December 18, 2023

NAVBO NewsBEAT

Today's Focus Session

Join us TODAY at 1:00pmEDT for our **Focus Session on Inflammation**. Today's presented abstracts include:

1. Monocyte Extracellular Vesicles as novel effectors and biomarkers in vascular inflammation. (Dr. Silvia Oggero, Queen Mary University of London, Lab of Prof. Mauro Perretti and Dr. Lucy Norling)
2. A novel role for endothelial cell Rac1 in leukocyte transmigration: Studies in vitro and in vivo. (Dr. Annette Gonzalez, Northwestern University, Lab of Dr. William Muller)
3. Galectin-9 facilitates enhanced recruitment of leukocytes from peripheral arterial disease patients. (Dr. Franzi Krautter, University of Birmingham, Lab o Dr. Asif Iqbal

This session will NOT b recorded - so be sure to join us today at 1pmET. Click here to register.

Join future Focus Sessions, sponsored and organized by the NAVBO Online Program Committee: Disease; New Techniques; and Endothelium Heterogeneity.

Join us for Virtual Vasculata 2021

Attend Vasculata 2021!
Register Now and Submit an Abstract!

Here is our exciting list of Speakers:
Pilar Alcaide, PhD, Tufts University School of Medicine
Rui Benedito, PhD, CNIC
Laura Benjamin, PhD, OncXerna
Joyce Bischoff, PhD, Boston Children's Hospital/Harvard Medical School
Hong Chen, PhD, Harvard Medical School/Boston Children's Hospital
Guilherme Costa, PhD, Queen's University of Belfast
Robert D'Amato, MD, PhD, Children's Hospital
Patricia D'Amore, PhD, Schepens Eye Research Inst of Mass Eye and Ear/ Harvard Medical School
Harold Dvorak, MD, Beth Israel Deaconess Med Center
Christiane Ferran, MD, PhD, Harvard Medical School
Michael A. Gimbrone Jr., MD, Harvard Medical School/Brigham & Women's Hospital
Chenghua Gu, PhD, Harvard Medical School
Tim Hla, PhD, Boston Children's Hospital, Harvard Medical School
Rakesh Jain, PhD, Massachusetts General Hospital
Nathan Lawson, PhD, University of Massachusetts Medical School
Robert Lefkowitz, MD, Duke University School of Medicine
Peter Libby, MD, Brigham and Women's Hospital
F. William Luscinskas, PhD, Brigham & Women's Hospital
Juan Melero-Martin, PhD, Boston Children's Hospital
Marsha Moses, PhD, Harvard Medical School
Mary Wallingford, PhD, Tufts Medical Center

Message from the President

If you missed Dr. Masanori Aikawa's President's Message, please click here to read it in it's entirety on our website.

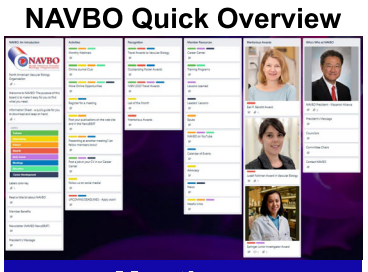
Call for Council Applications

If you are interested in serving NAVBO, please consider submitting your application for Council.

The NAVBO Council is pleased to announce a Call for Applications for two Councilor positions. Any Regular member in good standing (dues paid through June 30, 2021 or later) is eligible to run for the position of Councilor. Click here for more information and to submit an application. The deadline for submissions is April 30.

In this issue...

NAVBO Quick Overview



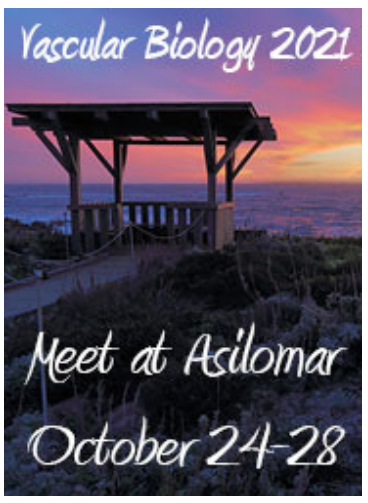
Meetings

Registration and Abstract sites open

Abstracts due March 31!!

