrie Khadanga, MD**
VCBH COBRE Pilot study P20GM103644 (awarded $50k) for 2018 to 2020

VCBH COBRE P20GM103644 ($250k/year)
Role: Project Director

CVRI Early Career Grant ($9500)
Role: Principal Investigator

**Rony Lahoud, MD**
XIENCE 90: A Safety Evaluation of 3-month DAPT After XIENCE Implantation for HBR patients
Role: Site Principal Investigator

Shockwave Medical, Inc.
SHOCKWAVE Coronary Lithoplasty Study (Disrupt CAD II)
Role: Site Principal Investigator

**Martin M. LeWinter, MD**
NIH RO1 HL118524
Myofilament Basis of Diastolic Dysfunction in HFpEF
Role: Principal Investigator

Rilonacept Inhibition of Interleukin-1 Alpha and Beta for Recurrent Pericarditis: A Pivotal Symptomatology

**Daniel L. Lustgarten, MD, PhD**
Cross X4 15-406: Evaluate the presence of PNS in pts who receive a BSCI device with SJM LV Lead
Role: Sub Principal Investigator

PSR M09-167: Product Surveillance Registry
Role: Sub Principal Investigator

Protego DF4 15-353: Determine the effectiveness of Biotronik’s DF4 lead
Role: Principal Investigator

Quadripolar Pacing Post Approval Study M13-013: Evaluate the acute and chronic performance of a Quadripolar CRT-D device system in a patient population indicated for cardiac resynchronization therapy
Role: Principal Investigator
TEMPO 15-008: To evaluate the effect of GS-6615 compared to placebo on the overall occurrence of appropriate ICD interventions (antitachycardia pacing [ATP] or shock) in subjects with ICD or CRT-D during the first 24 weeks of treatment
Role: Principal Investigator

MR-HIS 16-244: Retrospective multicenter analysis of His bundle pacing outcomes
Role: Principal Investigator

HIS Bundle Pacing Registry 00000048: The HBP Registry is a prospective, observational, multi-center registry
Role: Principal Investigator

**Peter S. Spector, MD**
UVM Spark award “Seeing Atrial Fibrillation through a clearer lens”
Role: Principal Investigator

**Michael J. Toth, PhD**
NIH R01 AR065826
Skeletal Muscle Atrophy and Dysfunction in Human Cancer
Role: Principal Investigator

NIH R01 AG050305
Skeletal Muscle Atrophy and Dysfunction Following Total Knee Arthroplasty
Role: Principal Investigator

**Matthew W. Watkins, MD**
Capricor, Inc.
Randomized, Double-Blind, Placebo-Controlled Phase I/II Study of the Safety and Efficacy of Intracoronary Delivery of Allogeneic Cardiosphere-Derived Cells in Patients With an Anterior Myocardial Infarction and Ischemic Left Ventricular Dysfunction (ALLogeneic Heart STem Cells to Achieve Myocardial Regeneration, ALLSTAR) – Enrollment ongoing
Role: Site Principal Investigator

NIH/Renova Therapeutics
Adenovirus Vector Type 5 (Ad5.hAC60 Expressing Human Adenylyl Cyclase Type 6) Administered via Intracoronary Catheterization – enrollment completed 2014, study ongoing
Role: Site Principal Investigator

**Joseph Winget, MD**
AdaptResponse 15-066: Test the AdaptivCRT algorithm in CRT indicated patients
Role: Principal Investigator

QP Excel 17-0163: Confirm safety and effectiveness of the Sentus QP LV lead and BIO-TRONIK CRT-D.
Role: Principal Investigator
Publications


Hopkins, WE, Golper, TA, Beathard, GA. Pulmonary hypertension in hemodialysis patients. In: UpToDate, Post, TW (Editor-in-Chief), Wolters Kluwer Health 2019.


Meyer M, LeWinter MM. Heart Rate and Heart Failure With Preserved Ejection Fraction: Time to Slow β-Blocker Use?. *Circ Heart Fail*. 2019;12(8):e006213. doi:10.1161/CIRCHEARTFAILURE.119.006213


Voigt T, Tourville TW, Falcone M, Slauterbeck JM, Beynnon BD, Toth MJ. Resistance training-induced gains in knee extensor strength are related to increased neural cell adhesion molecule expression in older adults. BMC Res Notes 18: 595, 2019


Dermatology at the University of Vermont Medical Center is a division of the Department of Medicine. Our division employs six general dermatologists, four surgical dermatologists, a pediatric dermatologist and five experienced physician assistants. We provide general dermatology care to the community as well as specialized consultation with particular strengths in the treatment of psoriasis, cutaneous lupus, dermatomyositis, cutaneous lymphoma, and all forms of skin cancer including melanoma. In 2019 we saw 35,648 patients and generated 74,979 wrRVU. The COVID pandemic slowed our services for two months, but we are now back full steam seeing patients.

This year we said goodbye to Julie Lin and Laura McGevna, both of whom joined private practices in the community. We work with them regularly. Dr. Lin has remained on in her EPIC / EMR role for the Department of Medicine.

The COVID pandemic necessitated the rapid rollout of teledermatology services. We have found telemedicine visits provide excellent care for follow-up care, pediatric dermatology, psoriasis, dermatitis and numerous other skin diseases. Because of the hands on nature of dermatology, most visits are still performed in person, and we are back to full schedules.

We have hired two new physicians and one new physician assistant. Dr. Julia Barker splits her time between the UVMMC and CVMC in Berlin. Dr. Evan Piette provides services at the UVM Medical Center main campus and will soon provide services at Porter Medical Center in Middlebury. Our new physician assistant, Morgan Rogers, has hit the ground running with a full schedule to accommodate new and returning patient visits.

Dr. Glenn Goldman is the President of the American College of Mohs Surgery. He also serves on the Board of Directors of the American Society for Dermatologic Surgery where he is Chair of the International Travelling Mentorship Program. This year he was granted an endowed Professorship and is now the Follansbee Professor of Dermatology at the UVM College of Medicine. He was also appointed Chair of the Coding and Reimbursement Committee of the American Academy of Dermatology.

Dr. Todd Holmes was promoted to Full Professor in recognition of his ongoing and outstanding academic contributions. He remains heavily engaged in the surgical training of our residents and fellows. He is the Chair of the International Fellowship Training Program of the American Society for Dermatologic Surgery. He is very active on multiple committees with a special interest in the Operations Committee.

Joseph Pierson, MD is the Dermatology Residency Director. He provides a very high level of academic service, serving on one committee for the UVMMC, four committees for the Department of Medicine, and three committees within dermatology. He is currently engaged in the diversity and inclusion task.
force for the Department of Medicine. Dr. Pierson publishes broadly and has been appointed to the Editorial Board of the American Academy of Dermatology. He was the lead author of a “top ten” article this year! He is very active in the Association of Professors in Dermatology.

Christine Weinberger, MD was promoted to Associate Professor of Medicine. She is developing a collaboration with a local dermatology group to provide Mohs micrographic surgery in an office setting.

Dr. Melanie Bui is our most active research dermatologist and is exceptionally dedicated to student and resident research. In the last three years she has mentored 17 medical students. She is our quality leader and this year during the pandemic she initiated can completed a far-reaching overhaul of our melanoma staging, tracking and followup system. She is engaged in multiple committees at the medical center, regionally and nationally. Dr. Bui has taken on our public face with multiple appearances in the local media for public education about sun and the skin as well as women’s dermatological issues. In the past year she and our students and residents had 12 posters, presentations and virtual presentations.

Dr. Keith Morley continues to offer broad ranging pediatric dermatology services. He provides pulsed dye laser treatment of vascular birthmarks, simple excisions, and diagnostic skin biopsies with sedation in the Comfort Zone if needed. He lectures broadly in the community. Dr. Morley continues as a Pediatric Contributing Editor for Visual Dx, a patient and physician-centered telehealth and public health web-based application. He serves on the Society of Pediatric Dermatology’s Education Committee and the Maintenance of Certification Committee. This year he was appointed to the Advisory Board Representative of the Vermont Dermatology Society to the American Academy of Dermatology (AAD). As always he will be volunteering with Camp Discover, a camp for children with chronic skin conditions.

Dr. David Chen focuses on Mohs surgery. He has taken over and revamped the entire dermatology medical school curriculum and has added defined metrics to improve the experience.

Dr. Ankit Gor sees patients both at UVMMC and in Plattsburgh at CVPH. He has facilitated NY state telehealth services and is working with the E-consult team to improve the process for outside consultations.

Each month we host medical students for clinical or research rotations in dermatology. On average one or two University of Vermont medical students per year choose to enter the field of dermatology. Due to the tremendously-competitive nature of dermatology as a specialty, each student requires careful guidance and assistance in procuring a residency. As usual, last year our two UVM students interested in dermatology matched at excellent training programs.

We continue to volunteer regularly at the Community Health Center Free Clinic. Each month, an attending physician supervises the residents and Physician Assistants in the provision of free care to patients at the Community Health Center in Burlington. This provides a service to the community and is also a superior experience for our residents and fellow, who are able to participate in the care of an underserved population.
Faculty

Glenn Goldman, MD
Rogers and Nancy Follansbee Professor of Medicine
Director, Dermatology Division
Director, Mohs Surgery and Dermatologic Oncology Fellowship
President, American College of Mohs Surgery
Board of Directors, American Society for Dermatologic Surgery

Mohs Surgery and Reconstructive Surgery
Management of high-risk skin cancers
Cosmetic Dermatology
Procedural Dermatology Education
National Health Care Policy
Continuing Medical Education
International Dermatologic Surgery

Todd Holmes, MD
Professor of Medicine
Surgical Dermatology and Cutaneous Oncology
Mohs and Reconstructive Surgery
Resident and Fellow Education
International Education in dermatologic surgery

Christine Weinberger, MD
Associate Professor of Medicine
Mohs Surgery and Reconstruction
Mohs Surgery for Melanoma
Skin Cancer in Solid Organ Transplant Recipient

Joseph Pierson, MD, Col US Army
Associate Professor of Medicine
General Medical Dermatology
Residency Education in Dermatology
Diversity and Inclusion

Melanie Bui, MD, PhD
Assistant Professor of Medicine
General Medical Dermatology
Immunology
Dermatology Research

David Chen, MD
Assistant Professor of Medicine
Mohs Surgery and Reconstruction
Cosmetic Dermatology
Medical Student Education

Keith Morley, MD
Assistant Professor of Medicine
Pediatric Dermatology
Pediatric Laser Surgery

Ankit Gor, MD
Assistant Professor of Medicine
• General and Surgical Dermatology
• CVPH Plattsburgh Outreach

Aliza Fischer, MD
Assistant Professor of Medicine
• General and Surgical Dermatology
• CVMC Berlin Outreach

Julia Barker, MD
Assistant Professor of Medicine
• General and Surgical Dermatology
• CVMC Berlin Outreach

Evan Piette, MD
Assistant Professor of Medicine
• General and Surgical Dermatology
• Teledermatology
• Middlebury Outreach

Fellow MSDO 2020-2021
Julien Lanoue, MD, PGY-5

Residents
Lucy Ledyard, MD, PGY-4
Alexandra Charos, MD, PGY-4
Daniel Bax, MD, PGY-3
Dustin Taylor, MD, PGY-3
Carli Whittington, MD, PGY-3
Santana VanDyke, MD, PGY-2
Nate Bombardier, MD, PGY-2

Physician Assistants:

Deb Roseman, PA:
Deb has been with us for over 15 years. She has decades of experience as a dermatology physician assistant and has a following of thousands of patients for whom she provides care. She is active in teaching students and in mentoring those with potential interest in becoming physician assistants.

Anne Klein, PA
Anne is a surgical PA, and works with the dermatologic surgeons daily. She trained for years with a plastic surgeon and has exceptional procedural skills. A testament to her skill is that physicians refer patients
to her regularly for surgical excisions. She is also active in teaching students and in mentoring those with potential interest in becoming physician assistants.

**Rich Callahan, PA**
Rich is experienced in dermatology and provides both medical and minor surgical dermatology care. He brings with him many patients from his former practice. Rich has a particular interest in dermoscopy and has championed the use of this technique for the evaluation of pigmented lesions.

**Emilie Rainville, PA**
Emilie was our medical assistant prior to going to PA school. She has trained with us and hits the ground running with a strong background in dermatology.

**Morgen Rogers, PA**
Morgen is our newest PA. She started out in dermatology as a medical assistant and we are very pleased to have her back on our team as a physician assistant.

**Endowed Professorships**
Glenn Goldman, M.D.
Rogers and Nancy Follansbee Professorship in Dermatology

**Editorships and Editorial Boards**

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<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Dr. Morley</td>
<td>Editor for Pediatric Section of VisualDx</td>
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<tr>
<td>Dr. Pierson</td>
<td>Editorial Board, Journal of the American Academy of Dermatology</td>
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**Institution Service**

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<th>Name</th>
<th>Position</th>
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<tr>
<td>Dr. Goldman</td>
<td>Chair, Medicine Credentials Committee</td>
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**Leadership in Professional Societies:**

**Vermont Dermatologic Society**

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<th>Name</th>
<th>Position</th>
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<tr>
<td>Dr. Goldman</td>
<td>President</td>
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<tr>
<td>Dr. Bui</td>
<td>Treasurer</td>
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**American Academy of Dermatology**

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<th>Name</th>
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<tr>
<td>Dr. Goldman</td>
<td>Chair of the Coding and Reimbursement Committee</td>
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**American Society for Dermatologic Surgery**

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<th>Name</th>
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<tr>
<td>Dr. Goldman</td>
<td>Board of Directors</td>
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<tr>
<td>Dr. Goldman</td>
<td>Chair of the ASDS International Traveling Mentorship Committee</td>
</tr>
<tr>
<td>Dr. Holmes</td>
<td>Chair of the ASDS ITMP Fellowship Subcommittee</td>
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**Dermatology Foundation**

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<th>Name</th>
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<tr>
<td>Dr. Goldman</td>
<td>Leader’s Society State / Regional Chair</td>
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<tr>
<td>Dr. Pierson</td>
<td>Leader’s Society State / Regional Vice Chair</td>
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**American College of Mohs Surgery**

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<tr>
<td>Dr. Goldman</td>
<td>President</td>
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Faculty, Resident and Fellow Peer-Reviewed Publications


Potter KA, Charos E, Chen DL. Repair of a deep auricular wound. Dermatol Surg 2019;epub ahead of print


Loyal J, Farrell E, Pierson JC. Atretic Cephalocele with Hypertrichosis – Case Report, Differential Diagnosis, and Workup. Cutis. (Accepted)

Tkachenko E, Vleugels R, Pierson JC. Porphyria Cutanea Tarda Masquerading as Systemic Sclerosis: Two Cases Demonstrating an Important Clinical Observation. J Rheumatol (Accepted)

Shea K, Cook D, Pierson J. Telangiectatic patch on the forehead of a middle-aged man. Cutis (Accepted)


The Division of Endocrinology and Diabetes
Joel J. Schnure, MD, Director

http://www.med.uvm.edu/medicine/endocrinology

The 2019-2020 academic year continued the trend of increased research and patient care opportunities for the Division of Endocrinology and Diabetes. The Division serves the residents of Vermont and upstate New York with a goal of delivering seamless, system-wide care within the University of Vermont Health Network for endocrine-related disorders. Our 8 physicians, 2 nurse practitioners, and 3 certified diabetes educators provide consultative and ongoing care through our outpatient clinic at Tilley Drive, which has approximately 14,000 visits per year (4th in the Department of Medicine); the Division also operates a consult service at the UVM Medical Center and continues to develop outreach endocrine services at our Network partner hospitals, CVPH in Plattsburgh, NY and Central Vermont Medical Center, Berlin, VT. In addition, we continue to expand our telemedicine program delivered in conjunction with Northwest Medical Center in Saint Albans, VT.

The Division continues to make progress in expanding services to patients in the areas of osteoporosis/metabolic bone disease under the aegis of Jennifer Kelly, DO, Director of the Osteoporosis/Metabolic Bone Disease Clinic. Dr. Kelly, a renowned clinician and researcher in the area of metabolic bone disease, joined our faculty in 2017. Working with Dr. Elizabeth Ames from Orthopedics, they are establishing a fracture liaison service for patients to receive proper evaluation and treatment after sustaining an osteopathic fracture. The DXA Bone Density Machine moved into the Endocrinology clinic on Tilley Drive in early 2020. This has increased our ability to focus on screening and prevention for at-risk patients. Dr. Kelly is also involved in a research project with Dr. David Lunardini from Orthopedics that examines the use of abaloparatide in healing C2 fractures.

Kaitlyn Barrett, DO joined our faculty in mid-August following completion of her Fellowship in Endocrinology and Diabetes with the Division. As the Division’s newest Assistant Professor, Dr. Barrett continues the excellent patient care and education of trainees that she demonstrated during her fellowship; she also is active in our metabolic bone disease enterprise and implemented our Division’s outpatient telemedicine initiative with Northwestern Medical Center in St. Albans in October 2019.

With our existing expertise in telemedicine we have been able to successfully establish a robust and enhanced telemedicine practice with social distancing due to the restrictions placed upon our system because of the Covid-19 pandemic.

Our research initiatives continue at both the clinical and basic levels. Dr. Matthew Gilbert leads the way in clinical trials. He and his collaborators are working on cardiovascular outcome trials with oral GLP-1RAs, analysis of cardiovascular outcome trials with GLP-1 RA and SGLT2 in the elderly, and the use of GLP-1 RA in patients with renal insufficiency.

Data from a Division-initiated analysis of the cost-effectiveness of inpatient diabetes consultation (Drs. Schnure and Kelsey Sheahan (our 2nd year Fellow)) was presented at the American Diabetes Association meeting in June and has been submitted for publication. The study has shown a substantial decrease in length of stay in patients who receive an early Endocrine consultation. Other ongoing clinical research projects, including a study investigating the various treatment modalities for enteral and parenteral feeding for inpatients (Drs. Gilbert and Barrett) are proceeding.

The Division’s basic research efforts with Drs. Tom Jetton and Jay Gupta continue to focus on pancreatic islet biology, diabetes, and metabolic disease and, in collaboration with Jana Kraft, PhD, on the effects of bioactive lipids on gut microbiota eubiosis, energy metabolism, and aging. Dr. Kraft is a lipid biochemist with expertise in human nutrition; in addition to her basic research with Drs. Jetton and Gupta, she is collaborating with Matthew Gilbert, DO, MPH on a clinical study of dietary dairy lipids and diabetes risk.

Our faculty participate in educational activities at multiple levels. Clinical faculty work closely with medical students and residents rotating through the Endocrine Service and they train two Fellows in Endocrinology each year. Dr. Kelly supervises the Metabolic Bone Conference series and ensures the quality and diverse topic range of this monthly lecture program. She also works with Drs. Nathan and Gilbert to be sure that the Endocrine lectures
provided weekly to Endocrine fellows, faculty, and staff are focused on a wide range of Endocrine pathologies and provide the most up-to-date standards of care. The Division’s educational mission is also evidenced by faculty participation in LCOM initiatives, including Dr. Schnure and Dr. Kelly’s service with The Teaching Academy, which promotes education and scholarship of faculty members.

The faculty’s medical education focus also extends beyond UVM/UVMMC through CME-accredited, day-long conferences available to healthcare providers in our region. Dr. Kelly was the course director for and a presenter at “Osteoporosis Update for Primary Care,” held in September 2019; Dr. Barrett also presented a program at this conference. Dr. Schnure was the course director for the “2nd Annual Diabetes for Primary Care Conference,” held in November 2019. This conference included local and nationally recognized experts in treating diabetes, heart disease, and peripheral neuropathy.

Dr. Schnure was named by Dr Isabelle Desjardins, the Chief Medical Officer at UVMMC, to serve as chairman of the newly formed Diabetes Oversight Task Force. The Task Force has been charged with enhancing the care of our patients with diabetes throughout our network. The Task Force expedites the work of Dr. Gilbert, who continues to serve as Chair of the Inpatient Glycemic Control Committee, whose mission includes education of hospital physicians and staff on glucose management strategies.

Dr. Jetton continues to serve as Director of the graduate course, Science Communication, which has become part of the required curriculum for the Cellular, Molecular and Biomedical Sciences Program. Dr. Jetton also continues to teach classes in human structure and function to medical students and was instrumental in updating of curriculum. He also works one-on-one in his lab to train undergraduate, graduate, and medical students in research techniques.

Clearly, the 2019-2020 year was a busy, productive, and very challenging one for the Division of Endocrinology and Diabetes and the programmatic and research strides made this year ensure the continued effectiveness of our service and education missions.

