**VIRIDIS MONTIS EARLY CAREER INVESTIGATOR CHALLENGE IN CARDIOVASCULAR DISEASE - APPLICATION**

**Mission:** Develop a unique early career investigator competition highlighting cardiovascular research, health/wellness, and service in the state of Vermont.

**Early Career Investigator Challenge in Cardiovascular Disease**
- Merit-based competition highlighting outstanding cardiovascular research conducted by early career scientists at the University of Vermont and UVM Health Network.
- Applicants will be judged by their *ability to communicate science to a broad cardiovascular audience*, rigor of the scientific method, and the potential scientific impact of the work.
- Applicants should represent the breadth of cardiovascular research, including basic science, translational, clinical, and epidemiological research. An interdisciplinary group of Finalists is determined by a merit-based review of abstracts.
- Selected Finalists will compete in the *Viridis Montis* competition and deliver an oral presentation in front of a panel of expert local and guest judges with the opportunity to win $6,000 in research funds.

**Timeline:**
- **Abstract due date:** December 8, 2023
- **Finalists announced:** January 5, 2024
- **Competition:** February 21, 2024

**Prerequisites of applicant:**
- The applicant must be an early career investigator primarily affiliated with the University of Vermont and/or the UVM Health Network. Eligible candidates include: PhD and master’s graduate students; postdoctoral fellows; medical students; residents and clinical fellows; faculty and staff within 5 years of first appointment.
- Applicant must be first author on the submitted work.
- The applicant’s primary mentor(s) must be affiliated with UVM and/or the UVM Health Network.
- Research submitted must be directly related to cardiovascular diseases (basic, clinical, translational, and/or public health).
- *Previously presented and/or published scientific work is eligible for submission* if the final publication occurred within 1 year of the Investigator Challenge (after January 1, 2023). If using a previously published abstract, *it must be revised as needed to meet competition guidelines*.
- Abstracts must be formatted per *Viridis Montis* guidelines outlined below, with *special attention toward communication of findings to a broad cardiovascular audience*. Abstracts not meeting basic formatting criteria will not be reviewed.
- Former *Viridis Montis* participants are eligible and encouraged to apply, but the research must be distinctly different from a prior entry.
- All components of the application (Appendix I) with attestations (Appendix II) must be submitted by the stated due date. Incomplete applications will not be considered.

**Application**
The formal application is due by 5:00 p.m. on December 8, 2023 and should adhere to the guidelines below. The entire proposal, including all required documents, must be submitted as a single PDF document to CVRI-VT@med.uvm.edu. Proposals that do not meet this requirement will not be reviewed.
Appendix I: Application for Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease

Adapted from American Heart Association Peer Review Criteria

A. Abstract

Required abstract format (adapted from AHA abstract submission guidelines)¹

Abstract Title
An abstract must have a short, specific title (containing no abbreviations) that indicates the nature of the investigation.

Author Name(s)
The submitting author is designated as the primary and presenting author.

Abstract Text
• Structured abstracts with following sections: Introduction, Hypothesis, Methods, Results and Conclusions.
• Ensure that your abstract is written to easily communicate your findings to a broad cardiovascular audience. Abstract scoring will emphasize communication.
• Describe briefly the objectives of the study unless they are contained in the title. Include a brief statement of methods. State findings in detail sufficient to support conclusions.
• Standard abbreviations may be used without definition. Nonstandard abbreviations (kept to a minimum) must be placed in parentheses after the first use of the word or phrase abbreviated.
• Do not include references, credits, or grant support.
• Abstracts are limited to 1,950 characters (about 300-350 words). This includes the text plus any graphics, but not the title or authors. Addition of an image whether a figure or a table deducts 250 characters. No more than 2 figures/tables are allowed. Spaces do not count as characters.
• Abstracts should be 1-inch margins, 10-12-point font.

Viridis Montis Presentation Format
• All oral presentations must be in electronic slide form.
• All Finalists must provide a 2-3 sentence bio including their education background, research interests, and past research contributions (how they would like to be publicly announced at the Challenge).
• The slides and the introduction must be submitted to the CVRI ECAC committee no later than 3 days in advance of the Early Career Investigator Challenge (February 18, 2024).

B. Mentor attestation (Appendix II)
Primary research mentor must provide written attestation verifying the academic integrity of the scholarly work.

C. Applicant attestation (Appendix II)
The applicant must provide written attestation verifying the academic integrity of the scholarly work. The attestation will verify the applicant’s commitment to an oral presentation at the Research Challenge if selected as a finalist.
D. Reviewer/Judge Conflict of Interest (COI)/Confidentiality
Abstract Reviewers and event Judges shall avoid any potential conflict of interest (including but not limited to personal, professional, financial), and must abstain from abstract grading if/when there is any perceived COI. All abstract materials and review discussions are confidential. All reviewers/judges will exemplify conduct in accordance with the University of Vermont Larner College of Medicine statement on professionalism (https://www.med.uvm.edu/com/professionalism).

E. Abstract Scoring Rubric:
Scoring criteria for abstracts are adapted from AHA\(^1\) and modified to fulfill the mission of the *Viridis Montis* challenge, that is to identify the best cardiovascular research conducted by early career investigators through a merit-based review emphasizing communication of science.
Abstracts will be judged based upon the five individual criteria outlined below. Each criteria will emphasize communication and is awarded 0-10 points and a total abstract score is summed with a maximum score of 50 points. The abstract score is used to determine the 4 Finalists selected to deliver an oral presentation during the *Viridis Montis* competition. The oral presentation delivered as part of the *Viridis Montis* competition will be judged separately and the abstract score will not contribute to the determination of the competition winner.