NAVBO ONLINE

Vasculata 2021
Virtual July 13-15
Now Accepting Abstracts
Registration is Open



Call for Nominations

New NAVBO Award for Outstanding Mentorship Named for Dr. Stephen Schwartz

This award, named for Dr. Stephen Schwartz, will honor an outstanding mentor. ***Nominations for the 2021 recipient are due May 3***. For more information and to submit a nomination, please go to the web page.

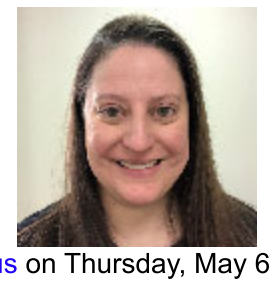
2022 Earl P. Benditt Award

The Earl P. Benditt Award recognizes an individual who has made an outstanding discovery or developed a concept that has been seminal to our understanding of vascular biology or pathology. More information is available here. Nominations are due July 20, 2021.

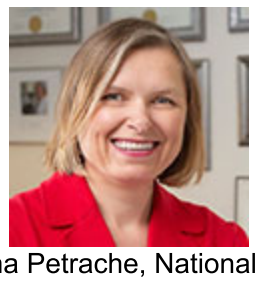
2022 Judah Folkman Award

This award is a mid-career award in recognition of Dr. Folkman's interests and his many contributions to vascular biology. The recipient will have made a significant impact on the field through his/her original research accomplishments. Click here for more information. Nominations are due July 20, 2021.

Upcoming Webinars



Join us on Thursday, May 6 at 1:00pmET, Dr. Amber Stratman from Washington University in St. Louis will present her talk "Regulation of endothelial cell-mural cell interactions during development."



Dr. Irina Petrache, National Jewish Health, will present her talk "Lung Injury Repair by the Pulmonary Microvasculature" in our webinar series on June 3. Click here to register.

Mark your calendars for these webinars. And bookmark this page on our web site for more exciting 2021 webinars.

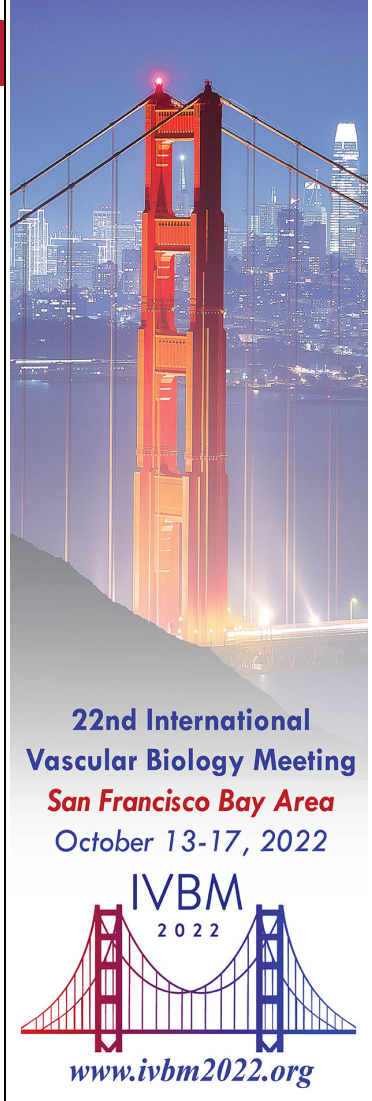
Leaders' Lessons

The NAVBO Education Committee reached out to interview several senior members of the Vascular Biology community to get their thoughts on a variety of key questions regarding how they pursue their science and choices they have made along their paths to professional success. We will be providing regular installments of the diverse perspectives from different individuals to share how some of our Vascular Biology Leaders have learned some of their Lessons. This will be an ongoing series and we hope to connect with more Leaders in the future!