**Faculty**

**Joel J. Schnure, MD**  
Professor of Medicine  
Director, Division of Endocrinology and Diabetes  
Chair, Diabetes Oversight Task Force, UVMMC  
Member, The Teaching Academy  
Member, DOM Operations and Efficiency Committee  
Lead, Diabetes Chronic Care Initiative  
Lead, Task Force on In-patient Diabetes Education  
Member, In-patient Diabetes Initiative

Research and clinical interests:
- Diabetes care for Type 1, Type 2, and diabetes in pregnancy
- Thyroid disease
- Pituitary disease
- Integration of home glucose monitoring into electronic medical records
- Fructosamine as an alternative to HbA1C in pregnancy
- Web-based algorithms in titration of basal insulin in adults with Type 2 diabetes
- HbA1c and fructosamine in early pregnancy: correlation to 24-28 week OGTT
- Cost-effectiveness of endocrine consultation in inpatients with diabetes

**Kaitlyn Barrett, DO**  
Assistant Professor of Medicine  
Research and clinical interests:
- Metabolic bone disease and osteoporosis
- Thyroid disorders
- Diabetes mellitus

**Sree Susmitha Garapati, MD, FACE**
Assistant Professor of Medicine
Clinical interests:
- In-patient and out-patient diabetes management
- Thyroid disease, including thyroid ultrasound and biopsy
- Adrenal and pituitary diseases
- PCOS
- Male hypogonadism

Matthew P. Gilbert, DO, MPH
Associate Professor of Medicine
Director, Endocrinology Fellowship Program
Chairman, Inpatient Diabetes Management subcommittee of P and T
Research and clinical interests:
- Diabetes mellitus
- Thyroid disorders
- Thyroid cancer
- Male hypogonadism

Dhananjay (Jay) Gupta, PhD
Research Assistant Professor
Research interests:
- Pathogenesis of type 2 diabetes and islet biology
- Epigenetic regulation of adaptive islet beta cell response with changing metabolic milieu

Thomas L. Jetton, PhD
Professor of Medicine
Research interests:
- Nutrient and neural regulation of β-cell mass homeostasis
- Diet influence on intestinal microbiota and autoimmune disease susceptibility
Teaching interests:
- Human Structure and Function
- Gastrointestinal Physiology
- Regulation of Energy Homeostasis
- Science Communication

Jennifer Kelly, DO, FACE
Associate Professor of Medicine
Director of the Metabolic Bone Program
Member, The Teaching Academy
Research and clinical interests:
- Osteoporosis
- Metabolic bone disorders, including Paget's Disease of Bone
- Diabetes mellitus

John (Jack) L. Leahy, MD
Professor of Medicine
Sarah Nichols Gruenig Green & Gold Professor in Diabetes Research
Co-Director, Division of Endocrinology and Diabetes
Research and clinical interests:
- Diabetes mellitus
- Islet beta-cell physiology and dysfunction

Muriel H. Nathan, MD, PhD
Professor of Medicine
Research and clinical interests:
- Diabetes (including use of insulin pumps) and PCOS
- Thyroid cancer, thyroid nodules, and hyper- and hypothyroidism
- Pituitary tumors and dysfunction
- Adrenal disorders, hirsutism
- Inpatient improvement projects funded by the James M. Jeffords Institute for Quality
- SQ and IV insulin forms, insulin pump, DKA

Juan Pablo Perdomo Rodriguez, MD
Assistant Professor of Medicine
Research and clinical interests:
- Hyperthyroidism (overactive thyroid disorders)
- Thyroid nodules and cancer
- Cushing disease
- Adrenal insufficiency in pregnancy
- Hyperaldosteronism
- Hyperparathyroidism and osteoporosis
- Adrenal tumors

Fellows
Kelsey Sheahan, MD (F5, began training 8/28/2018; expected completion 11/20/2020)
Amy Shah, DO, MPH (F5, began training 7/1/2019; expected completion 6/30/2021)
Shreya Amin, MD (F4, will begin training 7/1/2020; expected completion 6/30/2022)

Nurse Practitioners and Certified Diabetes Educators
Margaret Costello, FNP, MS
Ann Gotham, ANP, MSN, ScM
Chassidy Deslauriers, MBA, RD, CDE
Mary Spence, RN, CDE
Linda Tilton, MS, RD, CDE

Graduate Students, Post-doctoral Fellows, MD PhD Students
None

Endowed Professorships
Sarah Nichols Gruenig Green & Gold Professor in Diabetes Research
Held by John (Jack) L. Leahy, MD

Leadership in Professional Societies
Matthew P. Gilbert, DO, MPH
Vermont Board of Osteopathic Physicians and Surgeons, Secretary as of November 2019
Dhananjay (Jay) Gupta, PhD
American Diabetes Association
American Society for Biochemistry and Molecular Biology
Boston-Ithaca Islet Club

Thomas L. Jetton, PhD
Boston-Ithaca Islet Club, senior member

Jennifer J. Kelly, DO, FACE
National Osteoporosis Foundation, member of the Ambassadors Leadership Council
American Association of Clinical Endocrinologists national organization:
  Task Force to Update the AACE/ACE Postmenopausal Osteoporosis Clinical Practice Guidelines
  Membership Committee, member
  Bone and Parathyroid Disease State Network Committee, member
  Thyroid Disease State Network Committee, member
American Association of Clinical Endocrinologists, New England Chapter, Board of Directors
International Society of Clinical Densitometry, Web Advisory Committee member
New England Bone Club, 2018 and 2019 Annual Meeting Planning Committee member
American Association of Clinical Endocrinologists (AACE) national organization, Bone and Parathyroid Disease
  State Network Committee member and Thyroid Disease State Network Committee member

Muriel H. Nathan, MD, PhD
New England Thyroid Club, senior member

Editorships and Editorial Boards

Dhananjay (Jay) Gupta, PhD
Editorial Board: Journal of Endocrinology, Diabetes and Obesity

Thomas L. Jetton, PhD
Reviewer: Diabetes, Endocrinology, PNAS, Metabolism, Diabetologia, American Journal of Physiology, PLoSOne

John (Jack) L. Leahy, MD
Associate Editor: Journal of the Endocrine Society
Editorial Board: Journal of Biological Chemistry

Joel J. Schnure, MD
Editorial Board: Coronary Artery Disease

Study Sections and Federal Advisory Boards

Dhananjay (Jay) Gupta, PhD
Grant Review Panel, Diabetes UK

Thomas L. Jetton, PhD
Federal review boards:
  EMNR-Study Section (SBIR and STTR), ad hoc reviewer
  NIDDK/NIH, ad hoc reviewer
  NIH ($10 SIG/SIFAR), ad hoc reviewer

John (Jack) L. Leahy, MD
Hillblom Foundation, Scientific Advisory Board
Major Faculty Awards
None

Grants and Research

Dhananjay (Jay) Gupta, PhD
Department of Medicine (UVM) IGP Research Award
Vitamin D Signaling and Bioavailability in Pre-Clinical Models of Type 2 Diabetes (1/15/2020-1/15/2021)
Role: Principal Investigator

Jennifer J. Kelly, DO, FACE
Shire/Takeda
PARADIGM (Physicians Advancing Disease Knowledge in Hypoparathyroidism): A Registry for Patients With Chronic Hypoparathyroidism (2018-present)
Role: Site Principal Investigator

Role: Site Principal Investigator

Osteoporosis Center DXA Data Repository (2019-present)
Role: Site Principal Investigator

Publications


## Abstracts

**Gilbert MP, DeVoe SG, Nevares A, Teneback CC.** Improving Health Care Transitions for Young Adults at the University of Vermont Medical Center. Poster presented at University of Vermont Medical Center Department of Medicine Scholarly Quality Improvement Poster Session; May 8, 2020; Virtual Presentation.


Presentations

Kaitlyn Barrett, DO

Matthew P. Gilbert, DO, MPH
“Diabetes Management: Beyond Glycaemic Control” presented at the Global Diabetes Summit held in Frankfurt, Germany, October 4-5, 2019.

Jennifer J. Kelly, DO, FACE
Course Director for “Osteoporosis Update for Primary Care” and speaker for “What’s New in Osteoporosis 2019,” presented September 27, 2019 at the UVM Davis Center.

“Boning Up on Bone Health” at the 25th annual Vermont 50+ Expo held February 15, 2020 at the University Mall in South Burlington.

John (Jack) L. Leahy, MD
Debate participant for “Management of Type 2 Diabetes – Glucose vs. Obesity-centered Approach” arguing in favor of a glucocentric approach to treatment; held at Obesity Week 2019, the annual meeting of the Obesity Society, November 3-7, 2019 in Las Vegas.

Joel J. Schnure, MD
Course Director for “Diabetes 2019: Updates on Management and Treatment,” the 2nd annual Diabetes for Primary Care Conference; attendees were primary care providers and clinicians from Vermont, New Hampshire, Maine, and upstate New York. November 8, 2019; Burlington, Vermont.
Annual Report July 1, 2019-June 30, 2020

Division of Gastroenterology and Hepatology

Richard Zubari, MD, Section Chief
http://www.med.uvm.edu/medicine/gastro/home

The Gastroenterology and Hepatology Division at the University of Vermont College of Medicine/University of Vermont Medical Center has seven Gastroenterologists, one Advanced Practice Provider, four Gastroenterology Fellows, and one Ph.D.

2019-20 has been a tough year for the gastroenterology division, the medical center, and the health care system in general. During the COVID pandemic the cohesion, compassion, comradery, ingenuity and grit of the UVMMC gastroenterology division has never been so evident and needed. These traits were evident in our care of patients, our role as educators, and in the research, we conducted.

We have continued to provide exceptional gastrointestinal care to our community through this period. In order to protect our patients and health care workers from illness we abruptly limited endoscopy to urgent procedures in March and then thoughtfully started ramping back up this summer to a point now in late July that we are back up to pre-COVID volumes. During this period, we rapidly implemented telehealth visits. We did these visits from home, from our office, from endoscopy, and from clinic. Because we adopted telehealth so readily, we were able to seamlessly provide state-of-the-art gastrointestinal care to our community, and even reduce our long pre-COVID wait times. During the COVID era, we have also worked aggressively to improve our endoscopy triage and scheduling process in order to provide efficient and timely endoscopic care to our patients. We have positioned ourselves to significantly reduce our endoscopic backlog in the future.

Education of Fellows and Residents remains strong. Dr. Ferrentino continues to be our Fellowship Director. Dr. Reddy has taken on the role of Assistant Fellowship Director. Dr. Ganguly, who was promoted to full professor, also became a member of the teaching academy.

Education continues to be a priority for all members of our division. The challenges of maintaining social distancing resulted in us conducting conferences this year using teleconferencing. Although teleconferencing has limitations, it did allow us to stay connected and include physicians in our conferences that would otherwise have been difficult to include. Likely, this platform will be used in the future as we develop into a Network Department and try to reach learners at affiliated hospitals. During this period we were able to continue our regular educational conferences using teleconferencing, as well as adding liver rounds and gastroenterology morning report conferences to enhance the educational experience of our fellows and residents.

Research efforts were shut down during the first few months of the COVID pandemic. The unit remained productive despite this barrier. Dr. Lidofsky received a grant from the UVMHN to study the treatment of hepatitis C. Our division published articles on volumetric laser endomicroscopy for Barrett’s esophagus, diet and treatment in inflammatory bowel disease, risk factors for stent-associated cholangitis, intestinal serotonin and colitis, enteric neuroplasticy in inflammatory disease, and screening for hepatocellular cancer. We are currently conducting research in Hepatitis C, non-alcoholic steatohepatitis, treatment of IBD, pancreatic cancer, helicobacter pylori testing in peptic ulcer disease, novel technologies for esophageal dilation, and colonic neoplasia.
In summary, the Gastroenterology and Hepatology Division at the University of Vermont remains strong. The unprecedented challenges of this time have strained our system like no other. Through this time, it is clear that the greatest strength we have is our human capital. Our unit has always been about cohesion, collegiality, providing state-of-the-art compassionate care to patients in need, educating the future wave of health care providers, and having scientific inquisitiveness. These are the characteristics that are supporting us through this difficult time, and because of our collective talents, the Gastroenterology Unit remains strong. I am very proud to be part of this Division.

Richard Zubarik, MD

Nicholas Ferrentino, MD
Associate Professor of Medicine
Director, GI Fellowship Program
- Chronic Viral Hepatitis
- Management of Cirrhosis
- General Gastroenterology and General Hepatology
- Therapeutic Endoscopy

Joseph Frasca, MD
Assistant Professor of Medicine
Director of Inflammatory Bowel Disease
- Inflammatory Bowel Disease
- Crohn’s Disease
- Ulcerative & Microscopic Colitis
- Celiac Disease
- Biliary Tract Disorders

Eric Ganguly, MD
Professor of Medicine
Director of Endoscopy
- GI Oncology
- Endoscopic Ultrasound and GI Malignancies
- Barrett’s Esophagus and Radiofrequency Ablation for Barrett’s Esophagus
- Therapeutic Endoscopy
- GERD
- Inflammatory Bowel Disease

Gordon Jensen, MD, Ph.D.
Professor of Medicine and Nutrition
Senior Associate Dean of Research
- Nutrition assessment and therapy in chronic illness
- Short bowel syndrome
Steven Lidofsky, MD, Ph.D.
Professor of Medicine and Pharmacology
Director, Hepatology Section
Co-Director, Gastrointestinal Research
Director, MD-Ph.D. Program
  ▪ Cirrhosis
  ▪ Hepatocellular Carcinoma
  ▪ Hepatitis C
  ▪ Nonalcoholic Fatty Liver Disease

Gary Mawe, Ph.D.
Professor of Neurological Sciences; Adjunct Professor of Medicine and of Pharmacology
  ▪ Neural Regulation of the Digestive Tract
    (understanding changes in enteric neural circuits that contribute to altered gut function in inflammatory bowel disease and irritable bowel syndrome)

Sheela Reddy, MD
Assistant Professor of Medicine
  ▪ Alcohol Related Liver Disease
  ▪ Viral Hepatitis
  ▪ Nonalcoholic Fatty Liver Disease
  ▪ Autoimmune Liver Diseases
  ▪ Role of Liver Transplantation in Patients with End Stage Liver Disease

Doris Strader, MD
Professor of Medicine
  ▪ Viral Hepatitis
  ▪ Hepatitis C
  ▪ Nonalcoholic Fatty Liver Disease
  ▪ Eosinophilic Esophagitis
  ▪ Cirrhosis
  ▪ General Hepatology and General Gastroenterology

Richard Zubarik, MD
Professor of Medicine
Director of Gastroenterology & Hepatology Division
  ▪ GI Oncology
  ▪ Pancreatic Disorders
  ▪ Dysphagia
  ▪ Inflammatory Bowel Disease
  ▪ Therapeutic Endoscopy and EUS
  ▪ Endoscopic Ultrasound

Maia Stamieszkin, NP
Nurse Practitioner
  ▪ IBS
  ▪ FODA Map
Sonja Dawsey, MD  
GI Fellow

Brendan Everett, MD  
GI Fellow

Abubakar Ibrahim, MD  
GI Fellow

Jason Heffley, MD  
GI Fellow

**Leadership in Professional Studies:**

*Steven Lidofsky, MD, Ph.D.*
- AASLD Leadership
- Public and Clinical Policy Committee
- Abstract review hepatobiliary neoplasia for Liver Meeting and DDW
- Oral Session Moderator Digestive Disease Week 2019

*Gary Mawe, Ph.D.*
- Strategic Planning Committee, American Neurogastroenterology and Motility Society, 2015-present
- Fundamentals of Neurogastroenterology - Basic Science Committee, The Rome Foundation. The purpose of this committee is to develop a summary of the research and literature to date related to functional gastrointestinal disorders, and then offer guidelines or recommendations to help advance future research. 2012-present

**Editorships and Editorial Boards:**

*Steven Lidofsky, MD, Ph.D.*
- Ad hoc reviewer for American Journal of Gastroenterology
- Ad hoc reviewer for Clinical Therapeutics
- Ad hoc reviewer for Hepatology

*Gary Mawe, Ph.D.*
- Editorial Board: *Frontiers in Autonomic Neuroscience*, 2010-present
- Editorial Board: *Frontiers in Gastrointestinal Sciences*, 2011-present
- Editorial Board: *Journal of Visualized Experiments, (JoVE)*, 2011-present

*Doris Strader, M.D.*
- Reviewer, American Journal of Gastroenterology, Clinical Gastroenterology & Hepatology, 2009-Present
- Reviewer, Digestive Diseases and Sciences 2010- present
- Reviewer, AASLD publication, *Hepatology* Journal 2010-present
Richard Zubarik, M.D.

- Editorial Board Member, World Journal of Gastroenterology 2012-present
- Reviewer, Gastrointestinal Endoscopy 2004-present
- Reviewer, Evidence-Based Gastroenterology 2001-present
- Reviewer, Journal of Gastroenterology 2006-present
- Reviewer, Archives of Internal Medicine 2010-present
- Reviewer, Digestive Diseases and Sciences 2010-present
- Reviewer, International Journal of Inflammation 2012-present
- Reviewer, American Society for Gastrointestinal Endoscopy Publications Committee
- Reviewer, Journal of Endocrinological Investigation, 2015-Present

Study Sections and Federal Advisory Boards:
Steven Lidofsky, MD, Ph.D.

- Vermont Department of Health Steering Committee for Viral Hepatitis
- Appointed to Editorial Board, World Journal of Hepatology

Doris Strader, MD

- Director of Data Safety Monitoring Board for NIH Hepatitis B Research Network, 2011-Present

Grants – list all active by faculty member, PI
Steven Lidofsky, MD, Ph.D.

- UVMHN Medical Group (Steven Lidofsky, Co-PI with Andrew Hale) Empowering hepatitis C management in primary care by electronic linkage to specialty guidance (January 2020 - December 2021)

Pharmaceutical Sponsored Research
Steven Lidofsky, MD, Ph.D.

- Intercept: A phase 3 randomized long-term placebo-controlled multicenter study evaluating the safety and efficacy of obeticholic acid in subjects with nonalcoholic steatohepatitis (NASH)
- Gilead: A phase 3 multi-center double-blind randomized placebo-controlled trial of selonsertib in subjects with nonalcoholic steatohepatitis and advanced hepatic fibrosis
- Target Pharmasolutions: A multi-center study of the management and outcomes of subjects with nonalcoholic fatty liver disease
- Conatus: A phase 2 multi-center double-blind randomized placebo-controlled trial of emricasan in subjects with NASH cirrhosis and severe portal hypertension
- Intercept: A phase 2 randomized, long-term placebo-controlled multicenter study evaluating the safety and efficacy of obeticholic acid in subjects with cirrhosis due to NASH
- Celgene: A phase 2 multicenter study of the JNK inhibitor CC-90001 for non-alcoholic steatohepatitis (NASH) with advanced hepatic fibrosis or cirrhosis.
- Gilead (Steven Lidofsky, Site PI) A phase 3 randomized controlled trial for the FXR agonist cilofexor for noncirrhotic primary sclerosing cholangitis (2020-2022)

Joseph Frasca, MD

- Site Principal Investigator. A Study of the Efficacy and Safety of Risankizumab in Participants with Moderately to Severely Active Crohn’s Disease. AbbVie, Inc. Pending

Other Research
Richard Zubarik, MD
• Pancreatic Cancer Screening Employing CA 19-9 and Targeted Endoscopic Ultrasound (EUS) in a High Risk Population
• A Pilot Study to Determine if the Endoscopic Dilation Monitor can Create Real-Time Pressure/Volume and Pressure/Time Curves during Endoscopic Balloon Dilation of Esophageal Strictures, and if these Curves Vary According to Stricture Etiology.
• Choledocholithiasis After Normal Diagnostic Cholangiogram or Endoscopic Clearance of Bile Duct
• The Incidence and Risk Factors for Development of Ascending Cholangitis Following Common Bile Duct Stent Placement

Publications – peer reviewed, chapters, etc. (not abstracts)

Maarten Struyvenberg 1, Allon Kahn 2, David Fleischer 3, Anne-Fre Swager 4, Eric Ganguly 5, Vani Konda 6, Charles Lightdale 7, Douglas Pleskow 8, Amrita Sethi 9, Michael Smith 10, Arvind Trindade 11, Michael Wallace 12, Kenneth Wang 13, Herbert Wolfsen 14, G Tearney 15, Wouter Curvers 16, Cadman Leggett 17, Jacques Bergman 1. Expert Assessment on Volumetric Laser Endomicroscopy Full-Scans in Barrett’s Esophagus Patients With or Without High-Grade Dysplasia or Early Cancer


Joseph D Frasca 1, Adam S Cheifetz 2. Editorial: real-world short-term effectiveness of ustekinumab in 305 patients with Crohn’s disease-results from the ENEIDA registry


The Division of General Internal Medicine specializes in diagnosing, treating, and preventing medical problems in adolescents, adults, and the elderly. Our general internal medicine physicians work with their teams in the outpatient clinics to care for a large proportion of patients in our area. When the COVID-19 pandemic struck our area early in 2020 we had to act quickly to maintain connections to our patients through telemedicine. This allowed our patients to still get the care they needed in their homes without exposing them to potential risk of contracting the virus.

Our faculty physicians teach the principles of general internal medicine to medical students, resident physicians, professional colleagues, and community members. We hold several leadership roles at the College of Medicine and are proud to serve an integral role in our vibrant academic medical center.

**Service:**

Our clinical service includes approximately 42 physicians, nurse practitioners and physician assistants. We have four outpatient sites in Chittenden County. In April of 2020 our Essex providers moved into a brand new state of the art building.

In the office setting, patients are seen for a variety of acute and chronic medical problems, preventive care, health maintenance and preoperative exams. Our group has been a national leader in developing innovative models for care delivery. All four outpatient sites have been consistently recognized as NCQA as level 3 Patient Centered Medical Homes. In the era of new payment structures for health care, we have been transitioning to more value-based care models from the traditional fee-for-service model.

This year our general internal medicine faculty and providers will conduct approximately 70,000 patient encounters via in-person and virtual care (telemedicine and e-visits).

Our faculty and providers are extensively engaged in service at the state and national levels. A few examples include:

- President of the New England Society of General Internal Medicine, Immediate Past President of the Board of Directors of the Federation of State Medical Boards, member of the State Board Advisory Committee to the USMLE, member of the Vermont Commissioner of Health’s Task Force on Opioid Prescribing, USMLE Composite Committee member, Vermont Medicaid Drug Utilization Board members, OneCare Vermont Regional Clinician Representative, OneCare Population Health Committee Representative, Vermont Blueprint for Health Executive Committee, Councilor of the Vermont Chapter of the Alpha Omega Alpha Medical Honor Society
Education:
Division faculty members play a pivotal role in teaching and directing courses for a broad audience of clinical learners in the outpatient and inpatient settings. Our educational programs cover a wide spectrum, from communication skills to clinical skills, and from pre-medical students to post-graduate continuing medical education.

At the UVM College of Medicine, our faculty member’s act as preceptors, instructors, and facilitators for courses at all levels of the Vermont Integrated Curriculum. Additionally, we serve as course directors for Convergence (Dr. Patricia King), Doctoring Skills (Dr. Alan Rubin) and Outpatient Medicine Clerkship (Dr. Roberta O'Brien). Administrative leadership positions at the College of Medicine include Associate Dean for Clinical Education (Dr. Tania Bertsch), Associate Dean for Primary Care (Dr. Charles Maclean).

We also play key roles in the clinical education of the Internal Medicine residents. Our Adult Primary Care Burlington site houses the Internal Medicine Resident Clinic – where the Internal Medicine residents practice under the supervision of our preceptors and firm leaders in a busy clinic environment. Dr. Richard Pinckney and Dr. Halle Sobel lead the curricular coordination for the Resident Clinic.

Our educational endeavors extend to graduate students in analysis of clinical research, nurse practitioners in palliative care fellowship programs, and nurse practitioner students in clinical compassion. We educate our colleagues locally, regionally and nationally in a variety of venues. An example of this is the Vermont Academic Detailing Program which delivers educational outreach to Vermont’s primary care providers.

Research
Many of our clinical faculty conduct research via the General Internal Medicine Research unit and provide mentorship, resources, and a scholarly community that supports faculty from many departments in their investigations. We have a diversity of scholarly interests among our faculty including the impact of primary care redesign and mental health integration, narcotic prescribing practices in the outpatient setting, innovative models in medical education, improving transitions of care between health care settings, the use of portable technology in hypertension control, the role of inflammation in chronic disease management and disparities of health in rural populations.