1. **Communication**: The abstract is written in a manner that is intended for, and easily understood by a diverse cardiovascular audience. A clear summary of the research project is provided in lay language.
2. **Organization**: Structured abstract that includes all required components, is well-organized and easy to follow. Recently published/presented work is eligible for this competition as described previously, but abstract revision is strongly encouraged to ensure it meets competition guidelines.
3. **Science**: The science should be clearly described. Communication of science will be emphasized over the novelty or impact of the work, with the rationale and approach of the study clearly communicated.
4. **Hypothesis and Methodology**: Hypothesis/aims of the study are clearly communicated and supported by a concise introduction. Methodology is concisely described, as well as sufficient such that the reader can understand the study protocol and analysis.
5. **Results and Conclusion**: Results and any included tables/graphs are clearly presented in a manner that supports the aims of the study. Succinct conclusion that addresses the significance of the study’s findings.

Each of the above sections will be scored from 0-10 by the following:

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>10</td>
<td><strong>Outstanding</strong> – Exceptional, clearly of very high quality. Well-written and tailored for a broad cardiovascular audience to understand.</td>
</tr>
<tr>
<td>9</td>
<td><strong>Excellent</strong> – High-quality study that is clearly written and easy to follow. Very minor limitations.</td>
</tr>
<tr>
<td>8</td>
<td><strong>Very Good</strong> – Similar to above, but less outstanding. Minor limitations.</td>
</tr>
<tr>
<td>7</td>
<td><strong>Good</strong> – Reasonable communication of findings with room for improvement in communication and structure. Some limitations and shortcomings.</td>
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<tr>
<td>6,5</td>
<td><strong>Average</strong> – Contains adequate information and meets all requirements.</td>
</tr>
<tr>
<td>4,3,2</td>
<td><strong>Below Average</strong> – Difficult to understand at times, contains jargon or specific language that may be difficult for a general cardiovascular audience to understand.</td>
</tr>
<tr>
<td>1</td>
<td><strong>Should not be considered</strong> – Does not meet basic requirements for submission.</td>
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Abstract Review
Abstracts will be reviewed by a subcommittee comprised of CVRI Early Career Advisory Committee members, CVRI Board members, and CVRI Distinguished Investigators. Subcommittee members will review all abstracts and the top 4 will be selected. The authors of the 4 highest scoring abstracts will be selected as Finalists and will present their research to a panel of expert judges during the Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease. Feedback will be collated for each abstract and returned to applicants.

Oral Competition Scoring Rubric:
Selection of one winner from five Finalist presentations will be at the complete discretion of the Judges, following the rubric below. The rubric consists of a composite score emphasizing the communication of science. In case of a tie score, judges will discuss and select the winner from among the Finalists with tied scores based on scientific merit and presentation.

<table>
<thead>
<tr>
<th>Oral Presentation</th>
<th>Weight</th>
<th>Score</th>
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<tbody>
<tr>
<td>Clear summary of the research project</td>
<td>5</td>
<td></td>
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<tr>
<td>Clear and succinct introduction/background</td>
<td></td>
<td></td>
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<tr>
<td>Clear and succinct hypothesis/aims</td>
<td></td>
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<td>Clear and succinct methodology for answering the research questions and sufficiently described to understand the study protocol</td>
<td>5</td>
<td></td>
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<tr>
<td>Clear and succinct data and results. Tables, figures, graphs, and/or charts are clear, relevant and explain the project</td>
<td>5</td>
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<tr>
<td>Clear and succinct conclusion(s)/significance supported by the study’s findings</td>
<td>5</td>
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<tr>
<td>The extent to which the Finalist describes intellectual merit of the work: Does the finalist describe how the work advances knowledge and understanding within its field or across different fields? Emphasis should account for both overall impact of the work and should also clearly explain the originality of the work.</td>
<td>15</td>
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<tr>
<td>The extent to which the research is well organized, easy to follow and understand</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>The extent to which the Finalist answers questions aptly and thoroughly</td>
<td>10</td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>50</td>
<td></td>
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</table>

*Abstract and cardiovascular health/service attestation scores tabulated for judges based on application materials.

Appendix II: Research Attestation Form

Applicant attestation

The applicant must provide written attestation verifying the academic integrity of the scholarly work. The attestation will verify the applicant’s commitment to an oral presentation at the Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease if selected as a Finalist.

I ___________________________ (print name) am the primary investigator of this research (i.e. “first author”) the research submitted, and agree that it meets criteria for the Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease. The information provided is honest, original, and accurate.

If selected as a Finalist, I agree to an oral abstract presentation at the research challenge, and my conduct will be in accordance with the University of Vermont Larner College of Medicine statement on professionalism: https://www.med.uvm.edu/com/professionalism.

________________________________________________________
(Name/ Title/ Date)

Mentor attestation

The primary research mentor must provide written attestation verifying the academic integrity of the work.

I ___________________________ (print name) have supervised this research endeavor, reviewed the applicant’s work as a member of my team, and agree that it meets criteria for the Viridis Montis Early Career Investigator Challenge in Cardiovascular Disease. To the best of my knowledge, the information provided is honest, original, and accurate.

________________________________________________________
(Name/ Title/ Date)