In this issue, we asked Senior Scientists to respond to the question: **How do you choose what to pursue scientifically?**

***Patricia D'Amore, Ph.D.**, Senior Scientist, Schepens Eye Research Institute; Director, Howe Laboratory; Associate Chief for Opthalmology Basic and Translational Research, Massachusetts Eye and Ear; Charles L. Schepens Professor of Ophthalmology, Harvard Medical School*

In my opinion, it comes sort of organically. You know some projects you never finish, per se, but you might get to the end of what you're willing to do. I think part of the process is that you have to be doing things somewhere on the side that are a little bit discovery, but that you don't necessarily always have a hypothesis for. So that if you get an interesting observation, you have a choice of things you can pursue at some point. Now we're pursuing this molecule, endomucin, which just came up in a screen we did literally 12 years ago. We didn't do anything with it for awhile, and then as people came to the lab we had choices; now it's turned into a whole project, and my RO1 right now is funded on that. So, I think it's a combination of organic, but always with doing enough discovery research, sort of "look-and-see" experiments on the side; so that you have some new ideas waiting in the wings.



Journal Club

Join us on April 15 as we discuss, "Endothelial TFEB (Transcription Factor EB) Improves Glucose Tolerance via Upregulation of IRS (Insulin Receptor Substrate) 1 and IRS2" Registration information can be found in the NAVBO Online Event App.

Jan Kitajewski, Ph.D., *Professor and Head of Department of Physiology and Biophysics, College of Medicine at Chicago; Director, University of Illinois Cancer Center*

My experience has been a bit of a “fearless” approach, but possibly a “foolish” approach, because I have changed directions quite dramatically starting with pure cancer research, moving to vascular biology, and then moving to different pathological settings for studying vascular biology. So, I say it’s foolish, because you need to be able to “talk the talk” and “walk the walk” and need to be an expert in all those different areas; that is such an important element of succeeding. But also, I think being a bit fearless and taking advantage of opportunities is another key element to finding a good scientific area. When I see something that clearly is within my skillsets, but is an exciting new direction with high impact, then I am more inclined to jump into it and then worry later about putting all the pieces together to make it work well. I would say that I look hard for new opportunities and then dive into them.

Shulamit Levenberg, Ph.D.*, Professor and Former Dean, Biomedical Engineering Department; Director, Stem Cell and Tissue Engineering Laboratory; Technion, Israel Institute of Technology, Haifa, Israel*

First, I choose what interests me and what I think is interesting to learn about. I also prefer to identify a direction that will be important clinically and that has the potential to be applied. This is especially important if we are talking about tissue engineering. Another method for choosing what I work on is if I am approached by someone with a problem or an idea to address. For example, I have been approached by members from the foundation for spinal cord injury or from the diabetes area who are interested in our research. They have asked my lab and me to explore and ask questions in this direction. Sometimes we identify new directions based on students’ ideas. Students will identify something that they want to explore, and they come to me and ask to pursue research in this area. I think all of these options happen, and I love this student incorporation

Robert Mecham, Ph.D.*, Alumni Endowed Professor of Cell Biology and Physiology, Professor of Medicine, Pediatrics and Bioengineering, Washington School of Medicine in St. Louis*

Scientifically, I think the first influence is really the environment and familiarity. What I mean by that is when I think back to when I was starting, the first project that I got involved with was as a lab technician. I was trying to sequence a protein, and I didn't know anything about it. It was a job; however, I was interested in science, and it was an introduction to the scientific method, basically. That’s probably true for most of the students as well--that first project is probably assigned when they come into a lab. They might have an idea of what's going on in the laboratory, but I don't think that many students are aware enough of the details of the research to really understand the depth that they will need to understand a project. What I like to do when students come into my lab is talk about a project that will get them going on something that they are peripherally interested in. But I also encourage them to interact with the other students and postdocs; and that's important because it gives them an idea of what the major questions are that are being pursued in the lab. After a while, they will find their own niche