Faculty

Adult Primary Care - Burlington

Claudia Berger, MD (Site Clinical Leader)
Assistant Professor of Medicine

Amy Dinitz, MD
Assistant Professor of Medicine

Mia Hockett, MD, MPH
Assistant Professor of Medicine

Michael Latreille, MD
Assistant Professor of Medicine

Benjamin Littenberg, MD (see Division of GIM-Research)
Professor of Medicine
Director, Division of General Internal Medicine - Research

Scott Luria, MD
Associate Professor of Medicine (Emeritus)
John Miller, MD  
Assistant Professor of Medicine

Richard Pinckney, MD, MPH  
Associate Professor of Medicine  
Co-Director, Internal Medicine Resident Clinic

Alan Rubin, MD (see Division of GIM-Research)  
Professor of Medicine

Halle Sobel, MD  
Associate Professor of Medicine  
Co-Director, Internal Medicine Resident Clinic

Emily Hadley Strout, MD  
Assistant Professor Medicine

**Adult Primary Care - Essex**

Karen Abernathy, MD  
Assistant Professor of Medicine

Tania Bertsch, MD  
Associate Professor of Medicine  
Associate Dean for Clinical Education

Gary Gilmond, MD  
Assistant Professor of Medicine

Diane Haddock, MD (Site Clinical Leader)  
Assistant Professor of Medicine

Patricia King, MD, PhD  
Professor of Medicine  
Convergence Course Director, Vermont Integrated Curriculum, UVM College of Medicine

Charles MacLean, MD (see Division of GIM-Research)  
Professor of Medicine  
Associate Dean for Primary Care  
- Health services research and epidemiology

Roberta O’Brien, MD  
Associate Professor of Medicine  
Director, Internal Medicine Clerkship

**Adult Primary Care – South Burlington**

Dennis Beatty, MD  
Associate Professor of Medicine

Jennifer Gilwee, MD  
Associate Professor of Medicine
Division Chief, General Internal Medicine

**Jason Gramling, MD**  
Assistant Professor of Medicine

**Emily Greenberger, MD**  
Assistant Professor of Medicine

**Diane Hakey, MD**  
Assistant Professor of Medicine

**Sara Roberts, MD**  
Assistant Professor of Medicine

**Marie Sandoval, MD**  
(Site Clinical Leader)  
Associate Professor of Medicine

**Susan Weinstein, DO**  
Assistant Professor of Medicine

**David Ziegelman, MD**  
Assistant Professor of Medicine

**Adult Primary Care - Williston**

**Anne Breña, MD**  
Assistant Professor of Medicine

**Lucy Miller, MD**  
(Site Clinical Leader)  
Assistant Professor of Medicine

**Dennis Plante, MD**  
Associate Professor of Medicine  
(Emeritus)

**Jonathan Benjamin Wilfong, MD**  
Assistant Professor of Medicine

**Other Division Members:**

**Timothy Plante, MD, MHS**  
Assistant Professor of Medicine

**Adam Atherly, Ph.D.**  
Director of the Health Services Research Center  
Professor of Medicine

**Nurse Practitioners, Physician Assistants, and Mental Health Specialists:**

**Adult Primary Care - Burlington**

Tracey Niquette, NP  
Laura Weiland, PA
**Adult Primary Care - Essex**
Sarah Bushweller, PA  
Alison Hall, PA  
David Spence, PA

**Adult Primary Care - South Burlington**
Diane Bell, NP  
Rachel Brodie, PA  
Sarah McLaughlin, NP  
Desiree Price, NP

**Adult Primary Care - Williston**
Genevieve Flanders, PA  
Meagan Goodwin, NP

**Leadership in Professional Societies:**
Patricia King, MD, PhD  
- Chair, Composite Committee of United States Medical Licensing Exam

Halle Sobel, MD  
- President, New England Chapter of Society of General Internal Medicine

Sarah Bushweller, PA  
- Board of Directors for the Physician Assistant Academy of Vermont  
- Vermont representative to the House of Delegates, American Academy of Physician Assistants

Dennis Beatty, MD  
- AAMC Council of Faculty and Academic Societies, Senior Representative from Larner College of Medicine

**Editorships and Editorial Boards:**
Halle Sobel, MD  
- Reviewer: Annals of Internal Medicine, AAIM, SGIM, JGIM, AJM

**Study Sections and Federal Advisory Boards:**
Patricia King, MD, PhD  
- Federation of State Medical Boards Advisory Council to the United States Medical Licensing Examination  
- National Board of Medical Examiners Standards Setting Committee for USMLE Step 1

**Major Faculty Awards:**
- Dean’s Faculty Award for Professionalism- Jennifer Gilwee, MD  
- Curriculum Innovation Award from the Class of 2022- Patricia King, MD, PhD  
- Bloomfield Early Career Professorship in Cardiovascular Research- Timothy Plante, MD, MHS
Grants

- Halle Sobel, MD
  SAMSHA grant
  Grant Number: 1 H79 TI082571-01
  Project Title: Increasing the Pipeline of MAT Prescribers: DATA Waiver Training for All Vermont Medical Students at The Larner College of Medicine

- Michael Latreille, MD
  UVM Medical Center Foundation Grant: A Learning Garden to Cultivate Patient and Community Health.
  Total funds: $68,279

- Benjamin Littenberg, MD, Richard Pinckney, MD (co-investigators)

- Emily Greenberger, MD
  UHC Fund Grant: Incorporating Ultra-brief Psychotherapy into a Primary Care Visit

- Sara Roberts, MD
  UHC Fund Grant: Effect of Patient Education Regarding Strength Training

Publications – peer reviewed, chapters, etc. (not abstracts)


Geriatric Medicine
Michael LaMantia, MD, Division Chief

https://www.med.uvm.edu/medicine/geriatrics

The Division of Geriatric Medicine specializes in providing world-class, personalized medical care to older adults in a variety of settings, including nursing homes, rehabilitation facilities, clinics, and patient homes. We strive to get to know our patients as individuals and recognize the important role that their family, friends, caregivers, and community play in their identity and in their care. We are excited to work with our colleagues across Vermont and Northern New York State to ensure that our area remains one of the best places in the country to age in place.

Our faculty physicians teach geriatric medicine to medical students, resident physicians, professional colleagues, and community members. We hold numerous leadership roles at the College of Medicine and are proud to serve an integral role in our vibrant academic medical center.

Service:
Our 8 physicians and 1 nurse practitioner care for many geriatric patients in Chittenden County, attending to elderly patients living independently, in assisted living, in local nursing homes, and at hospice. Our Geriatric Medicine Division does consultations for the care of older adults through our Adult Primary Care Williston location.

Education:
Our geriatricians play a key role in teaching medical students, residents, undergraduates, graduate students, and providers across the region in issues affecting older adults. In addition, we speak widely on topics in aging in public venues across the region; we are interviewed frequently by newspaper and television reporters on the subject; and we provide evidence-based guidance to partners in community organizations as well as local and state government.

We teach the following groups of learners at the University of Vermont and University of Vermont Medical Center:

Undergraduate Students: Our faculty frequently teach in courses at the undergraduate level, often in courses led by our colleagues in the University of Vermont Center on Aging. In addition, our partners at the Center on Aging frequently work with us to find mentor and volunteer experiences for undergraduates interested in experiences in aging.

Medical Students: We teach medical students in the Doctoring in Vermont Course, the second-year Human Development and Reproductive Health Course, in clerkships, and in special electives.

Medical Residents: All internal medicine residents complete a required rotation in geriatric medicine where they evaluate patients in a variety of care settings under the supervision of our faculty.

Graduate Students: Our faculty have offered seminar courses in the Graduate College on topics related to aging through the Clinical and Translational Sciences program.
Research
Our faculty conduct research on a wide variety of topics affecting older adults in partnership with and with the support of the University of Vermont Center on Aging. Particular areas of focus include care of patients with cognitive impairment including delirium and dementia, care of older adults with chronic kidney disease, and care of older adults in the emergency department.

Faculty - Geriatric Medicine

Zail Berry, MD
Associate Professor of Medicine
Medical Director, The Arbors
- Geriatric Medicine
- Key Research Area: Optimizing care of elders in long-term care facilities

Amelia Gennari, MD
Associate Professor of Medicine
Associate Chief for Clinical Affairs
- Geriatric Medicine

Elizabeth Rosy Hill, MD
Assistant Professor of Medicine
Medical Director of Green Mountain Nursing Facility
- Geriatric Medicine

Michael LaMantia, MD
Associate Professor of Medicine
- Chief, Division of Geriatric Medicine
- Holly and Bob Miller Chair of Memory and Aging

Isaura Menzies, MD
Associate Professor of Medicine
Associate Chief for Education
Medical Director of Elderwood Skilled Nursing Facility
- Geriatric Medicine

Alexandra Messerli, MD
Assistant Professor of Medicine
- Geriatric Medicine

Susanna Thach, MD
Assistant Professor of Medicine
- Geriatric Medicine

Lynn Wilkinson, MD
Assistant Professor of Medicine
Associate Chief for Quality Improvement
Medical Director, Birchwood Terrace Health Care
- Geriatric Medicine

Nurse Practitioners, Physician Assistants, and Mental Health Specialists:
**Birchwood Nursing Center (Skilled Nursing Facility)**
Amber Snow, NP

**Editorships and Editorial Boards:**

Michael LaMantia, MD

- Deputy Editor, Journal of General Internal Medicine

**Grants**

LaMantia, Michael, MD: K23 Award, Delirium Evaluation in the Emergency Department

LaMantia, Michael, MD: NNECTR Pilot Grant- Feasibility of a Community Health Worker Intervention for Functional Decline in Rural Older Adults

**Publications – peer reviewed, chapters, etc. (not abstracts)**


A. Executive Summary

The Division of Hematology and Oncology has had a successful clinical and academic year with a continued dedication to our tri-partide mission of teaching, research and high quality, patient centered care. The division has 17 faculty members located at the UVMMC campus with additional faculty members at CVMC (2), Porter Medical Center (1) and CVPH (1). Faculty in the division care for patients with oncologic and hematologic malignancies, benign hematology, as well as thrombotic and bleeding disorders. The clinical care enterprise is also comprised of 6 APPs, 2 genetic counselors and over 50 nurses and staff in the outpatient UVMMC clinic. In 2019-2020, the division provided over 18,000 outpatient visits, 2500 new patients visits in addition to ~10,500 infusion and 650 procedures. Inpatient services offered by the division include a hematology consult service, an oncology consult service and a heme-malignancy inpatient service. In addition to specialized hematology services and subspecialty oncologic care, the division also provides unique services to our patient population including:

- The Thrombosis & Hemostasis Program, (Dr. Cushman, Director)
- Multidisciplinary Oncology Clinics (in collaboration with surgery & radonc)
- The Apheresis Program, (Dr. Sprague, Director)
- The VT Regional Hemophilia Treatment Center (federal designation, Dr. Holmes, PI)
- The FACT accredited Autologous Stem Cell Transplant Program (Dr. Sprague, Director)
- The High Risk Breast Program, a clinical research program, (Dr. Wood, PI)
- Familial Cancer Genetics, (Drs. Wood and Greenblatt, PI’s with 2 cancer geneticists)
- Oncology Rehabilitation, (Dr. Dittus, Medical Director)
- Lymphedema Care and Expertise, (Dr. O’Brien, PI)
- Prevention of Cancer Associated Thrombosis (VTEPACC, Dr. Holmes PI)

The division maintains an active fellowship program comprised of 6 fellows under the direction of Dr. Julian Sprague (Program Director) and Dr. Molly Barry (Associate Program Director). Specialized tracks in thrombosis & hemostasis, familial genetics and breast cancer are available to fellows and promote the academic careers of interested fellows. Fellows maintain an active clinical schedule and have engaged in research resulting in 5 national abstracts, 9 local meeting presentations and 5 publications with 4 under review in 2019. In addition to mentoring and teaching fellows, multiple faculty members serve as research and professional mentors to both medical students and internal medicine residents. Division highlights for the year in education include Dr. Sakshi Jasra participated in the Larner College of Medicine Teaching Academy and Dr. Molly Barry serves as a member of the ASCO eLearn Question Writing Group.
Research within the division focuses on epidemiologic and translational research as well as clinical trials. In the past year, faculty members have served as the site PI on 30 interventional clinical trials and have 6 ongoing investigator initiated studies with ~408 patient recruitments. Investigators within the Division receive funding from clinical trials (national cooperative group and pharmaceutical trials), NIH NCI, NHLBI, AHA, and NINDS. The division faculty and fellows published 79 manuscripts in the last year and were involved in numerous local, national and international abstract presentations.

Members of the division members also hold key leadership positions within the University of Vermont Cancer Center and including Dr. Holmes (appointed interim Co-Director of the UVM Cancer Center in January 2020; Dr. Wood (Associate Director of Cancer Control and Population Health Science); Dr. Ades (Medical Director of the Clinical Trial Office); Dr. Greenblatt (Molecular Mechanisms of Malignancy Program Co-Leader) and Dr. Kaufman (Co-leader of the Host Factor and Tumor Progression Program). Dr. Cushman serves on the Board of Directors of the Cardiovascular Research Institute at the University of Vermont.

**Faculty**

**Jose Acostamadiedo, MD** - Clinical Practice Physician

Physician at CVPH

Research and clinical interests: Lung Cancer and Melanoma

**Steven Ades, MD, MSc – Associate Professor**

Leader, UVM Medical Upper Gastrointestinal Oncology Transdisciplinary Team

Co-Leader, UVM Medical Center Genitourinary Oncology Transdisciplinary Team

Medical Director, UVM Cancer Center Clinical Trials Office

Member, University of Vermont Cancer Center Protocol Review and Monitoring Committee

Member, UVM Faculty Senate Financial & Physical Planning Committee

Member, UVM Medical Center Hematology/Oncology Fellowship Program Evaluation Committee

Member, UVM Medical Center Hematology/Oncology Fellowship Clinical Competency Committee

Member, Hematology/Oncology Division Chief Search Committee

Research and clinical interests: GI and GU cancers, supportive care and thrombosis in malignancy

**Diego Adrianzen Herrera, MD** - Assistant Professor

Member, Protocol Review and Monitoring Committee, UVM Cancer Center

Member, Search Committee, Benign Hematology Clinical Scholar Pathway

Member, Grand Rounds Committee, Division of Hematology and Oncology

Member, Hematology/Oncology Fellowship Applicant Review and Interview Committee

Research and clinical interests: Clinical correlation and epidemiologic significance of clonal hematopoiesis, myelodysplastic syndrome and cardiovascular disease. Novel diagnostic, therapeutic or prognostic markers in acute myeloid leukemia. Developing and implementing a portfolio of clinical trials in malignant hematology at UVM

**Shahid Ahmed, MD, MBBS** - Assistant Professor
Maura Barry, MD - Assistant Professor
Associate Program Director, Hematology/Oncology Fellowship Program
Member, UVMMC Department of Medicine Faculty Development Committee,
Member, UVM Medical Center Hematology/Oncology Fellowship Program Evaluation Committee
Member, UVM Internal Medicine Residency Program Evaluation Committee
Member, UVM Medical Center Hematology/Oncology Fellowship Clinical Competency Committee
Member, Larner College of Medicine Committee on Fitness
Member, Larner College of Medicine Teaching Academy
Member, UVM Medical Center EPIC Advisory Council
Member, UVM Medical Center EPIC Oncology Power Team
EPIC Specialty Champion
Member, Education and Professional Development Working Group, LCOM Gender Equity Initiative
Member, LCME Self-Study Task Force, Subcommittee 9
Research and clinical interests: Medical Education GI and head and neck cancers, supportive care, wellness.

Mary Cushman, MD, MSc – Professor, Medicine and Pathology
Director, Thrombosis and Hemostasis Program
Research and clinical interests: Etiology of cardiovascular diseases, stroke, cognitive impairment and other chronic diseases; racial disparities; venous thrombosis and post thrombotic syndrome, COVID-19

Kim Dittus, MD, PhD – Associate Professor
Medical Director of Oncology Rehabilitation
Director, Inpatient Hematology/Oncology
Chair Clinical Committee, Program in Integrative Health
Member, Cancer Control Committee, UVM Medical Center
Research and Clinical interests: Breast Cancer, Cancer survivorship, diet/nutrition, exercise

Marc Greenblatt, MD – Professor
Co-Chair, UVM Cancer Center Molecular Mechanisms of Malignancy Program
Assistant Director, Hematology/Oncology Fellowship Program
Research and clinical interests: Cancer genetics and gastrointestinal cancers
Chris Holmes, MD, PhD – Associate Professor
Interim Division Chief, Hematology/Oncology Division
Interim Co-Director, University of Vermont Cancer Center
Director, Vermont Regional Hemophilia Treatment Center
Assistant Director, Thrombosis and Hemostasis Program
Research and clinical interests: Venous thrombosis, platelet function, coagulation and cancer

Sakshi Jasra, MD—Assistant Professor
Co-chair, UVM Department of Hematology/Oncology Grand Rounds Committee
Member, UVM Cancer Center Data Safety and Monitoring Board
Member, UVM Department of Medicine Operations Committee
Research and clinical interests: Exploring barriers to clinical trial enrollment in rural cancer patients, qualitative research methods and their applications in rural health and mechanisms and clinical relevance of clonal hematopoiesis

Peter Kaufman, MD – Professor
Member, Vermont Cancer Center Data Safety and Monitoring Committee (DSMC)
Director, Regional Clinical Trials, Vermont Cancer Center
Program Co-Leader, Host Factors and Tumor Progression (HFTP) Vermont Cancer Center
Member, Clinical Trials Executive Committee, Vermont Cancer Center
Research and clinical interests: Breast cancer, translational research in breast cancer, clinical research and clinical trials in breast cancer

Farrah Khan, MD – Assistant Professor
Member: UVMMC Department of Medicine Faculty Development Committee, Faculty Engagement Committee
Member, UVMMC Department of Medicine Quality Assurance and Improvement Committee
Member, Data Safety and Monitoring Committee, UVM Cancer Center
Member, Executive Board for the Pharmacy and Therapeutics Committee
Research and clinical interests: Lung cancer, breast cancer, mesothelioma, sarcoma and supportive/palliative care

Saranya Kodali, MD—Clinical Practice Physician
Physician at CVMC
Member, Faculty Development Committee at UVMMC
Research and clinical interests: Malignant Hematology

Patricia O’Brien, MD – Assistant Professor Clinical Scholar
Director, Lymphedema Program
Oncology Rehab-Steps to Wellness

Hibba tul Rehman, MD—Assistant Professor
Member, Protocol Review and Monitoring Committee
Member, Clinical Competency Committee for Hem/Onc Fellowship
Member, Program Evaluation Committee for Hem/Onc Fellowship
Member, UVMMC Credentials Committee
Research and clinical interests: Lung cancer, sarcoma, breast cancer and rare tumors

**Julian Sprague, MD, PhD – Associate Professor**
Director, Hematology/Oncology Fellowship Program
Director, Stem Cell Transplant Program, University of Vermont Medical Center
Clinical Director, Apheresis Services
Member, UVM Medical Center, Transfusion Committee
Member, UVM Medical Center, Ethics Committee
Research and clinical interests: Myeloma and neurotoxicity, hematologic malignancies

**Eswar Tipirneni, MD—Clinical Practice Physician**
Physician at CVMC
Research and clinical interests: Immunotherapy and lung cancer

**Elvira Umyarova, MD—Assistant Professor**
Research and clinical interests: Malignant hematology, stem cell transplant, clinical trials

**Paul Unger, MD, FACP—Associate Professor**
Site Leader, Community Oncology Porter
Chair, UVMMC Credential Committee
Research and clinical interests: Quality assessment for clinical oncology in community practice

**Marie Wood, MD – Professor**
Director, Familial Cancer Program
Assistant Director, Hematology/Oncology Division
Associate Director, Cancer Control
Co-leader, University of Vermont Cancer Center, Control & Populations Health Science Program
Co-Chair, University of Vermont Faculty Senate Educational and Research Technologies Committee
Research and clinical interests: Biomarkers of breast cancer risk, genetic testing in rural areas, breast cancer screening and prevention

**Neil Zakai, MD, MSc – Associate Professor of Medicine and Pathology**
Member (Past Chair), UVM Cancer Center Data Safety and Monitoring Board
Member, UVM Medical Center Pharmacy and Therapeutics Committee
Member, UVM Medical Center Hematology/Oncology Fellowship Research Committee
Member, UVM Medical Center Internal Medicine Residency Research Committee
Chair, Medication Safety Subcommittee for the Pharmacy & Therapeutics Committee
Research and clinical interests: Epidemiology and novel risk factors for venous thrombosis and cardiovascular disease. Epidemiology, causes, and consequences of anemia in
diverse populations. Venous thrombosis causes and prevention, post thrombotic syndrome.

**Hematology/Oncology Fellows**
- Kitty Victoria, MD – 3rd year fellow
- Waqas Jehangir, MD – 3rd year fellow
- Ximena Jordan Bruno, MD – 2nd year fellow
- Sarah Gillett – 2nd year fellow
- Kara Landry, MD – 1st year fellow
- Mansour Gergi, MD – 1st year fellow

**NP’s and PA’s**
- Jamie Kelly, PA
- Penny Gibson, PA
- Jordan Tolstoi, PA
- Anne Berkowitz, NP
- Janet Ely, NP
- Emily Parenteau, MSN, FNP

**Graduate students, post-doctoral fellows, MD PHD students**
- **Juan Conde, PhD.** Medical Student Research. Smoking, Biomarkers and Stroke Risk. Medical Student Research. Mentored by Mary Cushman
- **Charles Nicoli.** Medical Student Research. Mentored by Mary Cushman
- **Samuel Short, BA.** Medical Student Research. Proenkephalin and risk of stroke in a biracial cohort. Medical Student Research. UVM Cardiovascular Research Institute of Vermont (CVRI) Summer Research Award 2020. Mentored by Mary Cushman
- **Alexander Karabachev, UVM LCOM Class of 2021** Mentored by Marc Greenblatt
- **Maeve Dillon-Martin, UVM Class of 2022** Mentored by Marc Greenblatt
- **Cinduja Nathan** - Medical Student Research. Venous thromboembolism prevention in the ambulatory cancer clinic (VTE PACC). Mentored by Chris Holmes
- **Kara Landry, MD** Mentored by Marie Wood
- **Nick Farina, PhD** Mentored by Marie Wood
- **Alexander Karabachev,** Mentored by Marc Greenblatt
- **Louise-Basset Porter,** Mentored by Kim Dittus
- **Jordan Munger, BS:** Inaugural Dean’s research fellowship 2020-21. Mentored by Neil Zakai

**Leadership in Professional Societies**

**Jose Acostamadiedo, MD**
Cancer Liaison Physician for Fitzpatrick Cancer Center
Steven Ades, MD
Member, Board of Directors Northern New England Clinical Oncology Society
Member, Alliance Symptom Intervention Committee
Member, ASCO Upper Gastrointestinal Oncology Annual Meeting Planning Committee

Diego Adrianzen Herrera, MD
Member, American Society of Clinical Oncology (ASCO): Career Conversations Mentor, Trainee and Early Career Council.
Member, Northern New England Clinical Oncology Society (NNECOS): Grant Reviewer Committee

Shahid Ahmed, MD, MBBS
Member, ALLIANCE cooperative group Immuno-Oncology committee
Member, NNECOS grant review committee
Member, American Society of Clinical Oncology
Member, American Society of Hematology
Member, Northern New England Clinical Oncology Society

Maura Barry, MD
Member, American Society of Clinical Oncology
Member, Northern New England Clinical Oncology Society
Member, Multinational Association of Supportive Care in Cancer

Mary Cushman, MD, MSc
Member, Quality Committee, American Society of Hematology
Member, Media Experts Committee, American Society of Hematology
Member, Leadership Council of the International Society on Thrombosis and Haemostasis, ex officio non-voting
Publishing Committee (ex officio), International Society on Thrombosis and Hemostasis
Medical Advisory Committee, Foundation for Women & Girls with Blood Disorders
Planning Committee, 2020 HTRS/NASTH Research Colloquium, Developing a Sustainable Research Career in Hemostasis and Thrombosis
Chair, Task Force on Women in Science and Medicine, American Heart Association
Chair, 2020 Women’s Triennial Health Tracking Study in Cardiovascular Disease and Stroke. American Heart Association
Board Director, Hemostasis and Thrombosis Research Society
Board Director, Eastern States Affiliate, American Heart Association
Research Funding Subcommittee of the Research Committee, American Heart Association
Board Director, UVM Cardiovascular Research Institute
Advisor, Early Career Advisory Committee of the Cardiovascular Research Institute
Member, Nominating Committee, Larner College of Medicine, University of Vermont
Chair, University of Vermont Faculty Senate Research, Scholarship, and Creative Arts Committee
Member, Medical Alumni Executive Committee

Kim Dittus, MD, PhD
Member, Cancer Control Committee, UVM Medical Center
Marc Greenblatt, MD
President, Human Genome Variation Society (HGVS)
Member, International Scientific Advisory Council, Human Variome Project Working Group
Member, American Association of Cancer Research
Member, American Society of Clinical Oncology
Member, American Society of Human Genetics
Member, Collaborative Group of the Americas of Inherited Colorectal Cancer (CGA-ICC)
Member, International Mismatch Repair Consortium (IMRC)
Member, Vermont Medical Society

Chris Holmes, MD, PhD
Executive Board Member, National Network, Health and Human Services New England
Comprehensive Hemophilia Diagnostic and Treatment Centers
Director, Community Counts-Vermont, Centers for Disease Control (CDC) Public Health Monitoring Program, Division of Blood Disorders
Member, Institutional Review Board, Committee on Human Research in the Medical Sciences (CHRMS), University of Vermont
Member, American Society of Hematology
Member, Northern New England Clinical Oncology Society
Member, Thrombosis Committee, American Thrombosis and Hemostasis Network, Centers for Disease Control
National Chair, Hemophilia Transitions, American Society of Hematology Workgroup on Transitions; American College of Physicians Pediatric to Adult Care Transition Initiative

Sakshi Jasra, MD
Member, American Society of Hematology
Member, Northern New England Clinical Oncology Society

Peter Kaufman, MD
Committee Member, Breast Cancer Core Committee, Alliance for Clinical Trials in Oncology
Breast Cancer Committee Liaison to Neuro-Oncology, Alliance for Clinical Trials in Oncology
Alliance Champion, E2112, A Randomized Phase III Trial of Endocrine Therapy Plus Entinostat or Placebo in Patients with Hormone Receptor Positive Advanced Breast Cancer
Co-Investigator, A071701, Genomically Guided Trial in Brain Metastases (CTEP Approved)
Board of Directors, Alliance for Clinical Trials in Oncology

Farrah Khan, MD
Member, American Society of Clinical Oncology
Member, Northern New England Clinical Oncology Society
Member, International Association for the Study of Lung Cancer
Member, American Society of Clinical Oncology
Member, Alliance for Clinical Trials in Oncology

Saranya Kodali, MD
Member, Alliance for Clinical Trials in Oncology
Member, NRG Oncology
Member, American Society of Clinical Oncology
Member, American Society of Hematology
Member, American Society for Blood and Marrow Transplantation
Member, American College of Physicians
Member, Massachusetts Medical Society

Patricia O’Brien, MD
Member, American Physical Therapy Association- Oncology Rehabilitation Educational

Hibba tul Rehman, MD
Member, American Society of Clinical Oncology
Member, American Society of Hematology
Member, Northern New England Strategic Planning Committee
Member, Northern New England Educational Committee
Member, Immuno Oncology Subcommittee for Alliance for Clinical Trials

Julian Sprague, MD
Member, American Society of Hematology
Member, American Society of Clinical Oncology
Member, Northern New England Clinical Oncology Society
Member, Committee on Training, American Society of Hematology
Liaison, Committee on Quality from the Committee on Training, American Society of Hematology
Member, Alliance Myeloma Subcommittee

Elvira Umyarova, MD
Member, American Society of Hematology
Member, Northern New England Clinical Oncology Society

Paul Unger, MD
Immediate Past President, Northern New England Oncology Society
Member, American Society of Clinical Oncology Quality Oncology Project Initiative (QOPI) Steering Committee

Marie Wood, MD
Co-Chair, Alliance, Prevention Committee
Member, Alliance Foundation, Board of Trustees
Member, NCI Prevention Steering Committee
Member, American Society of Clinical Oncology, CME Committee
Member, Northern New England Clinical Oncology Society Board of Directors
Neil Zakai, MD

American Heart Association (AHA)
Member, Executive Committee, American Heart Association Council on Epidemiology and Prevention
Member (past chair), American Heart Association Council on Epidemiology and Prevention, Publications Committee
American Heart Association Council on Epidemiology and Prevention March 2019 meeting (Houston TX)

American Society of Hematology (ASH)
Member, American Society of Hematology COVID 19 research initiative on benign hematology.
Member, American Society of Hematology VTE Guideline Panel: Prevention of VTE in Medical Patients
Member, American Society of Hematology “Consult a Colleague” Program
  • Content expert “Hemostasis/Thrombosis”
  • Content expert “Anemias”
Member 2019-2021, American Society of Hematology Organizing Committee for Highlights of ASH (organizing 12 domestic and 6 international meetings)

Hemophilia and Thrombosis Research Society (HTRS)
  • Vice-Chair 2020 Mentored Research Award Committee
  • Abstract Reviewer Hemophilia and Thrombosis Research Society April 2019 Meeting (New Orleans, LA)
  • Mentored Research Award Grant Reviewer 2020-21
International Society of Thrombosis and Haemostasis
  • Working group: Standardization of data elements for research on anticoagulation

Editorships and Editorial Boards

Jose Acostamadiedo, MD
Editorial Board Colombian Society of Hematology Oncology Magazine (ACHO)

Shahid Ahmed, MD
Associate – Mednet
Reviewer – Journal of Clinical Oncology, Precision Oncology

Mary Cushman, MD
Inaugural Editor-in-Chief, Research and Practice in Thrombosis and Haemostasis
Editorial Board, Circulation
Marc Greenblatt, MD  
Contributing Editor, Human Mutation  

Patricia O’Brien, MD  
Board, Multinational Association of Supportive Care in Cancer, reviewing lymphedema  
Publication  
Review for California Breast Cancer Research Program  
Review Grant Applications for Funding  

Marie Wood, MD  
Editorial Board, The Breast  
Editorial Board, Journal of the National Cancer Institute  
Editor in Chief, ASCO University (eLearning platform)  
Section Editor, Current Breast Concur Reports  

Neil Zakai, MD  
Editorial Board, Research and Practice of Thrombosis and Haemostasis  

Study Sections and Federal Advisory Boards  

Mary Cushman, MD, MSc  
9-10-2019 Expert Panel, Hormonal Contraceptive Use Among Women with Medical Conditions that Increase Thrombosis Risk. Division of Reproductive Health, Centers for Disease Control and Prevention, Atlanta, GA  
4/3/2020 NHLBI Roundtable on Acute Care Cohort / Longitudinal Cohort / National Registry of COVID-19 Patients  

Chris Holmes, MD, PhD  
NIH, Patient-Centered Outcomes Research Institute (PCORI), merit review panel member, Management of Care Transitions for Emerging Adults with Sickle Cell Disease  
NIH, National Heart, Lung, and Blood Institute (NHLBI), ad-hoc member, Clinical Trials Review Committee (CLTR)  
Center for Disease Control/American Thrombosis and Hemostasis Network Community Project Review Committee  

Marie Wood, MD  
Member, NCI Steering Committee  

Grants  

Steven Ades  
PROMISE Trial Ades (PI) 01/01/19-12/31/20  
UVMCC 1902-Prostate Cancer Circulating miRNAs for Precision-based Medicine  
Role: PI  

NNECOS Ades (PI) 01/15/20-06/16/21  
VTE Risk Assessment and Prevention in Cancer Patients in the Community Oncology Setting  
Role: PI
Mary Cushman
NINDS 02/15/18-01/31/23
U01 NS041588
VCID and Stroke in a Bi-Racial National Cohort
S Judd, Contact PI, University of Alabama at Birmingham
G Howard, MPI, University of Alabama at Birmingham
J Manly, MPI Columbia University
Role: MPI, 25%

NHLBI 4/1/17-03/31/20 (NCE)
R01 HL59367
Epidemiology of Venous Thrombosis and Pulmonary Embolism
AR Folsom, PI, University of Minnesota
Role: Subcontract PI, 15, 10, 10 in current project

NHLBI 08/15/00-12/18/25
HHSN2682015000031
Multiethnic Study of Atherosclerosis
R. McClelland, PI, University of Washington
Role: Subcontract Co-I, 5%

NIH 07/01/14-4/30/20 (NCE)
P01HD03192116A1
The National Longitudinal Study of Adolescent Health - Wave V
K Harris, PI, University of North Carolina, Chapel Hill
Role: Subcontract PI, 5%

NIH NICHD 09/09/16-05/31/20
Social Context, Life Course and Genetic Transcription in Add Health
K Harris, PI, University of North Carolina, Chapel Hill
Role: Subcontract PI, 2%

NIH-NIA 06/01/16-05/31/21
Transitions to Family Caregiving and its Impact on Health Indicators
Role: Subcontract PI, 10% → 4%

NIH-NIMHD 08/14/18-03/31/22
R01 MD013349
The Add Health Epigenome Resource: Life course stressors and epigenomic modications in adulthood
K Harris, PI, University of North Carolina, Chapel Hill
Role: Subcontract PI, 2.5%

NIH-NIA 03/01/19-02/28/23
R01 AG061186
Use of High Density Lipoprotein Proteome in the Prediction of Cognitive Impairment and Alzheimer’s Disease: (REGARDS)
RS Rosenson, R. Sidney, PI’s, Mount Sinai School of Medicine
Role: Subcontract PI, 5%

NIH-NHLBI 05/15/19-02/28/23
R01 HL141290
Thrombosis and Bleeding Risk Assessment in Medical Inpatients
N Zakai, PI, University of Vermont
Role: Co-Investigator, 5%

Kim Dittus
036831 Dittus/Stein (Co-PI) 09/01/19-06/30/20
Vermont AHS Department of Health Award
“CoC Survivorship Grant”
Role: Co-PI

Marc Greenblatt
NIH-NHGRI Berg, Jonathan (PI) 09/01/13-08/31/21
U01 HG007437-01
A Knowledge Base for Clinically Relevant Genes and Variants
Role: Co-Investigator

UVM Cancer Center Pilot Project Wood, Marie (PI) 01/2020 – 12/2021
Point of Care Testing for Patients with Advanced Cancer (PoC-TAC): A feasibility study
Role: Co-Investigator

Chris Holmes
NNE-CTR/NIGMS 06/2020
Improving VTE Risk Assessment: Education and Prophylaxis in Rural Cancer Clinics
Role: PI

NNECOS 01/15/20-04/30/21
VTE Risk Assessment and Prevention in Cancer Patients in the Community Oncology Setting
S. ADES, PI
Role: Co-investigator

5H30MC24048-04-00 Walsh (PI) 06/01/10-05/31/21
Department of Health and Human Services
Human Resources and Services Administration
Hemophilia Treatment Centers (SPRANS)
Role: Collaborating PI

ATHN2011001-1-1 Croteau (PI) 09/30/11-09/29/20
Centers for Disease Control and Prevention
American Thrombosis and Hemostasis Network
Public Health Surveillance for the Prevention of Complications of Bleeding and Clotting Disorders
Role: Co-Investigator

NIH-NHLBI05/15/19-02/28/23
R01 HL141290
Thrombosis and Bleeding Risk Assessment in Medical Inpatients
N Zakai, PI, University of Vermont
Role: Co-Investigator

**Peter Kaufman, MD**
Industry Sponsored
Kaufman (International Co-Chair) 06/10/19-Ongoing
Clinical Research Grant
Polyphor Pharma
An International, Phase 3, Multicenter, Randomized, Open-Label Trial Comparing Balixafortide in combination with Eribulin versus Eribulin alone in Patients with HER2-negative, Locally Recurrent or Metastatic Breast Cancer (FORTRESS)

**Marie Wood**
Alliance 31828 Wood (PI) 08/01/17-11/04/21
Prevention Committee Co-Chair/Concept
Role: PI

5UG1CA189823-06 Buckner/Paskett (Co-PI’s) 08/01/14-07/31/25
NIH/NCI
Alliance NCORP Research Base
Prevention Committee Co-Chair
Role: Subaward PI

Dana Farber Cancer Institute 09/15/19-09/14/20
DOD
Prospectively Randomized, Placebo-Controlled Phase III Study to Determine the Effect of Denosumab on Breast Cancer Prevention in BRCA1 Mutation Carriers
Role: Subaward PI

NNECOS Wood (PI) 08/15/2019-08/14/2020
Examination of Attitudes, Beliefs and Practices Regarding Point-of-Care Genetic Testing Among Northern New England medical Oncologists
Pilot award
Role: PI

UVM Cancer Center Wood (Co-PI) 01/01/2020-12/31/2021
Point of Care (POC) Testing for Patients with Advanced Cancer (PoC-TAC): A feasibility study
Pilot award
Neil Zakai
NIH-NHLBI Zakai (PI) 05/15/19-02/28/23
R01 HL141290
Thrombosis and Bleeding Risk Assessment in Medical Inpatients
Each year there are 10 million non-surgical admissions to hospitals in the United States, which are associated with 200,000 venous thromboembolism (VTE) events and an equal or greater number of bleeding events. Despite a lack of validated risk models, providers are required to assess VTE and bleeding risk on admission to the hospital, and provide VTE prophylaxis to those at low risk of bleeding and high risk of VTE. Our goals, in two complementary healthcare systems (located at the University of Vermont and the University of Washington), are to develop and validate robust models to assess hospital-acquired bleeding and VTE risk, and determine the period of increased risk for bleeding and VTE after discharge from the hospital
Role: PI 30%

U01 NS041588 Howard (PI) 02/15/18-01/31/23
NINDS
VCID and Stroke in a Bi-racial National Cohort
This study plans to extend follow-up for incident stroke and cognitive decline in a national cohort of 30,000 black and white community dwelling participants. This proposal will identify mechanisms of racial and geographic disparities in dementia, and identify pathways and biomarkers for the development of hypertension and diabetes
Role: Subcontract—Co investigator 10%

R01HL131579 Lutsey (PI) 01/01/17-11/30/20
NIH/NHLBI
Contemporary Venous Thromboembolism Treatment
Recent introduction of novel oral anticoagulant drugs have transformed the management of venous thromboembolism (VTE), however we have little real-world experience with the side-effects of these medications. This grant uses data from two large U.S. commercial claims databases (OptumInsight and MarketScan) to see whether real-life outcomes differ between traditional treatment of VTE and novel treatments and if bleeding and recurrent thrombosis differ
Role: Co-Investigator

R01 HL132947 Reiner (PI) 04/01/17-03/31/21
NIH
Thrombosis Genetics in African Americans
The primary objective of this project is to measure several emerging thrombosis and inflammation plasma biomarkers that are likely to reflect and/or account for increased thrombogenicity and therefore may contribute to higher rates of CVD in African Americans, and to assess the association of thrombosis biomarkers and biomarker-associated genetic variants with more complex subclinical and clinical CVD endpoints available in JHS and other African American cohorts, including REGARDS
Role: Subcontract Investigator

RO1 HL136373 Pamir (PI) 01/15/18-12/31/22
NIH
Identification of the Role of HDL Function in Human Cardiovascular Disease through Proteomics and Genetics.
The primary aims seek to assess whether high-density lipoprotein cholesterol efflux capacity and the protein composition of HDL provide predictive value of assessing the risk of coronary heart disease and stroke in Caucasian and African-Americans relative to HDL cholesterol and apolipoprotein A1 levels

Role: Subcontract Investigator

R01 Allison (PI) 07/01/18-06/30/22
NIH
Treatment of Venous Leg Ulcers with Factor Xa Inhibition: Efficacy and Mechanisms
This proposal will explore clinical aspects of venous leg ulcers, post-thrombotic syndrome and anticoagulation treatment, and will relate biomarker levels to ulcer characteristics and healing

Role: Subcontract Investigator

NIH Kanaya (PI) 04/01/19-03/31/25
Tri-Asian Cohort on Cardiometabolic (TRACC) Health
The general aim of this proposal is to provide fundamental clinical and biological data about cardiometabolic risk factor profiles including magnetic resonance imaging of the heart, great vessels, abdomen; to track changes in behavioral, psychological, sociocultural and contextual factors among Asian immigrants; and to investigate mechanisms that influence cardiometabolic risk aortic stiffness, hepatic and myocardial fibrosis

Role: Subcontract PI

Publications


Division of Hospital Medicine: Update for July 1, 2019 - June 30, 2020

Chief: Mark E. Pasanen, MD, FACP

The Division of Hospital Medicine at the Larner College of Medicine at the University of Vermont pursues excellence in academic Hospital Medicine by:

- Delivering compassionate, responsive, integrated care to medical inpatients 24 hours a day
- Teaching the science, art, and joy of medicine to students, trainees, and colleagues
- Promoting knowledge through research and educational efforts
- Cultivating a collegial and sustainable practice environment
- Collaborating with members of the hospital and university community to improve the quality, safety and value of inpatient care

Our Hospitalist faculty physicians are involved in all aspects of the academic teaching hospital mission, including providing valuable clinical services, teaching a broad range of learners, engaging in leadership and system improvement while advancing a broad research agenda.

**Service:**

The Internal Medicine Hospitalist Service specializes in the diagnosis and treatment of hospitalized adults, both as the primary service and in the role of consultant – with our service providing 24x7 attending coverage. We serve as physician leadership for the Rapid Response Team, which responds to inpatients with medical emergencies throughout the hospital. Our Hospitalists work in multi-disciplinary teams to provide effective, safe, timely and patient-centered care. We also offer medical consultation to patients in the inpatient Acute Rehabilitation program.

The Adult Hospital Medicine service includes 4 General Internal Medicine teaching services (each with an attending, 3 residents and 3rd and 4th year students), 1 Family Medicine teaching service (mix of FM and IM attendings with 3 FM residents), 3 non-resident services (each staffed by an attending and physician assistant), a medicine consult service, a triage attending, and a Medical Oncology service, which works closely with Oncology to provide inpatient care to patients with solid tumors. In addition, at night we have 2 nocturnists (and intermittent physician assistant coverage), who provide cross-coverage care and perform admissions for both the teaching and non-resident Adult Hospital Medicine services along with Medical Consults, rapid response coverage and outside hospital triage. We continue to expand our use and teaching of bedside ultrasound techniques under the expert guidance of Drs. Mohit Jindal and Tara Scribner, both of whom achieved UVMMC ultrasound privileges this past year. Evidence of strong clinical performance includes a low overall re-admission rate of <5%. The Internal Medicine Hospitalist Service faculty had a very busy year, which included preparing for and caring for potential and confirmed COVID-19 patients.
Our Hospitalists have been engaged in numerous institutional quality improvement and safety initiatives. Our most recent successful project focused on training all faculty in Improvement Science methodology. In the last few years, we have also significantly reduced the rate of hyperglycemia, reduced the number of unnecessary labs performed on our inpatients, improved the completion of accurate problem lists at the time of discharge, improved communication with primary care at discharge and decreased the wait time of orders for patients admitted through the Emergency Department. We are currently engaged in work to improve the use of prophylaxis in the prevention of venous thromboembolism.

**Education:**
Our faculty teaches General Internal Medicine and Hospital Medicine to medical students, resident physicians, professional colleagues, and community members.

Hospitalists serve as the teaching attending for the four General Medicine teaching teams and the Medical Oncology team throughout the year – offering clinical supervision, bedside and didactic education, along with feedback and evaluation to resident physicians and medical students. At night, our Nocturnists provided supervision and education for our night residents. Additionally, our inpatient faculty physicians lead the Medicine Consult elective for residents and medical students, which includes residents from Orthopedic Surgery.

Our faculty are regular participants and facilitators at Resident Report and Intern Report. Dr. Amy Teleron has provided outstanding leadership in our Adult Code training for our residents, with a focus on team dynamics and communication – resulting in recognized improvement in code performance. Through the leadership of Dr. Jason Bartsch, we have developed the Hospital Medicine academic half-day curriculum – in which multiple hospitalists participate. Several of our faculty also serve as preceptors for the Internal Medicine Resident Clinic. Drs. Allen Repp, Preetika Muthukrishnan and Maria Burnett, along with Amanda Kennedy, PharmD, have developed an incredibly robust and effective Improvement Science curriculum. Amanda Kennedy also oversees our comprehensive Internal Medicine Resident research program. In addition, Drs. David Rand, Lee-Anna Burgess, Rachel McEntee and Naomi Hodde have been developing and delivering teaching in communication skills.

Dr. Mark Pasanen and Dr. Shaden Eldakar-Hein serve as the Program Director and Associate Program Director for the Internal Medicine Residency, respectively. Our faculty members have been recognized numerous times by the resident physicians for teaching excellence. Most recently, Dr. Lee-Anna Burgess received the Mark A. Levine Award for Outstanding Teacher of the Year in General Internal Medicine in 2020.

At the UVM College of Medicine, our primary teaching is in the hospital setting, focusing on the Internal Medicine Inpatient Clerkship, Internal Medicine Acting Internship and the Clinical Tutor program (which is directed by one of our Hospitalists, Dr. Bartsch). Dr. Bartsch also serves as Assistant Clerkship Director and serves on the Active Learning Advisory Committee. Dr. Burgess serves as Assistant Acting Internship Director. Our faculty are also involved in other teaching activities including Foundations courses, Convergence and Professionalism, Communication and Reflection. In recognition of her commitment to students, Dr. Eldakar-Hein serves as the Interim Assistant Dean of Students, and was awarded with the AOA Society Faculty Award. She also serves as Faculty Advisor for the Committee on Advancement and for the Social Justice Coalition.

We educate our colleagues locally, regionally and nationally in a variety of venues. This includes successfully delivery of our 9th annual University of Vermont Continuing Medical Education Course in Hospital Medicine, attracting a national audience and with faculty largely from the Division of Hospital Medicine and other divisions of the Department of Medicine. Drs. Carrie Lyon, Steve Grant and Jason Bartsch co-direct this extremely popular course. In addition, Dr. Shea Lambirth co-directed the University of Kentucky Rural Physician Leadership Faculty Development Conference in November 2019.
The Internal Medicine Hospitalist Service faculty are also very involved in mentorship and advising. This includes advising numerous medical students on career choice and residency match issues. Residents also frequently seek out our Hospitalists to serve as advisors, especially those going into the growing field of Hospital Medicine. Dr. Shaden Eldakar-Hein is the Specialty Advisor for Internal Medicine for Larner medical students.

**Research:**
In addition to our clinical work and focus on quality and safety, we have diverse scholarly interests among our faculty. This has included externally funded clinical trials of immunizations and high value laboratory ordering practices. In addition, internal funding has supported work on teaching trainees to facilitate code status discussions. Previous funding has supported work on teamwork with a focus on communication during rapid response calls. Other areas of interest include opioid-related adverse events in inpatients, interosseus access by EMTs prior to hospitalization, adult code communication and performance and VTE prevention in acute medically ill patients.

**Leadership:**
The Internal Medicine Hospitalist Service faculty members are extensively engaged in service at the national, state and institutional levels. National and regional involvement includes the OneCare Vermont Clinical Advisory Board, Vermont Chapter for the American College of Physicians (past Governor and current Governor, along with 3 members of the advisory council membership) and past president of the UVM Medical Alumni Executive Committee. Dr. Repp serves on the Society of Hospital Medicine Performance Measurement and Reporting Committee, the Vermont Medical Society Council and the 2019 Overall Hospital Quality Star Ratings Provider Leadership Work Group for the Centers of Medicare and Medicaid Services.

Faculty participation in committees and task forces at the Larner College of Medicine and the University of Vermont Medical Center is also wide-ranging. Highlights include leadership and/or participation on the Tenure and Promotions committee, Committee for Advancement, Rapid Response and Resuscitation committee, Unit-based Care leadership Operations/Workforce, Quality Improvement, Ethics, COVID-19 response committees and EPIC/IT. In addition, we have had active engagement in the Network Adult Hospital Medicine Specialty Council.