Michelle Bendeck, Ph.D.*, Professor, Department of Laboratory Medicine and Pathobiology, University of Toronto and Translational Biology and Engineering Program, Ted Rogers Centre for Heart Research*

My answer is what has worked for me. I don't know if it would work for everyone, but I've found that it's always a good idea to build on what you know. At every stage in your career, start with the basis of what you've done before, but then always incorporate new techniques and approaches. You can stick with the same questions as long as you're still pursuing the questions that you're passionate about, that you're very interested in. As you establish your lab and advance, you can ask new questions and move into different areas of research, but I think it's always safer to have that concept of building on what you know and working forward from your established expertise. There is something really useful that I learned by example from my PhD supervisor, because I saw him do it: keep the questions that really intrigue you in the back of your mind. You may not be able to answer those questions today, but five years from now there may be a new technique, there may be a new approach, people in the field may have moved forward, and your question may become a hot research topic. So don't forget about those things that that you feel are really important.

Some researchers build their career very differently. Some people build a successful career by moving from one hot topic to the next. But I find that most people do better with a logical progression of thought building from where they started.

Joyce Bischoff, Ph.D.*, Professor of Surgery, Harvard Medical School; Research Associate, Surgery, Boston Children's Hospital; Principal Investigator, Surgery and Vascular Biology Program, Boston Children's Hospital*

I think it's good to pick a question or a disease that you want to tackle and keep that your main focus. Sometimes people early on in their training become really attached to a protein, transcription factor for example, or certain cellular process. That's really good for your training, but you don't know if your favorite transcription factor is going to turn out to be less important for the question(s) you want to tackle. When you start your own lab, I think you need

to pick the question and or disease and then just do whatever it takes to answer that question.

***Victoria Bautch, Ph.D.**, Beverly Long Chapin Distinguished Professor, Department of Biology, University of North Carolina at Chapel Hill; Co- Director of McAllister Heart Institute*
I think the single most important thing is to find something that you really want to know the answer to and that you think is cool, interesting and piques your imagination. No matter what else happens, if the passion for the answer isn't there, then it's just hard to enjoy doing science. Once I have something that's really interesting, exciting and stimulating, it is important to think about what you know and how it can be packaged in a way that's fundable-- ideas without money don't get you very far, especially in this day and age. Think about where the NIH wants to be, and where you and your questions could fit into that context. Also consider other funding sources. The way I pursue things scientifically isn't the same way that everybody does. We follow the science and the biology, which sometimes leads us into different areas, but also keeps things fresh and has allowed me to stay excited for a long time in the field of vascular biology. Also, people come to the lab with good ideas that fit into the bigger picture of the research goals, and those ideas often drive different, but interesting areas of research.

Find more lessons from leaders on our web site.

Lab of the Month

Lab of the Month - April 2021
The Lab of Dr. Rio Sugimura
This month we are highlighting the lab of Dr. Rio Sugimura, who is an Assistant Professor at the University of Hong Kong. Find out more about Dr. Sugimura's lab by visiting his page in our Lab of the Month listing.

Spotlight on Trainees

Entries for Science & SciLifeLab Prize for Young Scientists Now Open
The Science & SciLifeLab Prize for Young Scientists is awarded annually to four young scientists for outstanding life science research toward a doctoral degree earned within the previous two years and described in a 1000-word entry essay. Each year, a Grand Prize and category runners-up receive monetary awards, and grand prize-winning essay will be published in Science. All winners will be invited to Sweden in December 2021 to meet with leading scientists in their fields of research and create life-long connections to support their careers. Entries in the four topical categories (Cell and Molecular Biology; Genomics, Proteomics and Systems Biology; Ecology and Environment; Molecular Medicine) are judged by an independent editorial team on the quality of research and the applicants' ability to articulate their work's scientific impact. The **application period is open** March 15 – July 15, 2021.