There are numerous specific examples of leadership within the faculty. Dr. Steven Grant serves as the Associate Chief Medical Officer for Care Coordination and Patient Transitions. Drs. Chad Mitchell, Mohit Jindal and Steve Grant serve a critical role in Utilization Review, providing real-time reviews in coordination with Case Management. Dr. Rachel McEntee has been instrumental in helping to optimize EPIC, our electronic health record, through her work and leadership as a Physician Informaticist. Dr. Amy Teleron has provided leadership in significantly improving our Rapid Response and Resuscitation training and implementation and served as Assistant Director of the COVID-19 Incident Command Biologic Branch. Dr. Repp serves as Vice Chair of Quality for the Department of Medicine. Drs. Pasanen and Eldakar-Hein serve respectively as the Internal Medicine Residency Program Director and Associate Program Director. Dr. Eldakar-Hein also serves as Interim Assistant Dean of Students for Larner College of Medicine. Drs. Bartsch and Burgess respectively serve as Assistant Director for the Medicine clerkship and Acting Internship.

We have worked closely with other departments in an effort to optimize patient care. This has included Co-Management services with the Orthopedics Hip Fracture and Spine Service. We have also developed a shared model of care with the Renal Transplant Service and Ophthalmology. In addition, Drs. Gardner, Muthukrishnan and Rand serve as Unit-Based Leaders for our General Medical and Oncology units.

**Faculty/Members of the Division of Hospital Medicine:**

Jason Bartsch, MD  
Assistant Professor of Medicine  
Director of Medical Education, Division of Hospital Medicine  
Assistant Clerkship Director, Department of Medicine

Brittany Bryan, PA
Lee-Anna Burgess, MD  
Assistant Professor of Medicine  
Assistant Acting Internship Director, Department of Medicine

Maria Burnett, MD, MS  
Assistant Professor of Medicine  
Co-Director of Quality and Safety, Division of Hospital Medicine

Caleb Burr, MD  
Assistant Professor of Medicine

Alejandro Castro, MD  
Assistant Professor of Medicine

Markus Degirmenci, MD  
Assistant Professor of Medicine

Elie Donath, MD  
Assistant Professor of Medicine

Shaden Eldakar-Hein, MD, MS  
Associate Professor of Medicine  
Associate Program Director, Internal Medicine Residency  
Interim Assistant Dean of Students, Larner College of Medicine

Florian Foerg, MD  
Assistant Professor of Medicine  
Director, Hospital Medicine Consult and Co-management Service

Jon Ford, PA

Melanie Fortin, PA

Zechariah Gardner, MD  
Assistant Professor of Medicine  
Director for Baird 3 Unit-based Care

Steven Grant, MD  
Associate Professor of Medicine  
Associate Director, Hospitalist Service  
Associate Chief Medical Officer for Care Coordination and Patient Transitions

Sonali Herath, PA

Naomi Hodde, MD  
Assistant Professor of Medicine

Mohit Jindal, MD  
Assistant Professor of Medicine  
Director of Ultrasound Education, Division of Hospital Medicine

Amanda Kennedy, PharmD
Associate Professor of Medicine
Chair, Internal Medicine Residency Research Committee
Department of Medicine Quality Scholar

Erin Kurek, MD, MPH
Assistant Professor of Medicine

Shea Lambirth, MD
Assistant Professor of Medicine

Griffin Latulippe, PA

Caroline Lyon, MD, MPH
Associate Professor of Medicine
Director, Hospital Medicine CME course

Rachel McEntee, MD
Assistant Professor of Medicine
Informaticist

Sadie Mills, MD
Assistant Professor of Medicine

Chad Mitchell, MD
Assistant Professor of Medicine

Preetika Muthukrishnan, MD
Assistant Professor of Medicine
Co-Director of Quality and Safety, Division of Hospital Medicine
Co-director for McClure 6 Unit-based Care

Melissa Naef, PA

Mark Pasanen, MD
Associate Professor of Medicine
Program Director, Internal Medicine Residency Program
Chief, Division of Hospital Medicine

David Rand, DO
Assistant Professor of Medicine
Co-director for Miller 5 Unit-based Care

Allen Repp, MD, MS
Professor of Medicine
Vice-Chair for Quality, Department of Medicine

Tara Scribner, MD
Assistant Professor of Medicine

Paul Slavik, MD
Assistant Professor of Medicine

Michael Stutzman, MD
Assistant Professor of Medicine

Amy Lynn Teleron, MD
Assistant Professor of Medicine
Medical Director, Clinical Emergency Response Team
Medical Director Emergency Response Nurse Team

Eric Westphal, PA

Dennis Woods, MD
Assistant Professor of Medicine

Editorships and Editorial Boards:

Allen Repp, MD, MS
Reviewer:
- Journal of Hospital Medicine
- Journal for Healthcare Quality
- Journal of General Internal Medicine
- Academic Medicine
- The Joint Commission Journal on Quality and Patient Safety

Zech Gardner, MD
Reviewer:
- British Medical Journal Open Quality

Major Faculty Awards:

Lee-Anna Burgess, MD was the recipient of the Mark A. Levine, M.D. Award for Outstanding Teacher of the Year in General Internal Medicine

Shaden Eldakar-Hein, MD, MS was the recipient of the Alpha Omega Alpha Society Faculty Award

Publications – peer reviewed, chapters, etc. (not abstracts)


Presentations:

Department of Medicine Quality Showcase (May 8, 2020)


Kramer Wahlberg, MD, Maria Burnett, MD, Andrea Desautels,* Kathy Leahy,* Preetika Muthukrishnan, MD, Kate Purcell,* Allen B. Repp, MD, MSc.. Partnering with Patients in a Quality Improvement Curriculum for Internal Medicine Residents.

Constance van Eeghen, DrPH, MHSA, MBA, Elizabeth Wahlberg, MD, Amanda G. Kennedy, PharmD, BCPS.

KC Bolton, MD, Stephen G. DeVoe, MPH, MS, Jennifer Hauptman, MSW, LICSW, Amanda G. Kennedy, PharmD, BCPS, Marissa Madden, RN, Naomi Hodde, MD Gauging oncology inpatient experience before and during Covid-19 visitor restrictions: Implementation and preliminary results of a pre-discharge questionnaire.

Effects of Nostalgia-Directed Music Therapy on Residents with Dementia Garrett Chan¹, Jack Fitzsimons, Sidika Kajtezovic, Kristen Keene, Marc Kostrubia, Jessica Sikka, John Vandenberge, Cameron Segal, Shaden Eldakar-Hein, MD, MS, Michael Stutzman, MD and Jan K. Carney, MD, MPH presented at APHA’s Annual Meeting and Expo (November 2019)

UVM Hospital Medicine Conference (Feb 2020)

Paul Slavik: “Choosing Wisely: Things We Do For No Reason”
Naomi Hodde: “Medical Oncology Update”
Allen Repp: “On Safari: Zebras and Other Rare Sightings in Vermont”
David Rand: “Inpatient Palliative Care”
Caroline Lyon: “Quick Hits: Updates in Consult Medicine”
Preetika Muthukrishnan: “Quality and Safety in Hospital Medicine Practice”
Jason Bartsch (Closing Address): “Resilience”

Rising Together: Working with Compassion and Purpose (UVMHN Summit 11/22/19)

Jason Bartsch presented personal reflections
The Division of Immunobiology currently has five research faculty and two graduate students. Research covers a variety of areas, including the immune response to infections and vaccines, virus-host interactions, autoimmune mechanisms, and inflammation in cancer. Research support includes numerous individuals grants as well as a Center of Biomedical Research Excellence (COBRE) Award from NIH. Now in its 14th year, the COBRE grant supports the activities of the Vermont Center for Immunology and Infectious Diseases (VCIID), which now numbers 25 faculty in 8 departments in 3 colleges and is in close alliance with the Vaccine Testing Center. The VCIID has a weekly joint Research-in-Progress meeting, seminar series, and a journal club. This provides a regular forum for students and postdoctoral fellows to present their research progress as well as for faculty to review hypotheses and specific aims of planned grants. During the first 10 years of COBRE funding, VCIID faculty published 419 articles and received over $92 million in funding. This also provided funds to allow the College of Medicine to build a new BSL3 facility in partnership with the Vermont Department of Health, and to recruit new faculty to the theme of the host response to infection. We also have a T32 Training Grant from NIH, also in its 14th year, to support the salaries of our graduate students.

Faculty

Ralph Budd, MD
University Distinguished Professor of Medicine and Microbiology & Molecular Genetics
Director, Vermont Center of Immunology & Infectious Diseases
- Key Research Interests: Autoimmune mechanisms, immune cell death, Lyme arthritis, caspase regulation, immune metabolism
- Clinical interests in autoimmune diseases

Jason Botten, PhD
Associate Professor of Medicine, Adjunct in Microbiology and Molecular Genetics
- Key Research Interests: Identification of key virus-host interactions required for viruses (e.g. arenaviruses, flaviviruses, coronaviruses, hantaviruses) to complete their life cycle and/or cause human disease; understanding host-driven posttranslational modifications (e.g. phosphorylation) of viral proteins regulate their functionality; understanding the natural history of host T and B cell responses to virus infection and how these immune cells contribute to protective immunity or immune-mediated pathogenesis; viral diagnostics; translating our basic science discoveries into vaccines and therapeutics.

Emily Bruce, PhD
Faculty Scientist
- Key Research Interests: Understanding how viruses (arenaviruses, hantaviruses, influenza virus, coronaviruses) interact with host cellular machinery to facilitate virus particle assembly and release and the identification of neutralizing antibodies against these viruses.

Cory Teuscher, PhD
Professor of Medicine and Pathology
- Key Research Interests: Genetics of animal models of autoimmune and infectious disease
Tina Thornton, PhD
Assistant Professor of Medicine

- Key Research Interests: Understanding the interactions of signaling pathways that control early thymocyte development and survival, the interaction of the p38 MAPK pathway and GSK3 in the context of DNA damage signaling.

Graduate Students, Post-doctoral Fellows, MD PhD Students and brief statement on their research study:


Inessa Manuelyan (graduate student) – Identification of key human proteins and host-drive post-translational modifications of viral proteins required for flavivirus and coronavirus propagation.

Editorships and Editorial Boards:

(Budd) Senior Editor for “Textbook of Rheumatology” 11th Edition, Elsevier

(Botten) Editor for Frontiers in Microbiology

Study Sections and Federal Advisory Boards:

Budd:
2019 Arthritis Connective Tissue Sciences (ACTS) NIH Study Section
2020 T32 Grant Reviews AITC NIAID
2020 NIH Immunity and Host Defense
2020 ZGM1 RCB-9 COBRE Phase I Grant Review NIGMS

Botten:
2019 Topics in Drug Discovery, Clinical, and Field Research, ZRG1 IDM-U (02) Special Emphasis Panel, NIH /NIAID, Ad hoc reviewer
2020 Topics in Drug Discovery and Clinical Field Studies (ZRG1 IDM-N (02) Special Emphasis Panel, NIH /NIAID, Ad hoc reviewer
2020 Invitation to review for i) NIH/NIAID Rapid COVID-19 Review Panel, ii) Coronavirus Disease-Immunology (COVID-IMM) peer review panel of the FY20 Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP), iii) 2020 PAR-20-177 and PAR-20-178, “Emergency Awards: Rapid Investigation of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease 2019 (COVID-19) (R21/R01 Clinical Trial Not Allowed)”, and iv) NIH Topics in Drug Discovery, Clinical, and Field Research in Infectious Diseases.

Teuscher:
Ad hoc reviewer for NIH reviewers pool

Permanent member, grant review panel for the National Multiple Sclerosis Society

Major Faculty / Research Awards:

(Botten) PhD students Inessa Manuelyan and Annalis Whitaker each received travel awards for the 2020 American Society of Virology Meeting. Annalis, Inessa, Emily Bruce, and Dr. Botten all gave talks at this meeting.

(Botten) Was a keynote speaker at the 2019 XI International Conference on Hantaviruses meeting in Leuven, Belgium and the 2020 International NIH Back to Basics: Research to Address Bunyavirales Emergence Workshop in Rockville, MD.

(Botten) Was the Opponent for Drs. Gary Kobinger and David Safronetz’s PhD student Bryce Warner at the University of Manitoba, Canada.

(Botten) Dr. Botten, former UVM postdoc Dr. Chris Ziegler, and Faculty Scientist Dr. Emily Bruce had one of their images featured on the cover of their recent publication in Trends in Microbiology.

(Bruce) Selected for oral presentation at the Microbiology Society Annual Conference 2020. ‘Viruses that get under your skin- virus infections of skin and associated epithelia’ session. “Rab proteins play key roles in the mammarenavirus (LCMV) life cycle: from entry to particle formation”. Edinburgh, UK. March 31-April 3, 2020 (Cancelled due to COVID-19).


(Bruce) Invited seminar at MRC-University of Glasgow Centre for Virus Research, Glasgow, UK. March 27, 2020. “Rab proteins play key roles in the mammarenavirus (LCMV) life cycle: from entry to particle formation” (cancelled due to COVID-19).

(Bruce) Invited seminar at the Roslin Institute, University of Edinburgh, UK. March 30, 2020. “Rab proteins play key roles in the mammarenavirus (LCMV) life cycle: from entry to particle formation” (cancelled due to COVID-19).

Grants – list all active by faculty member, PI

Budd:
- R21 AI 119979  Budd (PI)
  Title: Metabolic Regulation of Caspases and Survival in T Cells
  Dates of Award: 04/01/16-09/30/19
  Role: PI
  Current Yr funding: $0 No Cost Extension
  Source: NIH/NIAID

- P30 GM118228  Budd (PI)
  Title: Vermont Immunology / Infectious Diseases Center
  Dates of Award: 08/05/2016 – 07/31/21
  Role: PI
  Current Yr funding: $1,165,984
  Source: NIH/NIGMS

- T32 AI 055402  Budd (PI)
  Title: Vermont Immunology / Infectious Diseases Training Grant
  Dates of Award: 09/01/05 – 08/31/21
  Role: PI
  Current Yr funding: $91,231
R21 AI 151407  Budd (PI)
Title: Ligands for Human Synovial Gamma/Delta T Cells
Dates of Award: 04/09/20-03/31/22
Role: PI
Current Yr funding: $232,186
Source: NIH/NIAID

Botten:

SPARK2017 (Botten, J.) 2017-2020
SPARK-VT Competition, UVM
Title: Therapeutic antibodies for treatment of hantavirus cardiopulmonary syndrome
The goal of this award is to develop human monoclonal antibodies for treatment of New World hantavirus disease.
Current Yr Funding: $50,000

P30GM118228 (Budd, R.) 08/01/18 - 07/31/19
NIH/NIGMS
Centers of Biological Research Excellence (COBRE), Vermont Immunobiology/Infectious Disease Center
Dr. Botten is the PI of a pilot project to develop a therapeutic molecule to target ERGIC-53-sensitive viruses.
Current Yr Funding: $50,000

R41AI132047 (STTR) (Botten, J.) 08/08/2017-07/31/2021
NIH/NIAID
Therapeutic antibodies for treatment of hantavirus cardiopulmonary syndrome
Major goal is to capture the repertoire of antibodies generated against Andes hantavirus during acute infection and identify those that could be used to therapeutically treat disease.
Total award: $599,772

3R41AI132047-01S1 (Supplement to R41AI132047) (Botten, J.) 12/01/2017-07/31/2021
NIH/NIAID
Therapeutic antibodies for treatment of hantavirus cardiopulmonary syndrome
The major goal of this research supplement is to provide support for Dr. Emily Bruce in my group to reenter the workforce full time and use a novel approach (that is complementary to the approach used in the parent grant) to identify therapeutic antibodies for treatment of hantavirus disease.
Total costs with indirect costs: $205,396

R21AI135265 (Botten, J.) 06/01/2018-05/31/2021
NIH/NIAID
Title: Mapping the Zika virus phosphoproteome
Major goal is to map the phosphorylation sites on the arenavirus proteome and determine which modifications regulate the functionality of arenavirus proteins.
Total costs with indirect costs: $425,218

1R43AI142911-01 (SBIR) (Botten, J., Co-PI) 10/01/2018-11/01/2020
NIH/NIAID
A novel antibody therapy for Sin Nombre virus infection
Major goal is to capture the repertoire of antibodies generated against Sin Nombre hantavirus during acute infection and identify those that could be used to therapeutically treat disease.
Total costs: $599,772

SPARK2018 (Botten, J.) 2018-2020
SPARK-VT Competition, UVM
Title: Development of monoclonal antibodies for treatment of hantavirus disease in North America
The goal of this award is to develop human monoclonal antibodies for treatment of hantavirus disease in North America.
Current Yr costs: $50,000

1U01AI141997-01 (Botten, J., Diehl, S., Kirkpatrick, B. MPI) 02/01/19-01/31/24
NIH/NIAID
Mechanisms of Protection and Durability for a Live Attenuated Tetravalent Dengue Vaccine
Tetravalent dengue vaccination must offer safe and durable protection against all four serotypes of dengue viruses. We leverage four vaccine trials and viral challenges evaluating the NIH dengue vaccine to explore and confirm immune mechanisms associated with protection.
Total costs: $3,085,084

OVPR2020 Botten, J. (PI) 2020-2021
Office of the Vice President of Research, UVM
COVID-19 Studies
The goal of this award is to refocus our lab for COVID-19 studies including development of diagnostics and therapeutics.
Total direct costs: $150,000

NASA Botten, J. (PI) 6/01/2020 – 12/31/2020
Screening of novel anti-SARS-CoV-2 peptides for infection of Vero E6 cells with SARS-CoV-2
The overall goal of this project is to evaluate candidate peptides for their ability to inhibit SARS-CoV-2 propagation.
Total direct and indirect costs: $100,002

R21AI154198 Botten, J. (PI) 06/01/2020-05/31/2022
NIH/NIAID
Deep sequencing the lymphocytic choriomeningitis arenavirus quasispecies to identify and functionally validate the molecular signature of defective interfering particles.
Major goal is to identify the genetic identity of LCMV defective interfering genomes.
Total direct costs: $275,000 (Total costs with indirect costs: $444,347)

R41AI157527 (STTR) Botten, J., Murad J. (MPI) 09/01/2020-08/31/2022
NIH/NIAID
A Novel Broad-spectrum Antiviral Agent
Major goal is to develop monoclonal antibodies to ERGIC-53 to make a broad spectrum antiviral for treatment of multiple families of RNA viruses.
Direct costs of this subproject: $400,241 (Total costs with indirect costs: $599,560) *we received an impact score of 20 on this STTR grant I (payline is 34 in current year).

Bruce:

COBRE Pilot Award. Bruce, E (PI) 08/01/2019-07/29/2020
Role of Rab proteins in standard and defective interfering LCMV particle assembly
Awarded from the Vermont Center for Immunology and Infectious Disease COBRE (VCIID) (Ralph Budd, PI)
Total direct costs: $50,000
COBRE Pilot Award  Bruce, E. (PI)  08/01/2020-07/29/2021

Virological and immunological detection of SARS-CoV-2 exposure
Awarded from the UVM Translational Global Infectious Disease Research (TGIR) COBRE (Beth Kirkpatrick, PI)
Total direct costs: $30,000

Teuscher:
R21AI128595
Title: Genome-wide physical mapping of IAV-QTL using wild-derived inbred mice
Dates of Award: 12/1/16 – 11/30/2020
Role: PI
Current Yr funding: $0 No Cost Extension
Source: NIH

Publications – peer reviewed, chapters, etc. (not abstracts):


* Note our submitted electron micrograph of virus particles budding was selected as the *cover photo* for this issue.
The Infectious Diseases (ID) Division is comprised of twelve attending physicians and 3 mid-level providers dedicated to the diagnosis, management, prevention and investigation of infectious diseases. The division had a great year, providing outstanding patient care for those in the hospital as well as in the clinic and throughout the State, teaching fellows, residents, students, colleagues, and the community, performing cutting edge research, and providing administrative support for a variety of hospital functions. Obviously 2020 ushered in the onslaught of the COVID-19 pandemic, in response to which the Division provided leadership for the Medical Center, the Network, and the State.

The ID division performs about 150 inpatient consultations a month. We also staff a busy outpatient clinic seeing new consultations, hospital follow-ups, and caring for travelers, those living with HIV, hepatitis C, tuberculosis and refugees, among others. This effort includes the care of over 500 patients with HIV in four federally funded Comprehensive Care Clinics in Vermont. The Division has contracts with the Vermont Department of Health to collaborate on antibiotic stewardship, the diagnosis and treatment of tuberculosis, and biological and pandemic influenza preparedness. The Division has a contract with the VT Department of Corrections to consult on hepatitis C. The ID staff includes the UVM Medical Center Hospital Epidemiologists and Director of Infection Prevention, Director of Antibiotic Stewardship, Director of Clinical Ethics, the Larner College of Medicine Clerkship Director for the Department of Medicine, and the Director of the Vaccine Testing Center at UVM.

We are becoming a UVM Health Network Division, welcoming ID physicians from Champlain Valley Physicians Hospital (Keith Collins and Madiha Tahir), and Central Vermont Medical Center (Jessie Leyse).

In addition to daily teaching rounds with medical students, residents and fellows, the faculty are actively involved in teaching several courses in the Larner College of Medicine. The ID Division accepts one fellow per year into a two-year fellowship training program. The graduating fellows have a 100% board certification pass rate. Our fellows have presented abstracts at national ID meetings, published peer reviewed articles, and authored book chapters. We are very proud of Dr. Prateek Ghatage who graduated this year.

Within our Division we have several active research laboratories, which support a number of clinical and basic science projects including those performed by a PhD faculty member (Jose Teixeira, PhD), graduate and visiting students, laboratory technicians, and often the 2nd year ID Fellow.

The Huston laboratory has been continuously funded by the NIH as well as the Gates Foundation and is working on the discovery of therapeutic agents for Cryptosporidium.

Investigations of the Kirkpatrick laboratories and Vaccine Testing Center (VTC) continue in the Department of Microbiology and Molecular Genetics (MMG), in tight collaboration with the division of Infectious Diseases. It focuses on improving global health through the assessment of candidate vaccines, microbial diseases, and the understanding of human protective immune responses following vaccination and infection. The team continues to work on development of the NIH’s live attenuated tetravalent dengue vaccine, performs extensive work on dengue human immunology and correlates of protection, Zika vaccine development and immunology, rotavirus immune correlates of protection and human experimental challenge models for Cryptosporidium.

In addition to clinical revenues, financial support is provided by grants from the National Institutes of Health (NIH), especially NIAID, the Health Services Research Administration (HRSA) as well as contracts with regional hospitals, the VT Department of Health, and UVM Medical Center directorships.
W. Kemper Alston, MD, MPH  
Professor  
- Division Chief, Infectious Disease Division  
- Attending Physician for Infectious Disease  
- Hospital Epidemiologist and Medical Director of Infection Prevention  
- Chair, Infection Prevention Committee, UVM Medical Center  
- Tuberculosis Consultant, State of Vermont  
- Medical Director, UVMMC Employee Health  
- Infection Prevention Consultant, Northwestern Medical Center  
- HIV care provider, Brattleboro Memorial Hospital, Comprehensive Care Clinic  
- Member, Medical Staff Quality Assessment and Improvement Committee, UVMMC  
- Member, Infectious Diseases Practice Subcommittee, Pharmacy and Therapeutics Committee, UVMMC  
- Member, Visiting Nurse Association of Chittenden and Grand Isle Counties, Quality Assurance and Performance Improvement Committee

Jean Dejace, MD  
Assistant Professor  
- Associate Director, Infectious Disease Fellowship Training Program  
- Attending Physician for Infectious Disease  
- CVPH attending (7/1/19 – 12/31/19)

Andrew Hale, MD  
Assistant Professor  
- Attending Physician for Infectious Disease  
- Director, Infectious Elective Rotation  
- Course Director, How the Hospital Works, 4th yr medical student course  
- Course Director, Comparative Physiology, Mount Desert Island Biological Laboratories  
- Course Director, Cancer Respiratory and Renal Pathophysiology at the UVM Larner College of Medicine  
- Chair, Vermont Hepatitis C Taskforce

Christopher D. Huston, MD  
Professor of Medicine with Tenure  
- Research Interests: Intestinal protozoan infections including *E. histolytica* host-parasite infections, Cryptosporidium drug development  
- Attending Physician for Infectious Disease  
- Institutional Biosafety Committee, UVM  
- Research Committee, UVM Larner College of Medicine  
- Reappointment, Promotions and Tenure Committee, Department. of Medicine, UVM College of Medicine  
- Faculty search committee, Division of Endocrinology, Department of Medicine, UVM College of Medicine

Beth D. Kirkpatrick, MD, FIDSA, FASTMH  
Professor of Medicine with Tenure  
Chair, Department of Microbiology and Molecular Genetics  
- Director, UVM Vaccine Testing Center  
- Research Interests: Vaccine development, vaccine immunology, enteric and flavivirus infections, human experimental infection models.  
- College of Medicine Advisory Committee. UVM Larner College of Medicine.  
- Physician-Scientist Working Group. UVM Larner College of Medicine

Tim Lahey, MD, MMSc  
Professor of Medicine  
- Director, Clinical Ethics  
- Attending Physician for Infectious Disease
- Ombudsperson for Graduate Medical Education
- Co-Chair, Unsafe Patient Behavior Task Force
- Member, Discriminatory Patient Preferences Workgroup
- Faculty co-advisor, Social Justice Coalition, UVM Larner College of Medicine
- Faculty associate-advisor, Albert Schweitzer Fellowship, UVM Larner College of Medicine

**Cindy Noyes, MD**  
Associate Professor of Medicine  
- Attending Physician for Infectious Disease  
- Associate hospital epidemiologist  
- Associate Director, Infection Prevention

**Kristen K. Pierce, MD**  
Professor of Medicine  
- Director, Infectious Disease Fellowship Training Program  
- Attending Physician for Infectious Disease  
- Lead Clinical Investigator, Vaccine Testing Center  
- Research Interests: Development of Live Attenuated Flavivirus Vaccines  
- Institutional Review Board

**Louis B. Polish, MD**  
Associate Professor of Medicine  
- Director, Department of Medicine Inpatient Medicine Clerkship Program  
- Attending Physician for Infectious Disease

**Devika Singh, MD, MPH**  
Assistant Professor of Medicine  
- Director, Part C HRSA Award, Part B HRSA Sub Award, and NEAETC Sub Award  
- Attending Physician for Infectious Disease  
- HIV care provider, Rutland Regional Medical Center, Comprehensive Care Clinic  
- Consultant in pharmacovigilance/safety, Microbicide Trials Network (HIV/AIDS clinical trials network by the National Institute of Allergy and Infectious Diseases)

**Lindsay M. Smith, MD**  
Assistant Professor of Medicine  
- Director, UVMMC Antimicrobial Stewardship Program  
- Attending Physician for Infectious Disease  
- Co-Chair, IDCP sub-committee, Pharmacy and Therapeutics Committee

**Jose E. Teixeira, PhD**  
Faculty Scientist  
- Interests: Intestinal protozoan infections including *E. Histolytica* host-parasite infections, *Cryptosporidium* drug development

**Timothy Whitman, DO**  
Associate Professor of Medicine  
- Attending Physician for Infectious Disease  
- HIV care provider, Northeastern Vermont Regional Hospital, Comprehensive Care Clinic  
- Quality Assurance and Improvement Committee representative

**Fellows**
Prateek Ghatage, MD
Infectious Disease 2nd Year Fellow
- Infectious Disease Fellowship Training Program July 1, 2018 – June 30, 2020

Sean Bullis, MD
Infectious Disease 1st Year Fellow
- Infectious Disease Fellowship Training Program July 1, 2019 – June 30, 2021

Nurse Practitioners and Physician Assistants:

Jessica Terrien, PsychNP
Comprehensive Care clinic, HIV patients
- HIV Patient Care, mental health

Laura Catoe, ARNP
Nurse Practitioner, Comprehensive Care clinic
- Travel health
- Vermont Refugee Clinic
- General ID

Mary Claire Walsh, NP
Nurse Practitioner, Comprehensive Care Clinic / Vaccine Testing Center
- General ID

Graduate Students, Post-doctoral Fellows, MD PhD Students:

Md Mahmudul Hasan – PhD Student (Huston Laboratory)
Bethany Mihavics—PhD Student (Huston Laboratory)
Ethan Mattice—PhD Student (Huston Laboratory)

Endowed Professorships:

Leadership in Professional Societies:

Christopher Huston, M.D.
- Member, American Society for Microbiology Council on Microbial Sciences

Beth Kirkpatrick, MD, FIDSA, FASTMH
- Global Health Committee, Infectious Disease Society of America
- Institutional Representative, American Society for Clinical Investigation (ASCI)
- Scientific Advisory Board. Symposium on Controlled Human Experimental Infection Models. International Alliance for Biologic Standardization (IABS)

Tim Lahey, MD, MMSc
- Member, United States Medical Licensing Examination Microbiology and Immunology Test Material Development Committee
- Member, United States Medical Licensing Examination Step 1 Interdisciplinary Review Committee
• Member, United States Medical Licensing Examination General Principles/Foundational Science Task Force

**External Reviewer, Editorships and Editorial Boards:**

W. Kemper Alston, MD  
○ External reviewer  
  • Annals of Internal Medicine,  
  • Clinical Infectious Diseases  
  • Infection Control and Hospital Epidemiology

Andrew Hale, MD  
○ External reviewer  
  • Medical Teacher  
  • Teaching and Learning in Medicine  
  • BMJ Open  
  • ID Cases: received “Reviewer Recognition” in 2019, 2020  
  • Contributing writer, Contagion  
  • Journal of Graduate Medical Education  
  • Cancer Causes and Control  
  • Therapeutic Advances in Infectious Disease  
  • PLOS Medicine  
  • Case Reports in Infectious Diseases  
  • Journal of the American Podiatric Medical Association

Christopher Huston, MD  
○ Editorial Board Member – Infection and Immunity  
○ External reviewer  
  • PLoS Pathogens  
  • PLoS Neglected Tropical Diseases  
  • PLoS ONE  
  • mBio  
  • Antimicrobial Agents and Chemotherapy  
  • Journal of Infectious Diseases  
  • Clinical Infectious Diseases  
  • ACS Infectious Diseases  
  • Cellular Microbiology  
  • Molecular Microbiology  
  • Molecular and Biochemical Parasitology  
  • Journal of Clinical Microbiology  
  • American Journal of Tropical Medicine and Hygiene

Beth Kirkpatrick, MD, FIDSA, FASTMH  
○ Section Editor, American Journal of Tropical Medicine and Hygiene 2014-present  
○ External Reviewer  
  • American Journal Tropical Medicine and Hygiene  
  • Clinical Infectious Diseases  
  • Journal Infectious Diseases  
  • Lancet Infectious Diseases  
  • PLOS Neglected Tropical Diseases  
  • PLOS Pathogens
- PLOS ONE
- Vaccine

Tim Lahey, MD, MMSc
  - External Reviewer
    - Clinical Infectious Diseases
    - Academic Medicine
    - The Lancet Respiratory Medicine
    - AMA Journal of Ethics

Kristen Pierce, MD
  - External reviewer
    - American Society of Tropical Medicine and Hygiene

**Study Sections and Federal Advisory Boards:**

Christopher Huston, MD
  - Ad-Hoc Reviewer - National Institutes of Allergy and Infectious diseases
    - 2019, ZRG1 IDM-M(02) (Vector and Eukaryotic Pathogens Study Section)
    - 2019, ZRG1 IDM-S(02) M (Topics in Drug Discovery and Clinical Field Studies Study Section)

Beth Kirkpatrick, MD, FIDSA, FASTMH
  - Indo-US Vaccine Action Program, Candidate Vaccine Advisory Committee (CVAC) - international Vaccine Working Group

Kristen Pierce, MD
  - ACIP American Council on Immunization Practices – CDC working group on Flavivirus Vaccines
  - Indo-US Vaccine Action Program, Candidate Vaccine Advisory Committee (CVAC) - international Vaccine Working Group

**Major Faculty Awards:**

**Andrew Hale, MD**
UVMMC Foundations Awards Nominations
  - Dean Warsahaw Integration Award
  - Above and Beyond Award
  - Foundations Course Director Award
UVM LCOM Professionalism Accolade
  - Commencement Speaker; UVM Internal Medicine Residency Graduation

**Tim Lahey, MD, MMSc**
Albert Schweitzer Fellowship Leadership Award 2019

**Cindy Noyes, MD**
University of Vermont Medical Center Department of Medicine, Distinguished Clinician Award

**Grants – list all active by faculty member, PI**

Andrew Hale, MD
Frymoyer Scholars Program 7/1/18-6/30/20

Optimizing Care for Vermonters Infected with Hepatitis C Virus through a Statewide Educational Curriculum

$50,000

Andrew Hale, MD (PI)
HIV/HCV Care for Incarcerated Persons in Vermont
Consultant for the State of Vermont Department of Corrections contractor for optimizing care of HIV and HCV infected persons who are incarcerated in Vermont.
3/1/2019-2/28/2020
$48,000 per year

Andrew Hale, MD (PI)
Eureka Grant, University of Vermont Department of Medicine.
The Impact of Infectious Diseases Provider Involvement on Asplenic Care Outcomes
4/11/2019-6/30/2022
$10,000

Chris Huston (Co-investigator (5%)) (Jason Botten is the PI)
NASA Jet Propulsion Laboratory
Title: Screening of novel anti-SARS-CoV-2 peptides for infection of Vero E6 cells with SARS-CoV-2
June 1, 2020-December 31, 2020
Direct costs: $100,000

Christopher Huston, MD (PI)
Merck Serono
Project title: Screening the Merck “mini-library” for anti-Cryptosporidium drug activity
Role: Principal investigator (2.6% effort)
12/1/2015-12/31/2019
Direct costs: $43,547 Total costs: $67,032

Christopher Huston, MD (PI)
National Institute of Allergy and Infectious Diseases R21 AI130807
Project title: Continuous in vitro culture and treatment of Cryptosporidium using small molecule differentiation inhibitors
Role: Principal investigator (10% effort)
1/25/2017-12/31/2019 (NCE)
Direct costs: $275,000 Total costs: $419,375

Christopher Huston, MD
Griggs (PI)
Subcontract from Grant OPP1161880 from St. Louis University (Griggs, PI)
Bill and Melinda Gates Foundation
Project title: Pharmacokinetic and pharmacodynamics profiling of compounds with known anti-Cryptosporidial activity to promote their improvement and advancement for clinical development.
Role: Principal investigator on UVM subcontract (5% effort)
07/01/2017-12/31/2019
UVM Direct costs: $116,699 UVM Total costs: $128,369

Christopher Huston, MD (PI)
UVM Immunobiology COBRE Pilot Grant Program
Project Title: Manipulating the gut microbiota to prevent cryptosporidiosis.
Role: Principal Investigator (0% effort)
07/01/2017-06/30/2019
Direct costs: $50,000 Total costs: $ 50,000

R01 AI143951 Christopher Huston, MD (PI)
National Institutes of Allergy and Infectious Diseases (NIAID)
Project title: Preclinical optimization of a parasiticidal drug for cryptosporidiosis
The goal of this project is to develop a new drug candidate for treating cryptosporidiosis and determine its molecular mechanism of action, beginning with a piperazine-based lead compound identified through phenotypic screening.
Role: Principle investigator (multi-PI grant; Huston lead (20% effort))
07/01/2017-06/30/2019
Direct costs: $50,000 Total costs: $ 50,000

R21/R33 AI141184 Christopher Huston, MD (PI)
National Institutes of Allergy and Infectious Diseases (NIAID)
Project title: Repurposing the EMD-Serono “mini-library” for Cryptosporidium drug development.
The goal of this project is to develop a new drug candidate for treating cryptosporidiosis, using high-value EMD-Serono compounds as the chemical starting points.
Role: Principle investigator (multi-PI grant; Huston lead (10% effort))
10/01/2017-06/30/2019
Direct costs: $30,000 Total costs: $456,623

Christopher Huston MD (Co-PI) (10% effort)
Gilbert (PI) (University of Dundee)
Medical Research Council (Great Britain)
Project title: Development of new agents for the treatment of cryptosporidiosis
Role: Principal investigator of sub-project at UVM (10% effort)
10/01/2017-06/30/2019
Direct costs: $100,000 Total costs: $100,000

P20GM125498 Kirkpatrick (PI)
National Institutes of General Medical Sciences Center of Biological Research Excellence (COBRE)
Project title: Translational Research to Prevent and Control Global Infectious Diseases (Translational Global Infectious Diseases Research Center, TGIR)
The goal of this project is to establish a center for translational infectious diseases research at UVM by facilitating interactions between faculty in the biological sciences with faculty in the engineering and data sciences.
Role: Co-principal Investigator (20% effort)
10/01/18-06/30/2023
Direct costs: $30,000 Total costs: $30,000

NIH U01 AI141997 Kirkpatrick, Diehl, Botten (MPI)
Mechanisms of Protection and Durability for a Live, Attenuated Tetravalent Dengue Vaccine
This work seeks to clarify the immune components and mechanisms of durable protection of a live tetravalent dengue vaccine.
02/2019-01/2024

Bill & Melinda Gates Foundation (Kirkpatrick (PI))
New Paradigms of Campylobacter Persistence and Transmission in Zimbabwean Infants.
This work follows our observations of human Campylobacter recrudescence and uses meta-genomic sequencing in a new birth cohort to re-examine reservoirs and transmission of this important pathogen. This data may improve prevention of an important cause of infant diarrhea and poor health in low-income settings.

1/2019-12/2022

NIH P20 GM125498-01 Kirkpatrick (PI)

10/2018-9/2023

Center of Biomedical Research Excellence (COBRE) award for the Translational Global Infectious Disease Research (TGIR) Center. This award supports institution-wide growth in global Infectious Disease research and the support and development of junior faculty (from both biomedical and computational/quantitative data fields) toward research independence.

10/2018-9/2023

Beth D. Kirkpatrick, MD Principal Investigator

Improving Rotavirus Vaccination: Refining Correlates of Protection and Immunologic Responses to Vaccination. The major goals of this project are to permit better understanding and use of immunologic markers (correlates) of protection and identify the optimal immunologic responses and variables inhibiting responsiveness to rotavirus vaccination.

$2,200,000 (2015-2019) Bill and Melinda Gates Foundation

Beth D. Kirkpatrick, MD Site Principal Investigator

Operation of a Facility for the Study of Infectious Agents, Vaccines, and Antimicrobials in Adult and Pediatric Human Subjects. This award supports the design and implementation of a series of large outpatient clinical studies and basic immunology evaluations of novel live flavivirus (e.g. Dengue, West Nile, Zika) virus vaccines and human challenge models.

$9,000,000 (2009-2019) National Institutes of Health and Johns Hopkins University

Devika Singh, MD, MPH (Principal Investigator)

Eureka Grant, The Sexual and Reproductive Health Experiences of Women Infected with HIV in Vermont

2019-2020

Award: $10,000

Devika Singh, MD

New England AIDS Education Training

7/1/2019 – 6/30/2020

$49,039 Federal sub-award, UMASS

Devika Singh, MD (PI)

Ryan White Part C Grant for HIV Care

5/1/2019–4/30/2020

$ 530,005 Federal HRSA

Devika Singh, MD (PI)

Ryan White Part C Grant for HIV Care

5/1/2020 – 4/30/2021

$ 530,005 Federal HRSA

Devika Singh, MD (PI)

Ryan White HIV/AIDS Program Part C EIS Covid-19 Response

4/1/2020 – 3/31/2021

$ 77,125 Federal HRSA
Devika Singh, MD (PI)
Ryan White Care Act Part B Sub Award
1/1/2019–12/31/2019
$290,000 Federal HRSA

Devika Singh, MD (PI)
Ryan White Care Act Part B Sub Award
1/1/2020–12/31/2020
$340,000 Federal HRSA

Lindsay M. Smith, MD
Vermont Department of Health Antimicrobial Stewardship Grant
6/1/17 – 4/30/20
Total Direct Costs $410,939

Publications – peer reviewed, chapters, etc. (not abstracts)


Freed J, Hale A, Ricotta D, Rangachari D. 12 Tips for Teaching Oncology to Non-Oncologists. Accepted at Medical Teacher October 16, 2019. doi.org/10.1080/0142159X.2019.1682534

Ricotta DN, Freed J, **Hale A**. Things We Do For No Reason: Card Flipping Rounds. *Journal of Hospital Medicine* December 17, 2019, in press.


Lahey T & Elwyn G. Is shared decision making impossible when patients have reduced decision-making capacity? *AMA Journal of Ethics* 2020 (in press).


DIVISION OF NEPHROLOGY
Annual Report – July 1, 2019-June 30, 2020

A. Executive Summary:

2020 has been a challenging year for the Division. We saw a reduction in available FTE, through retirement (Dr. Rimmer), reduction in clinical FTE% (Drs. Hood, Solomon, and Weise), and transitions to other positions within the Department of Medicine (Megan Houston, ANP). These changes stressed our remaining staff with coverage of our six dialysis units, in-patient service at UVMMC, and outpatient services at Burlington, Newport, Rutland, and Barre that represent the only nephrology referral sites in Vermont. The COVID-19 pandemic was actually an important opportunity to address some of the stresses caused by staffing shortages. We had already started virtual visits using Zoom in some of our dialysis units to minimize travel time/expenses. The pandemic made it clear that all of our dialysis units needed to be Zoom capable and our outpatient clinics needed to quickly become capable as well. The transition was relatively smooth with clinic encounters at pre-COVID levels by June, with 90% being conducted by phone or Zoom. Because dialysis is not an ‘elective’ procedure, our dialysis visits/RVU’s were maintained through the shut-down.

What was put on hold were research efforts involving patients – on-going recruitment into trials was halted while existing patients were followed remotely. We are now back to active enrollment including our two investigator-initiated trials. Dr. Kat Cheung was successful with a number of competitive grants including the COBRA grant on neural and brain microcirculatory health.

We did manage to attract one new faculty member – Dr. Enyinna – who will join us in October 2020 replacing Dr. Susarla who will be returning to India by the end of the year. We continued another year without fellows, reflecting the national shortage of residents interested in a career in Nephrology. Our fellowship slots were reduced from 2 per year to 1 per year. We remain optimistic that this next recruiting year may bring renewed interest in Vermont as a place to live during fellowship. Dr. Alison Fitzgerald will be taking the reins from Dr. Weise and leading the program.

Despite the many challenges associated with the loss of clinical FTE (higher workload, more nights and weekends on call), EMR upgrades, financial constraints on variable compensation, loss of childcare services affecting some of our junior faculty, the Division scored extremely well on provider satisfaction and was one of the lowest on the burnout survey. None of the above changes have diminished patient access and the quality of care delivered. Indeed, the Division was a leader in the Press-Gainey patient satisfaction survey.

As we move into FY21, the Division is starting an ACO funded ‘navigator’ program to work specifically with patients who are nearing end stage renal disease. The recently hired navigator will be interacting with these patients, educating them with regard to diet, dialysis, transplantation, and palliative care options, establishing ‘goals of care’ documents, and facilitating the transition to a path consistent with those patient goals. The ultimate goal is to improve the patient experience and reduce hospitalizations and costs associated with developing end stage kidney disease.

Education
The Division has a number of faculty who are members of the Teaching Academy including at least one Master Teacher. The clinical experience of medical students and residents on the Nephrology service has continued to change such that more than 50% of time is now in the outpatient arena. The pandemic has added some additional challenges but currently residents and students are paired with a nephrology attending and participate in their clinics. Patients are discussed as the encounters take place and at the end of the clinic, there is a summary meeting to review all the patients seen.

We had a very successful international observer program (2 per month) until the pandemic hit. We are hopeful that this program will be able to reopen in the future. Approximately 50% of the observers in our program have
been accepted into US medical residencies and we are hopeful that in the years to come, we may see some back as Nephrology fellows.

The Division has been in discussions with the nephrology community in Plattsburgh. Currently there are 4 nephrologists with one on a slow path to retirement and two junior people eager to pick up the patient load. Discussions on exactly how to integrate these two young nephrologists into the network were sidelined by the pandemic. I hope that we will be able to restart those discussions in the near future.