Member News

Welcome to our Newest Member:
Paulina Langa, University of Illinois at Chicago
Junyeop Lee, Asan Medical Center
Stephanie Niemczyk, University of Illinois at Chicago
Terren Niethamer, University of Pennsylvania
Olamide Olayinka, University of Illinois at Chicago
Noa Shapiro-Franklin, Columbia University Medical Center
Lauren Vachon, Montreal Heart Institute

Harvard Medical School Seminars in Vascular Biology
Organized by several NAVBO members (Peter Libby, Michael Gimbrone, Masanori Aikawa, Guillermo Garcia-Cardena, and Patricia D'Amore), this seminar series offers weekly talks on Thursdays at 4:30 PM (ET). Here's what's coming up this month:

April 8
Manuel F. Navedo, PhD
University of California, Davis
Singularity: Regulation of Vascular Reactivity by a Single Amino Acid in L-type Ca2+ Channels

April 15
Guo-Hua Fong, PhD

University of Connecticut School of Medicine
Communication Between Retinal Astrocytes and Endothelial Cells During Angiogenesis

April 29
Eugene C. Butcher, MD
Stanford University and Palo Alto VA Medical Center
Endothelial Diversity, Angiogenesis and the Origins of HEV: insights from Single Cell Profiling

Zoom Info: https://partners.zoom.us/j/4919086978

If you have news to share with your colleagues, send it to membership@navbo.org

Recent Member Publications

A Role for Polo-Like Kinase 4 in Vascular Fibroblast Cell-Type Transition
JACC Basic to Translational Science.
Polo-like kinase 4 (PLK4) is canonically known for its cytoplasmic function in centriole duplication. Here we show a noncanonical PLK4 function of regulating the transcription factor SRF's nuclear activity and associated myofibroblast-like cell-type transition. In this context, we have further found that PLK4's phosphorylation and transcription are respectively regulated by PDGF receptor and epigenetic factor BRD4. Read more

A hierarchical and collaborative BRD4/CEBPD partnership governs vascular smooth muscle cell inflammation
Molecular Therapy Methods and Clinical Development
Bromodomain protein BRD4 reads histone acetylation (H3K27ac), an epigenomic mark of transcription enhancers. CCAAT enhancer binding protein delta (CEBPD) is a transcription factor typically studied in metabolism. While both are potent effectors and potential therapeutic targets, their relationship was previously unknown. Read more

If you have a recent paper that you would like to share with NAVBO NewsBEAT subscribers, send the title and link to membership@navbo.org. *Please note, only papers authored by current NAVBO members are accepted for inclusion.*

Industry News

IAS Opens Nominations for Gotto Prize in Atherosclerosis Research
The International Atherosclerosis Society invites nominations for the Antonio M. Gotto, Jr., Prize in Atherosclerosis Research for 2021. The Gotto Prize aims to encourage basic, clinical and translational research in the areas relating to the causes, prevention, and treatment of cardiovascular disease globally, by recognizing the work of an individual who has achieved these goals and continues to work towards that end. The $20,000 Prize, sponsored by Weill Cornell Medical College and the International Atherosclerosis Society, will be presented during the upcoming XIX International Symposium on Atherosclerosis, October 24-27, 2021, in Kyoto, Japan. Please email your nomination along with the candidate's CV and a letter of support to the Selection Committee at GottoPrize@athero.org by May 31, 2021.

"Considerations for Patients with Peripheral Artery Disease During the COVID-19 Pandemic"
From the abstract: Farhan and colleagues at NYU and Mt. Sinai report in Clinical and Applied Thrombosis/Hemostasis on the complexities of treating patients with peripheral artery disease during the coronavirus pandemic in New York City. The authors note that challenges presented to health care systems and medical personnel were especially acute in NYC, one of the epicenters of the outbreak. The report is based on the experiences of experts from various medical fields involved in the treatment of patients with PAD practicing in hospitals across New York City during the outbreak. The authors advance recommendations for clinical management based on COVID-19 infection status as well as the clinical PAD presentation of the patient.