Patient Care
RVU target FY19 – 32,210       Actual 30,066 (-6.7%)
RVU target FY20 – 36,652       Actual 18,586 (-23.5%) as of May 2020

Arrived Visits target FY19 -6440  Actual 4305 (-33%)
Arrived Visits target FY20 -6674  Actual 3196 (-27.8%) as of May 2020

B. Faculty
Varun Agrawal, MD
Associate Professor
Medical Director of Barre Dialysis Unit
    Education of medical residents, burnout in nephrology fellows

Katherine Cheung, MD
Assistant Professor of Medicine
    Frailty in chronic kidney disease, cognitive decline in end stage kidney disease

Alison Fitzgerald, MD
Assistant Professor of Medicine
Medical Director Newport Dialysis Unit
    Well-being of medical students

Virginia Hood, MD
Professor of Medicine
Director of Stone Clinic
    High value care, nephrolithiasis

Abhishek Kumar, MD
Assistant Professor of Medicine
    Transplant, including cardiac transplant

Nina Narasimhadevara, MD
Assistant Professor of Medicine
    Urinary oxygen as marker of kidney function

Macaulay Onuigbo, MD
Professor of Medicine
Director of Home Dialysis Unit
    Acute kidney injury

Marios Prikis, MD
Associate Professor of Medicine
Medical Director of Transplantation
    Transplantation
**Jeff Rimmer, MD**  
Professor of Medicine  
Medical Director Chittenden Dialysis Unit  
Hemodialysis,

**Richard Solomon, MD**  
Professor of Medicine  
Director, Division of Nephrology  
Medical Director of Acute Dialysis Unit  
Acute kidney injury

**Sree Susarla, MD**  
Assistant Professor of Medicine  
Medical Director of Rutland Dialysis Unit  
Nephrolithiasis

**Wolfgang Weise, MD**  
Associate Professor of Medicine  
Medical Director, St. Albans Dialysis Unit  
Glomerulonephritis

**Alan Segal, MD**  
Associate Professor of Medicine  
Per Diem  
Renal physiology

C. Fellows:  
None

D. PA/NP:  
Margaret Butler, APRN (outpatient hemodialysis and chronic kidney disease)  
She is our designated 'superuser' for EPIC  
Megan Houston, APRN (in patient hemodialysis)

E. Post-doctoral Fellows (Ph.D.)  
None

F. Endowed Professorship  
Patrick Professorship (Dr. Solomon)

G1. Leadership in Professional Societies
   - Kidney Disease Outcome Quality Initiative Education committee, National Kidney Foundation (Agrawal)
   - American Academy of Hospice and Palliative Medicine special interest group (Cheung)
   - American Geriatrics Society Junior Faculty Committee (Cheung)
   - Member, Kidney Supportive Care Work Group (Cheung)
   - Member, UVM Medical Center Board of Trustees, 2014-present (Hood)  
     Chair, UVM Health Network Population and Quality Committee, 2017-present (Hood)  
     Member, UVM Health Network Board of Trustees, 2017 –present (Hood)
o Member Executive Committee, International Society Internal Medicine 2015-present (Hood)
o Member, Sydney University Graduate Union North America Board of Trustees (Hood)
o Member, ACP Membership Committee (Hood)
o Member, ACP Vermont Chapter Council (Hood)
o President Emeritus, American College of Physicians (Hood)
o Member of the European Board of Transplant Medicine, National representative (Prikis)
   Board Member and Examiner for the Transplant Medicine certification of the European Union of Medical Specialties (UEMS). (Prikis)
o European network for Collaboration on Kidney Exchange Program – COST action (Prikis)
o Chairman, Constitution and Bylaws Committee, Association of Nigerian Physicians in the Americas (Onuigbo)
o ESRD Network 1 Board of Directors (Rimmer)
ESRD Network 1 Medical Review Committee (Rimmer)

G2: Larner College of Medicine, Department of Medicine

o Teaching Academy-Portfolio Review Committee, LCOM (Agrawal)
o UVM Center for Aging, Executive Council (Cheung)
o Department of Medicine Faculty Engagement and Communication Committee (Cheung)
o Department of Medicine, Resident Research Committee (Cheung)
o Chair, Practitioner Health Advocacy Committee (PHAC), LCOM (Fitzgerald)
o Member, Medical Student Wellness Committee, LCOM (Fitzgerald)
o Member, Professionalism, Communication and Reflection Committee, LCOM (Fitzgerald)
o Member, Diversity of Inclusion, Department of Medicine, LCOM (Onuigbo)
o Member, Larner College of Medicine Gender Equity Steering Committee (Onuigbo)
o Member, The Robert Larner, M.D. College of Medicine Teaching Academy Educational Scholar Mentoring Group (Onuigbo)
o Department of Medicine, Quality Assurance and Improvement Committee (Onuigbo)
o University of Vermont Medical Center, Pharmacy and Therapeutics Committee (Onuigbo)
o University of Vermont Medical Center, Medical Records Committee (Onuigbo)
o Department of Medicine, Faculty Development Committee (Prikis)
o Department of Medicine, Quality Improvement Committee (Rimmer)
o Department of Medicine, Operations Committee, (Kumar)
o Epic Dialysis Module “Power Team” (Rimmer)
o Department of Medicine, Research Committee (Solomon)

H. Editorships and Editorial Boards

o Associate Editor, Journal of Medical Case Reports, Nov 2014 to present (V.Agrawal)
o Associate Editor, BioMed Central Nephrology. Nov 2016 to present (V. Agrawal)
o Member, Editorial Board, International Journal of Clinical Practice (Onuigbo)
o Member, Editorial Board, BioMed Research International (Onuigbo)
o Member, Editorial Board, Journal of Renal Injury Prevention (Onuigbo)

I. Study Section and Federal Advisory Boards
J. Major Faculty Awards
  - Election to Master Teacher, The Robert Larner, M.D. College of Medicine Teaching Academy, University of Vermont, Burlington, VT (Onuigbo)

K. Grants (all grant accounts show a positive balance) – active 2016-2017

Federal
  - National Palliative Care Research Center Career development award ($154,000 over 2 years) – (Cheung) July 2018- Dec 2020
    Telemedicine facilitated palliative care consultations in rural dialysis units – (Cheung)
  - NIH-NIA R56 (June 2019-May 2021 - $23,500)-A Randomized-Clinical Trial of a Communication Tool to Improve Access to Palliative Care for Patients with End-Stage Renal Disease (Cheung- site PI)
  - NIH-NIA R01 (June 2020-Feb 2025- $202,800) A Randomized-Clinical Trial of a Communication Tool to Improve Access to Palliative Care for Patients with End-Stage Renal Disease (Cheung- site PI)
  - NIH R01 DK113201 IMPROVE AKI: A Cluster-Randomized Trial of Team-Based Coaching Interventions to IMPROVE Acute Kidney Injury (Jeremiah Brown, PI)
    Role: Sub PI July 2018-June 2023 (Solomon)

University of Vermont
  - UVM Medical Student Summer Research Fellowship. Association of urine findings with metabolic syndrome traits in a population of patients with recurrent nephrolithiasis (Hood)
  - Feasibility and acceptability of yogic breathing and meditation e-intervention in dialysis patients (2020 - $3000). (Cheung- mentor to medical student Jordan Carver)
  - One Care VT Pilot Project of Care Coordinator for Chronic Kidney Disease (Rimmer) - $300K for 2020
  - Nicotinamide for treatment of hyperphosphatemia in patients with end stage kidney disease (Onuigbo)
    IRB 18-0487
  - Aortic pathology and acute kidney injury in patients undergoing TAVR (Solomon/Dauerman) IRB 17-0238
  - Urine oxygen in patients undergoing cardiac surgery (Solomon/Leavitt) IRB 14-570

Multicenter Pharmaceutical supported grants
  - Bayer Figaro and Fidelio Trials: Use of finerenone for patient with diabetes and chronic kidney disease (Solomon) IRB: 16-057 and 16-058
  - REATA: Study of bardoxolone treatment in patients with autosomal dominant polycystic kidney disease (Solomon) IRB: Study 341
  - AKEBIA: Study of valdulastat for treatment of anemia of chronic kidney disease (Rimmer) IRB 16-706
  - CALLIDITAS: Budesonide therapy in patients with IgA nephropathy (Solomon) IRB Study 15
  - TRC101: Treatment of metabolic acidosis in patients with chronic kidney disease using a novel H+ binder (Solomon) IRB 19-0188
  - APOLLO study: participating center (Prikis)
  - Cell free donor DNA (Allosure) in diagnosing BK nephropathy. Study run by Univ of Rhode island and CareDx- Pending budget approval, participating center (Prikis)

Funded but not yet started:
  - UVMMG (MG191 - $50,000): A pilot crossover study of the impact of increased urine flow rate by oral hydration versus bolus intravenous furosemide infusion on urinary oxygen tension. (Narasimhadevara, Onuigbo, Solomon)
NIH-NIGMS  Cushman/Nelson (PI)  8/2020-7/2023
Trajectories and vascular mechanisms of cognitive impairment in chronic kidney disease
The goal of this study is to examine the trajectories of cognitive impairment in chronic kidney disease in the REGARDS study, to identify risk factors for rapid decline and to examine potential vascular mechanisms of cognitive impairment in CKD.
Role: Cheung, Project Director
Direct Costs: $495,000

L. Publications


valve implantation (from the Northern New England Cardiovascular Disease Study Group), Am J Cardio, 2019, 123 (3): 426-433, PMID 30522749.

INVITED SPEAKER

National and International:

- National Kidney Foundation annual meeting (Solomon) March 2020
- Annual International Nephrology Congress (Solomon) June 2020
- American Academy of Hospice and Palliative Medicine, San Diego, CA March 2020 (Cheung) “Breaking Access and Distance Barriers: Using Innovative Modalities of Tele-Palliative Care” (Cheung)
  Kathleen Foley Retreat, National Palliative Care Research Center, Jackson, WY, October 2019 “Kidney palliative care frontiers.” (Cheung)
- Kidney Stones. 32nd Congresso SIMBA/ISIM symposium, Buenos Aires, Argentina, November 20, 2019 (Hood) Preventing Kidney Stone Recurrence. Royal North Shore Hospital, Sydney, Australia, March 4, 2020 (Hood)

Annals of Internal Medicine Audio files for On Being a Doctor, On Being a Patient, Ad Libitum:. (Hood)
- 2019: July 16; August 20; September 3; October 1; Nov 5, 19; December 17.
- 2020: January 21; April 7, 21; June 2;
Division of Pulmonary and Critical Care Medicine
Anne Dixon MA, BM BCh, Director

http://www.med.uvm.edu/medicine/pulmonary

The Pulmonary Critical Care Division has faced tremendous challenges related to the COVID epidemic during 2020; members of the Division emerged as local and national leaders spearheading our clinical response to the pandemic, and also undertaking major new research initiatives related to COVID. We welcomed three new faculty to the Division: Drs. Ram Baalachandran, Suman Majumdar and Zachary Weintraub. Meanwhile members of the faculty won major local and national awards. This has been a very successful year for the Division.

In the face of the COVID epidemic, members of the Division led planning efforts to care for critically ill patients in our region. Gil Allen served as lead of the Clinical Branch for the UVM Medical Center, Drs. Ryan Clouser and MaryEllen Antkowiak coordinated ICU planning for the pandemic, and Drs. Marta Kokosyynska and Morgan Clark Collier served on key committees planning our local surge responses for critically ill patients. On a national level, Renee Stapleton and Anne Dixon served on an ad-hoc COVID Committee put together by the ATS to provide input to PHARMA for clinical trials related to COVID. Dr. Josh Farkas provided data and clinical informational resources to the clinical community through his blog PulmCrit, which has been an important resource for disseminating up to date information to clinicians across the globe. A major new research development this year was undertaken by Jason Bates in response to the COVID epidemic: he spearheaded the development of a novel, low-cost ventilator, the “Vermontilator”. While we have been lucky enough not to need this here, this could be an important development for resource poor countries. The Vermontilator garnered major national attention, including from the New Yorker magazine. There have been a number of other significant new research initiatives and submitted grants related to COVID that we hope will lead to significant advances in our understanding and treatment of this devastating disease.

Members of the Division continued to be very productive, publishing approximately 100 peer-reviewed articles, editorials and book chapters during the last year, and obtained significant funding from a number of foundations and major grants from the NIH. Locally, Renee Stapleton and Matt Kinsey were recognized as Senior and Junior Researchers of the Year respectively, by the UVM Medical Group.

Members of the Division continue to have major national leadership roles: Dr. Stapleton is Chair of the Critical Care Assembly of the American Thoracic Society, and Dr. Dixon serves on the American Lung Association National Board of Directors, the “Expert Panel Review-4” guideline panel currently updating the NIH’s national asthma guidelines and the American Board of Internal Medicine Pulmonary Exam Board Committee. Members of the Division serve on numerous national grant review committees, and editorial boards for major publications. Dr. Jason Bates received national recognition for his contributions to science this year with the Solbert Permutt Award from the Respiratory Structure and Function Assembly of the American Thoracic Society for contributions to Pulmonary Physiology and Medicine. Dr. Dixon was awarded the American Thoracic Society Distinguished Achievement Award for outstanding contributions to fighting respiratory diseases through research, education, patient care or advocacy, and Charles Irvin was awarded the inaugural Fred Taylor Award from NIH for outstanding contributions to the IDEA program.

The Division is committed to education and training, and trains 2 clinical fellows per year in pulmonary and critical care medicine, as well as a number of pre and post-doctoral research students. Dr. Garrison, our outstanding fellowship director, was recognized this year by the graduating medical school class with the “Clinical Teacher of the Year Award”, and by the Teaching Academy with an award for “Outstanding Contributions”. The last year has been a busy and successful year for the Division as outlined in detail for all members of the Division below.
Faculty

Gilman Allen III, MD
Professor of Medicine
Director of Critical Care Services

MaryEllen Antkowiak, MD
Assistant Professor of Medicine
Co-Director Critical Care Services

Jessica Badlam, MD
Assistant Professor of Medicine

Ramasubramanian Baalachandran, MBBS
Assistant Professor of Medicine

Jason H.T. Bates, PhD DSc
Professor of Medicine
Department of Molecular Physiology & Biophysics

Jan Kirk Carney, MD MPH
Professor of Medicine
Associate Dean for Public Health

Ryan Clouser, DO
Associate Professor of Medicine
Network Medical Officer for Network Regional Transport System

Anne E. Dixon, MA, BM BCh
Professor Medicine
Director, Pulmonary Disease and Critical Care Medicine
Director of Clinical Research, Vermont Lung Center

Joshua Farkas, MD
Associate Professor of Medicine

Garth Garrison, MD
Associate Professor of Medicine
Program Director, Pulmonary and Critical Care Fellowship
Co-Director, Lung Cancer Screening Program

Kathryn N. Huggett, PhD
Director, Teaching Academy at the UVM College of Medicine
Robert Larner, MD ’42 Professor in Medical Education
Assistant Dean for Medical Education
   Curriculum design and evaluation
   Faculty development
   Medical education research

Charles Irvin, PhD
Professor Department of Molecular Physiology & Biophysics
Associate Dean for Faculty Affairs

David Kaminsky, MD
Professor of Medicine
Medical Director, Pulmonary Function Lab
  Pulmonary physiology, pulmonary function testing, asthma, COPD

C. Matthew Kinsey, MD, MPH
Assistant Professor of Medicine
Director of Interventional Pulmonary
  - Quantitative imaging and computational modeling for identification of lung cancer
  - Application of endobronchial ultrasound transbronchial needle aspiration for development of novel precision medicine therapies for lung cancer
  - Interventional trials for COPD

Skyler Lentz, MD
Assistant Professor of Medicine
Emergency Medicine Physician

Suman Majumdar, MD
Assistant Professor of Medicine

Prema Menon, MD, PhD
Assistant Professor of Medicine

Katherine Menson, MD
Assistant Professor of Medicine

Katelin Morrissette, MD
Assistant Professor of Medicine

Matthew E. Poynter, PhD
Professor
Director of the Cellular, Molecular, and Biomedical Sciences Graduate Program
Associate Director of the Vermont Lung Center
Associate Director of the Multidisciplinary Training in Lung Biology T32 Training Grant
  Immunobiology of asthma
  Pathophysiology of obese asthma
  Alcohol-induced immunosuppression

Renee Stapleton, MD, PhD
Professor of Medicine

Charlotte Teneback, MD
Associate Professor
Medical Director, Pulmonary Rehabilitation
Director, Adult Cystic Fibrosis Center
Director, Cystic Fibrosis Therapeutic Development Center
  Cystic fibrosis clinical care and research
  Pulmonary rehabilitation clinical practice and research
Zachary Weintraub, MD
Assistant Professor of Medicine

Daniel Weiss, MD, PhD
Professor of Medicine

Fellows
Morgan ClarkColler, MD
Brittany Duchene, DO
Emily Ducomb, MD
Brett Erdreich, MD
Glenda Euceda, MD
Elena Kozakewich, MD

Nurse Practitioners and Physician Assistants:
Abe Sender, PA
Sarah Wagner, NP
Suzanne DeCapua, PA

Graduate Students, Post-doctoral Fellows, MD PhD Students:
Anne E. Dixon, MD
  Ravishankar Chandrasakaren, PhD, Post-doctoral fellow
  Brittany Duchene, MD, Pulmonary fellow
  Swati Bhatawadekar, PhD, Post-doctoral fellow

Charles Irvin, PhD
  Sergio Maldonado Second Year Medical Student
  Ponce Health Science University, Ponce PR

C. Matthew Kinsey, MD, MPH
  Vitor Mori, Post-Doc
  Axel Masquelin, PhD student
  Emily DuComb, Pulmonary Fellow
  Heng Tan, medical student

Skyler Lentz, MD
  Specialty Mentor/Advisor for 2 MS4 LCOM students
  2018-2019 Zach Ehret Robert Larner, MD College of Medicine, University of Vermont
  2018-2019 Andrew Wick Robert Larner, MD College of Medicine, University of Vermont

Matthew E. Poynter, PhD
  Katherine Menson, DO (PCCM fellow)
  JJ Bivona (PhD candidate in Cellular, Molecular, and Biomedical Sciences (CMB) PhD Program)

Renee Stapleton, MD PhD
  Prema Menon, MD, Assistant Professor (research/faculty mentor)
  Katharine Cheung, Assistant Professor (research/faculty mentor)

Daniel Weiss, MD PhD
  Sara Enes PhD – Post-Doctoral Fellow
  Robert Pouliot PhD - Post-Doctoral Fellows
Juan Uriarte PhD - Post-Doctoral Fellows
Evan Hoffman – Graduate Student
Pauline DiGiannivittorio-Graduate Student
Jayita Barua – Graduate Student

Endowed Professorships:

Leadership in Professional Societies:
Gilman Allen, MD
Cycled off the SCCM Congress Planning Committee in February 2020 after a three year term.

MaryEllen Antkowiak, MD
Member of ATS membership committee

Anne E. Dixon, MA, BM, BCh
Chair ATS Nominating Committee
Chair American Lung Association Scientific Advisory Committee
Member, American Lung Association National Board
Member, American Lung Association National Board Executive Committee

David Kaminsky, MD
Led effort to develop an American Thoracic Society statement on operating Pulmonary Function Labs during the COVID-19 pandemic:
Restoring Pulmonary and Sleep Services as the COVID-19 Pandemic Lessens: From an Association of Pulmonary, Critical Care, and Sleep Division Directors and American Thoracic Society-coordinated Task Force.

C. Matthew Kinsey, MD, MPH
Board of Directors, American Association of Bronchology and Interventional Pulmonology
Member, Drug, Device, Development, and Discovery Committee, American Thoracic Society

2015-present American Thoracic Society: Drug, Device, Discovery, and Development (DDDD) Committee Appointed Member
2016-present American Lung Association: New England Lung Cancer Screening Task Force Appointed Member
2017-present Alliance for Oncology Clinical Trials: Respiratory and Prevention Committee Appointed Member
2017-present American Association for Bronchology and Interventional Pulmonology: Board of Directors Elected Member
2018-present Advisory Board, Respiratory Innovation Summit Appointed Member

Skyler Lentz, MD
American Academy of Emergency Medicine, Section of Critical Care Medicine
At-Large Director (2019)
Chair-Elect (2020)

Renee Stapleton, MD PhD
American Thoracic Society
Board of Directors, 2019-2021
Critical Care Assembly Chair, 2019-2021
Unrepresented Patients Working Group, member 2016-present
Canadian Critical Care Nutrition Clinical Practice Guidelines Committee, External Panel
Member, 2008-present
ASPEN Physician Engagement Committee, member, 2018-19
Chair of Data Safety Monitoring Board, “The NEUROlogically-impaired Extubation Timing Trial
(NEURO-ETT),” 2016-present.
International Consensus on the use of High Flow Therapy (HFT) with Nasal Cannula, member,
March 2018-present.
Member of Data Safety Monitoring Board, “Facilitating Communication Study (FCS2),”
2019-present
Member of Data Safety Monitoring Board, “Phase 2 RCT of low dose inhaled carbon monoxide in
ARDS,” 2019-present
Chair of Data Safety Monitoring Board, “Arrest Respiratory Failure Due to Pneumonia (ARREST
Pneumonia) Trial”, NIH funded, MPIs J Levitt, E Festic, O Gajic, K Mahaffey, M Matthay,
2019-present
Member of Data Safety Monitoring Board, “Impact of Resident Scheduling on Patient and
Resident Outcomes (INCURS) Trial”, CIHR funded, MPIs D. Piqette and C. Parshuram,
2019-present

Daniel Weiss, MD PhD
Chief Scientific Officer
International Society for Cell and Gene Therapies 2014-present

Respiratory Tract Committee
American Society for Cell and Gene Therapies 2003-present

Chair/Emeritus Chair
ATS Stem Cell Working Group 2005-present

Editorships and Editorial Boards:
Jason H.T. Bates, PhD DSc
Deputy Editor, Journal of Applied Physiology

Charles Irvin, PD
2014 - present   Editorial Board, COPD Journal

C. Matthew Kinsey, MD, MPH
2016-present   Journal of Bronchology and Interventional Pulmonology
Editor for series “Epidemiology and Statistical Pearls for Interventional Pulmonologists”

Skyler Lentz, MD
2019- Present. Co-editor of online Emergency Medicine Blog. emDOCS.net

Matthew E. Poynter, PhD
Editorial Board Member for the American Journal of Respiratory Cell and Molecular Biology

Renee Stapleton, MD PhD
Murray & Nadel’s Textbook of Respiratory Medicine. Co-Editors: V. Courtney Broaddus, Lynn M.
Schnapp, Joel D. Ernst, Talmadge E. King Jr, Stephen C. Lazarus, Renee D. Stapleton. Elsevier
Saunders, Philadelphia, publication expected 2021.

Daniel Weiss, MD PhD
Molecular Therapy 2008-present
American Journal of Respiratory and Cell Molecular Biology 2012-present
Cytotherapy 2019-present

**Study Sections and Federal Advisory Boards:**

Anne E. Dixon, MA, BM, BCh
- Member, VA Pulmonary Merit Review Study Section
- Ad hoc member NIH RIBT study Section
- Ad hoc Member, NHLBI, Special Emphasis Panel, ZHL1 CSR-S (M1). Stimulating Access to Research in Residency Transition Scholar (StARRTS), March 2020

Charles Irvin, PhD
- Chair, U01. R21 Review, NCATS, National Institutes of Health, 2019
- Co-Chair, CTSA NCATS National Institutes of Health, 2019
- Chair, INBRE Review, NIGMS, National Institutes of Health, 2019
- Chair, U01. R21 Review, NCATS, National Institutes of Health, 2020
- Chair, American Lung Association COVID-19 grants review, 2020

David Kaminsky, MD
- Research Grant Study Section Group B for American Lung Association

C. Matthew Kinsey, MD. MPH
- Development Therapeutics Study Section Appointed Member National Cancer Institute, 2020

Matthew E. Poynter, PhD
- Flight Attendant Medical Research Institute
- NIH Hypersensitivity, Allergies and Mucosal Immunology (HAMI) IMM-T57 Special Emphasis Panel
- NIAID Special Emphasis Panel, Immune Tolerance Network (2020/10 ZAI1 TC-I (S3) R) (07/28/2020)

Renee Stapleton, MD PhD
- Member of NIH Review Panel2020/01 ZRG1 SBIB-A (S6) R. “Early Phase Clinical Trials in Imaging and Image-Guided Interventions (R01 Clinical Trial Required),” September 2019.
- Member of NHLBI Clinical Trials Review Committee (CLTR, standing study section), June 2020-present

Daniel Weiss, MD PhD
- NIH/VA COVID Response Special Emphasis Panel, 2020
- DOD, 2019
- Canadian Cystic Fibrosis Foundation, 2019, 2020
- Dutch Lung Research Foundation, 2020

**Major Faculty Awards:**

Gilman Allen, MD
- ACP “Honor Your Mentor” Award, Nominated by Amy Teleron

Jason H.T. Bates, PhD DSc
- Solbert Permutt Trailblazer Award, Respiratory Structure & Function Assembly, American Thoracic Society

Anne E. Dixon, MA, BM, BCh
American Thoracic Society Distinguished Achievement Award.

Charles Irvin, PhD
Visiting Professor, University of Amsterdam, The Netherlands, 2019
Mentorship Award, Department of Medicine, LCOM, 2019
W. Fred Taylor (Inaugural Award) IDeA/EPSCOR Foundation, 2020

C. Matthew Kinsey, MD MPH
Junior Researcher of the Year Award, 2019, University of Vermont Medical Group

Katelin Morrissette, MD
Inducted into the UVM teaching academy

Renee Stapleton MD PhD
Senior Researcher of the Year Award, 2019, University of Vermont Medical Center

Zachary Weintraub, MD
PACE Award. The program for adult care excellence in CF.

Grants – list all active by faculty member, PI

Jason H.T. Bates, PhD DSc

R01 HL130847 PI: Bates/Dixon 03/15/2016 – 02/29/2020
NIH/NHLBI
Non-allergic late-onset asthma of obesity: pathophysiology and therapy.
The goal of this project is to determine how elevations in lung volume affect airways responsiveness and asthma control on obese subjects with the non-atopic form of obese asthma.
Role: PI

T32 HL076122 PI: Poynter/Irvin 05/01/2019 – 04/30/2024
NIH/NHMBI
Multidisciplinary Training in Lung Biology
This training program for 4 predoctoral and 3 postdoctoral researchers seeks to train a group of collaborative and productive scientists to investigate the causes, diagnosis, and cures of debilitating lung diseases such as asthma, interstitial lung disease, cystic fibrosis, acute lung injury, and infections of the lung.
Role: Co-PI

R01 HL133920 PI: Poynter/Dixon 08/15/2016 - 07/30/2021
NIH/NHLBI
Obese Allergic Asthma and the Impact of Weight Loss on Airway Epithelial Function
The objective of this proposal is to investigate cells and mediators released from visceral adipose tissue of obese allergic asthmatics, and their effects on mitochondrial function.
Role: co-investigator

U01 HL139466 PI: Suki/Bates 09/01/2018 – 08/31/2023
NIH/NIBIB
A multi-scale computational model of the extracellular matrix of the lung
The objective of this proposal is to develop computational models, based on experimental data of how pulmonary fibrosis develops over time, with a view to understanding how the histological phenotype arises as a result of mechanical stress.
Role: Co-PI
Preserving epithelial barrier integrity in ventilator-induced lung injury.

The objective of this proposal is to develop a quantitative mechanistic understanding of the mechanical processes involved in ventilator-induced lung injury, to encapsulate this understanding in mathematical/computational models, and to use this understanding to propose improved approaches to the ventilator management of patients with acute respiratory distress syndrome.

Role: Co-PI

Translational research to prevent and control global infectious diseases (Translational Global Infectious Diseases Research Center, TGIR)

The goal of this proposal is to train a cadre of promising young faculty at the University of Vermont in research into the understanding and prevention of global infectious diseases. Dr. Bates is leader of a core in Predictive Computational and Mathematical Modeling.

Role: Co-PI and Core Leader

Ryan Clouser, DO
UVMMC Foundation Grant – Community Paramedice Pilot Project.

Anne E. Dixon, MA, BM, BCh
Dixon PI: NIH R34 HL135361, 5/1/2017 – 04/30/2020 NIH/NHLBI (NCE)
Trial of Roflumilast in Asthma Management (TRIM)

Dixon MPI: NIH R01HL133920 08/15/16-07/31/2021,
Obese Allergic Asthma and the Impact of Weight Loss on Airway epithelial Function

Dixon MPI: NIH R01 HL130847 03/01/16 – 02/29/2020 (NCE)
Non-Allergic Late-Onset Asthma of Obesity: Pathophysiology and Therapy

Dixon MPI: NIH R01 HL137268 08/15/17-05/30/2021
S-glutathionylation chemistry, glycolysis and obese allergic asthma

Dixon MPI, NIH R01HL136917 09/04/2018-07/31/2023
Mitochondrial Redox Perturbations in Obese Allergic Asthma

Dixon Co-I, NIH R01 HL138708 08/03/2017 – 06/30/2021
DUOX1 and mitochondria in obese asthma

Dixon Co-I 08/01/00-05/31/2021
American Lung Association Airways Clinical Research Center Network

Charles Irvin, PhD
American Lung Association (Irvin) 07/01/1999 - 06/30/2021
Airways Clinical Research Center (ACRC)
Role: Principal Investigator of the Northern New England Consortium (NNEC) ALA-ACRC
Major goal are to investigate the pathogenesis of asthma in the format of a multi-center network. I am the PI of the NNEC study site and we currently are recruiting applicants for both NIH sponsored studies and industry sponsored studies.

T32 HL076122, NIH/NHLBI (Irvin/Poynter) 04/01/2004 - 04/30/2024
Multidisciplinary Training in Lung Biology
Role: MPI

The major goal of this training grant is to produce outstanding, independent biomedical scientists who investigate the mechanisms, manifestations, preventions and cures for lung disorders. This grant supports both pre and postdoctoral fellows.

R35 HL135828 (Janssen-Heininger) 01/01/2017 - 12/31/2023
NIH/NHLBI
S-glutathionylation chemistry in fibrotic lung remodeling
Role: Co-Investigator

The goal of this proposal is to understand the importance of the process of S-glutathionylation in patients with asthma or pulmonary fibrosis, and in mouse models of these diseases. The goal is to understand how this process of S-glutathionylation works, and whether the enzymes that regulate this process can be a target for more specific drugs. We believe that these questions are important for translation into clinical practice as we already have data with compounds that can be used clinically.

R01 HL137268 (van der Vliet/Dixon) 08/15/2017 - 05/30/2021
NIH/NHLBI
S-glutathionylation chemistry, glycolysis and obese allergic asthma
Role: Co-Investigator

Obesity is a risk factor for the development of asthma, and obese asthmatics tend to have severe and poorly controlled disease. The underlying factors that contribute to increased disease severity in obese asthmatics are currently largely unknown. This proposal addresses whether changes in oxidant status are an important factor in obese asthma and whether oxidant-induced changes in glucose metabolism (glycolysis) contribute to disease severity in obese asthmatics.

R25 GM116701 04/01/2016 - 02/28/2021
NIH/NIGMS
Fostering entrepreneurship in biomedical research
Role: PI

The goal of this training grant is to increase the entrepreneurship environment in biomedical research within the University of Vermont as well as other IDeA states (Maine, New Hampshire, Rhode Island, Puerto Rico and Alaska) by developing common courses and workshops.

UT2 GM130176 (Reder) 09/01/2018 - 08/31/2020
NIH/NIGMS
Subcontract with Celdera Medical
Role: Academic Co-PI

DRIVEN: Accelerating Medical Entrepreneurship in the Northeast
The goal of this grant is to establish a regional hub to facilitate investigators of the Northeast IDeA states to become successful entrepreneurs

C. Matthew Kinsey, MD MPH
Ongoing Research Support
1K23HL133476-01, NIH National Heart, Lung, and Blood Institute
Kinsey, C. Matthew (PI) 09/01/16-06/30/21

CT Characteristics of Emphysema for Evaluation of Pulmonary Nodules
This research focuses on leveraging the morphologic and vascular characteristics of emphysema to help determine if a lung nodule may be cancer.

Translational Medicine Pilot Award 2017, University of Vermont Medical Center Department of Medicine
Kinsey, C. Matthew (PI) 07/01/17-06/30/20

A Computational Model for Adjuvant Cisplatin Based on CT and Tissue Features
Delivery of intratumoral cisplatin directly into a tumor is currently performed in an unguided manner. Through this work we will develop a computational model based on CT features and tissue biopsy to understand the optimal dose and location for intratumoral cisplatin.

Skyler Lentz, MD
Longitudinal epidemiologic investigation of post-hospitalization health care utilization among ICU survivors in Vermont
Vermont Lung Center Pilot Award 07/01/2020-06/30/2021
PI: Renee Stapleton, MD, PhD
Role: Co-investigator

Matthew E. Poynter, PhD
1 R01 HL142081 (Poynter) 04/01/2018 – 03/31/2022
NIH/NHLBI
Ketone Body Supplementation in Obese Asthma
Role: PI

R01-HL133920 (Poynter & Dixon) 08/15/2016 – 07/30/2021
NIH
allergic asthma and the impact of weight loss on airway epithelial function
Role: Co-PI

NDC 2777 (Kraft) 11/01/2017 – 12/31/2020
National Dairy Council
Full-Fat Yogurt and Glucose Tolerance
Role: Co-I

T32-HL076122 (Poynter & Irvin) 05/01/2019 - 04/30/2024
NIH/NHLBI
Multidisciplinary Training in Lung Biology
Role: Co-PI

2 R01 HL085646-09 (van der Vliet) 09/01/2017 -08/31/2022
NIH/NHLBI
Dual Oxidase in Airway Epithelial Injury and Inflammation
Role: Co-I

R01 HL138708 (van der Vliet) 08/03/2017-06/30/2021
NIH/NHLBI
DUOX1 and Mitochondria in Obese Asthma
Role: Co-I
R56 AG062105 (Dumas) 09/15/2019 - 08/31/2020
NIH/NIA
Fatty Acid Effects on Brain Functioning in Normal Aging
Role: Co-I

R01 HL122383-06 (Anathy) 05/01/2020 – 04/30/2024
NIH/NHLBI
Endoplasmic reticulum stress signaling in allergen induced airway remodeling
Role: Co-I

R01 HL143452 (Stapleton, Toth, Files, & Poynter) 09/15/2018-06/30/2022
NIH/NHLBI
Effects of Exercise on Inflammation-Induced Lung and Muscle Injury in Critical Illness (NEXIS-FLAME)
Role: MPI

R03 AI151525 (Wargo) 4/23/2020-4/22/2022
NIH/NIAID
Klebsiella pneumoniae pathogenesis in the obese lung
Role: Co-I

Renee Stapleton, MD PhD
R01 HL132887 4/01/2017-3/31/2022
NIH/NHLBI
Nutrition and Exercise in Critical Illness (The NEXIS Trial): A Randomized Trial of Combined Cycle Ergometry and Amino Acids in the ICU
Role: Contact PI

R01 HL143452 09/15/2018-06/30/2022
NIH/NHLBI
Effects of Exercise on Inflammation-Induced Lung and Muscle Injury in Critical Illness (NEXIS-FLAME)
Role: Contact PI

R01 AG050698 5/01/2016-2/28/2021
NIH/NIA
Improving Palliative Care for Older Seriously Ill Hospitalized Patients and Their Families: A Randomized Trial of an Informed Assent Communication Intervention about CPR
Role: PI

R42 AG059451 4/01/18-6/30/21
NIH/NIA
Novel Arm Restraint for Critically Ill Patients to Reduce Immobility, Sedation, Agitation and Cognitive Impairment
Role: Contact PI

R01 HL142093 4/01/2019-3/31/2023
NIH/NHLBI
Therapeutic modulation of zinc for lung injury and mechanobiology
Role: Co-Investigator

T32 HL076122 05/01/2019-04/30/2024
NIH/NHLBI
Multidisciplinary Training in Lung Biology
Role: Co-Director

Charlotte Teneback, MD  
Cystic Fibrosis Therapeutic Development Network  3/2/2020-3/1/2021  
CF Therapeutic Development Center Award  
Co-PI (with Thomas Lahiri MD)

Cystic Fibrosis Center Grant  7/1/2020-6/30/2021  
Adult Program Center grant

Cystic Fibrosis Lung Transplant Transition Learning and Leadership Collaborative  3  
June 2020-October 2021

Calithera Biosciences  
CX-280-202: A phase 1b randomized, double-blind placebo-controlled trial to evaluate the safety of CB280 in Patient with Cystic fibrosis.

Daniel Weiss, MD PhD  
R21 EB024329 (DJ Weiss, PI)  02/15/2017-07/31/2020  
NIH/NHLBI  
Decellularized Avian Lungs for Use in Pulmonary Therapeutics  
The goals of this project are to fully characterize de- and recellularization of representative avian lung, develop initial technologies for novel Avian Lung Assist Devices (ALAD) incorporating recellularized avian lungs that could be potentially utilized for independent, portable or implantable lung assist devices.

R13 HL149436 (DJ Weiss, PI)  07/04/2019-06/30/2020  
NIH/NHLBI  
Optimization of MSC Based Cell Therapies for CF  
The principle goals of the proposed meeting, “Stem Cells, Cell Therapies, and Bioengineering in Lung Biology and Diseases” are to convene the relevant experts and up and coming junior investigators to share and debate recent developments in this rapidly moving and exciting field with a specific goal to formulate basic, translational, and clinical research directions.

SPARK, UVM (DJ Weiss/Adam Jakus, Dimensions Inc.)  07/01/2018-06/30/2020  
Development of novel lung bioinks  
Project goals are to test the mechanical and biochemical properties of lung-specific ECM-derived materials and evaluate optimized lung ECM-origin gels and patches in pre-clinical models of lung injury.

WEISS18P0 (Weiss)  04/01/2019-03/31/2021  
Cystic Fibrosis Foundation  
Role of Glycoproteins in Lung Recellularization  
The goals for this proposal are to systematically analyze key matriline binding and activation patterns to specific individual HS, CS and DS in decellularized human lungs, to systematically determine matriline dependent and independent effects of individual HS, CS and DS chains on representative lung cell growth and differentiation and to determine matriline-dependent and independent effects of systematic repletion of decellularized normal or diseased human lung ECM with key HS, CS and/or DS functional groups on cell growth and differentiation.

PRMRP Expansion Award (Weiss)  07/01/2019-06/30/2022  
Department of Defense  
Clinical Development of a Novel Pleural and Tracheal Sealant
The goals of this proposal are to define optimal manufacturing of the ALG-MA-DA patch formulations, optimal sterilization, preservation and storage conditions to facilitate off the shelf use, long term efficacy and safety in longitudinal small (rate) and large (pig) models of adult pleural injury and adult and pediatric tracheal injuries and assess short term efficacy in an ex vivo pleural injury model in human lungs obtained at autopsy (UVM).

S10 OD026976 (Weiss) 08/01/2019-07/31/2020 NIH
Zeta View TWIN Laser Nanoparticle Tracking Analyzer
The goal of this proposal is to obtain a state-of-the-art ZetaView TWIN Laser Nanoparticle Tracking Analyzer (NTA) device at the University of Vermont (UVM).

Publications-peer reviewed, chapters, etc.


Borger V; Weiss DJ; Anderson JD; Borras FE; Bussolati B; Carter DRF; Dominici M; Falcon-Perez JM; Gimona M; Hill AF; Hoffman AM; de Kleijn D; Levine Bl; Lim R; Lotvall J; Mitsialis SA; Monguo-Tortajada M; Muraca M; Nieuwland R; Nowocin A; O’Driscoll L; Ortiz LA; Phinney DG; Reischl J; Rohde E; Sanzenbacher R; Thery C; Toh WS; Witwer KW; Lim SK; Giebel B. ISEV and ISCT statement on EVs from MSCs and other cells: considerations for potential therapeutic agents to suppress COVID-19. Cytotherapy. 2020 May 16.


Cuthbertson L., Walker A, Oliver A; Rogers G; Rivett D; Hampton T, Ashare A; Elborn S; De Soyza A; Carroll A; Hoffman L; Lanyon C; Moskowitz S; O'Toole G; Parkhill J; Planet P; Teneback C; Tunney M; Zuckerman J, Bruce K; and van der Gast C. Lung Function and Microbiota in Cystic Fibrosis. Microbiome 8, 45 (2020)


Dixon AE, Peters U, Walsh R, Daphtary N, MacLean ES, Hodgdon K, Kaminsky DAK & Bates JHT. Physiological signature of late-onset asthma of obesity, ERJ Open Research, accepted for publication


Lim SK; Giebel B; Weiss DJ; Witwer KW; Rohde E. Re: "Exosomes Derived from Bone Marrow Mesenchymal Stem Cells as Treatment for Severe COVID-19" by Sengupta et al. In press, Stem Cells & Development. 2020 Jun 10.


Pouliot RA; Young BM; Link PA; Park HE; Kahn AR; Shankar K; Schneck MB; Weiss DJ; Heise RL. Porcine Lung-Derived Extracellular Matrix Hydrogel Properties Are Dependent on Pepsin Digestion Time. Tissue Engineering - Part C: Methods. 26(6):332-346, 2020 Jun.


Silva LHA; Silva MC; Vieira JB; Lima ECD; Silva RC; Weiss DJ; Morales MM; Cruz FF; Rocco PRM. Magnetic targeting increases mesenchymal stromal cell retention in lungs and enhances beneficial effects on pulmonary damage in experimental silicosis. In press, Stem Cells Translational Medicine, June 2020.


Stapleton RD, Heyland DK. Glycemic control and intensive insulin therapy in critical illness. Up To Date online version 16.3. 2007-present. Last updated May 2018. Section Editors Polly E. Parsons MD and Adrienne G. Randolph MD MSc; Deputy Editor Kevin C. Wilson MD. Website: http://www.uptodate.com/online/content/topic.do?topicKey=cc_med/13045&selectedTitle=1~150&source=search_result


Chapter:


Dixon AE & S Peters, Obesity and asthma, in Murray and Nadel 2019 (accepted)

Thompson B, Irvin CG Chapter 42 Development, Structure, and Physiology in Normal Lung and in Asthma In: Middleton’s Allergy Principles and Practice 9th Ed, Eds Burks AW et al Elsevier New York, 2020


Editorial:


Non-peer reviewed publications:


Editor of digital companion to “Tintinelli’s Emergency Medicine, 9th edition” textbook. Chapter 33- Cardiac pacing and devices (In Progress) K. Morrissette
The members of the Division of Rheumatology and Clinical Immunology provide high quality patient care to residents of Vermont, up-state New York and other contiguous communities, teach UVM Medical Center resident physicians and UVM College of Medicine medical students, and perform both bench and clinical research. Our faculty consists of seven physicians, a clinician pharmacist and a nurse practitioner. Over the past 12 months, the Rheumatology Division saw over 11,000 patients, generating more than 17,000 work RVUs. We provide point of care diagnostic and procedural (guided injections) musculoskeletal ultrasound that is integrated with rheumatology care. We participate in an interdisciplinary metabolic bone clinic in addition to our rheumatology services. We cover inpatient consults at the University of Vermont Medical Center on a 24-7 basis.

Our fully accredited rheumatology fellowship program accepts one new fellow annually in an increasingly competitive match. Our fellows receive musculoskeletal ultrasound training and participate in the USSONAR program. The internal medicine residency program continues to participate in an outpatient rheumatology rotation where residents see rheumatology patients with all of the faculty, thus experiencing a variety of practice styles. Faculty and fellows teach various rheumatology topics during the annual Internal Medicine Academic Half Day. Medical students complete one month elective rotations in our outpatient clinic. Each year we participate in the Vermont Integrated Curriculum Connections course teaching 2nd year medical students rheumatology and musculoskeletal physical examination skills.

Our faculty engage in clinical research including JAK kinase inhibition in giant cell arteritis, thyroid antibodies in rheumatology patients with a positive ANA, and chronic low back pain exercise. We are actively engaged in QI projects such as VCHIP transition of care program, prevention of glucocorticoid induced osteoporosis, pneumococcal vaccination in patients on biological drugs, and patient education regarding DMARD therapy. The latter two QI projects resulted in (respectively) an abstract and a publication. We continue to collaborate with the Division of Immunobiology on research in molecular physiology in rheumatoid arthritis and lupus patients.

**Faculty**

**Narandra Bethina, M.D.**
Associate Professor of Medicine
Associate Program Director, Rheumatology Fellowship Training Program
Director, Division of Rheumatology Musculoskeletal Ultrasound Clinic

- Rheumatoid Arthritis
- Psoriatic Arthritis
- Scleroderma
- Sjogren's Syndrome
- Gout
- Autoimmune disorders
- Musculoskeletal Ultrasound

Ralph Budd, M.D.
University Distinguished Professor of Medicine, Microbiology & Molecular Genetics
Director, Immunobiology and Vermont Center for Immunology and Infectious Diseases
- Systemic Lupus Erythematosus (SLE)
- Inflammatory Arthritis (γδ T cells)
- T cell homeostatic proliferation in autoimmune diseases
- Metabolic regulation of cell death in the immune system

Chi Chi Lau, M.D.
Associate Professor of Medicine
- Systemic Lupus
- Inflammatory arthritis
- Connective tissue disorders

Scott Legunn, M.D.
Assistant Professor of Medicine
- Rheumatoid Arthritis
- Polymyalgia Rheumatica/Giant Cell Arteritis
- Psoriatic Arthritis
- Vasculitis

Bonita Libman, M.D.
Professor of Medicine
Division Chief, Rheumatology and Clinical Immunology
Program Director, Rheumatology Fellowship Training Program
- Systemic Lupus Erythematosus
- Rheumatoid Arthritis
- Psoriatic Arthritis

Alana Nevares, M.D.
Assistant Professor of Medicine
- Giant Cell Arteritis
- ANCA Associated Vasculitis
- Autoimmune Eye Disease

Sanjeev Patil, M.D.
Assistant Professor of Medicine
- Vasculitis
- Rheumatoid Arthritis
- Psoriatic Arthritis
- Ankylosing Spondylitis
- Inflammatory Muscle Disease
- Musculoskeletal Sarcoidosis

**Fellows**

Matthew Jaenicke, M.D., graduated June 30, 2020

Jeanne Gosselin, M.D., 2nd year fellow

Brendan Thoms, M.D., Ph.D., 1st year fellow

**Nurse Practitioners and Physician Assistants:**

Morgan Merchand, APRN

**Leadership in Professional Societies**

Bonita Libman, M.D., member, American College of Rheumatology RheumPAC Committee

Narandra Bethina, M.D., member, American College of Rheumatology Musculoskeletal Ultrasound Planning Committee

Narandra Bethina, M.D., member, USSONAR Fundamental Education Committee

Narandra Bethina, M.D., Educational Mentor, USSONAR (Ultrasound School of North American Rheumatologists)

Alana Nevares, M.D., Award Selection Committee, Panamerican League of Associations for Rheumatology (PANLAR) Stimulus and Schumacker Awards

Alana Nevares, M.D., Reviewer, Abstract Selection Sub-Committee for Orthopedics, Low Back Pain and Rehabilitation, American College of Rheumatology 2019 National Meeting

Alana Nevares, M.D., Reviewer, Journal of Clinical Rheumatology

**Editorship**

Ralph Budd, M.D., Editor, Textbook of Rheumatology 11th edition, 2020

**Study Section**
Ralph Budd, M.D.
T32 Grant Reviews AITC NIAID
COBRE Phase I Grant Review NIGMS
Arthritis Connective Tissue Sciences (ACTS) NIH Study Section
T32 Grant Reviews AITC NIAID
NIH Immunity and Host Defense

Grants

Chi Chi Lau, M.D.  Rheumatology Research Foundation Medical Student Research Preceptorship Grant ($4000)

Alana Nevares, M.D.  Rheumatology Research Foundation Medical Student Research Preceptorship Grant ($4000)

Ralph Budd, M.D.
NIAID R21 AI151407 Ligands for Human Synovial Gamma/Delta T cells 2020-2022
NIAID T32 AI 055402 Immunology/Infectious Diseases Training Grant 2005-2021
NIGMS P30 GM118228 Vermont Immunobiology/Infections Diseases Center (COBRE Phase III Grant) 2016-2021

Publications

Peer Reviewed Publications


**Book Chapters and Non-Peer Reviewed Publications**

Alana Nevares, M.D. Introduction to Autoimmune Rheumatic Disorders, online Merck Manual Professional Version, February 2020
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<td>Nitric Oxide and Acute Kidney Injury (NO-AKI Phase 1): A Proof of Concept Study in Patients Undergoing Transcatheter Aortic Valve Replacement</td>
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**Pulmonary-Total**: $6,570,615 | **Grand Total**: $13,091,720
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## Department of Medicine

**FY2020 External UVM Research Applications Submitted by DOM Faculty**

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<th>FY20 Count</th>
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Department of Medicine
UVM Research Funding (Direct & Indirect), FY16-FY20

$39,020,893
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$16,060,209
$17,629,335
$17,452,377
## Department of Medicine

### UVM Research Funding (Direct & Indirect) by Division, FY2016-FY2020

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Department of Medicine
UVM Medical Center Research Revenue (Direct & Indirect), FY16-FY20

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