3rd Annual Blood-Brain Barrier Summit Announced
The blood-brain barrier (BBB) is a complex cellular and matrix-based interface that effectively segregates the peripheral blood from the brain. Recent research has explored novel means of breaching the BBB in order to deliver therapeutic agents to the central nervous system. A digital Blood-Brain Barrier Summit is planned for June 28-30, 2021, focused exclusively on evaluating innovative approaches to tackling this major challenge for CNS drug developers. The program features updates on the use of antibody therapies, nanoparticle engineering, AAV capsids, focused ultrasound, and extracellular vesicles, as well as consideration of mechanisms of SARS-CoV-2 brain entry. Presenters include scientists from academic labs and industrial partners from AbbVie, Novartis, Roche, Merck and Ossianix.

Summer PRIDE Program

PRIDE Program Mentees

Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE)
The PRIDE Summer Institute Program in Cardiovascular Disease Comorbidities, Genetics and Epidemiology to Increase Diversity Among Individuals Engaged in Health-Related Research is now accepting applications. Space is limited for the 2021 mentored summer training programs so apply early!

Eligible applicants are junior-level faculty or scientists with a background that is under-represented in the biomedical or health sciences, and are United States Citizens or Permanent Residents. Research interests should be compatible with those of the National Heart, Lung, and Blood Institute (NHLBI) in the prevention and treatment of heart, lung, blood, and sleep (HLBS) disorders.

Our All-Expense paid Summer Institute program with effective mentored training opportunities to enhance the research skills and to promote the scientific and career development of trainees with a research interest in Cardiovascular disease Comorbidities, Genetics and Epidemiology.

Trainees will learn effective strategies for preparing, submitting and obtaining external grant funding for research, including extensive tips on best practices.

For more information on the PRIDE Program click here

Call for Papers

Frontiers in Cardiovascular Medicine Special Research Topics

Putting Engineering Back In Vascular Tissue Engineering To Advance Basic Science and Clinical Applications
Topic Editors: Jessica Wagenseil (Washington University in St. Louis) and W. Lee Murfee (University of Florida).

This topic is sponsored by NAVBO
Vascular tissue engineering (VTE) can be characterized as the creation of replacement vessels. Over the past 30 years, approaches have incorporated different combinations of extracellular matrix scaffolds, cells and biological active chemical cues. Challenged by the goal to recapitulate the complexity of big or small vessels, the clinical use of in vitro tissue engineered vessel replacements is still limited. With research more often focusing on reductionist materials science or cell biology characterization of vessel-like constructs, an opportunity has emerged to re-apply engineering approaches to guide the next step in VTE.

Manuscript submission deadline has been extended; for more information, click here.

What do we know about COVID-19 implications for cardiovascular disease?
Topic Editors: Hendrik Tevaearai Stahel, Masanori Aikawa, Shuyang Zhang, and Andrew F. James

The coronavirus epidemic causes major cardiovascular complications. Underlying mechanisms, however, remain incompletely understood. Frontiers in Cardiovascular Medicine invite you to submit your article on this topic. We consider all types of manuscripts: fundamental basic science reports, translational or clinical studies, review articles and methodology papers.

We have already published 17 articles. More submissions are currently under review. Due to the popularity and the emerging nature of this topic, we decided to extend the deadline to December 31, 2021. All articles submitted before this deadline will be published free of charge. We encourage you to take advantage of this opportunity to publish your original study or review article in FCVM (Impact Factor 3.915).

For more information, click here.

For questions, please contact Masanori Aikawa
maikawa@bwh.harvard.edu or the editorial office
cardiovascularmedicine.editorial.office@frontiersin.org

Calendar of Events

April 14, 2021	NIH Grants 101 & Early Career Reviewer Program Webinar
April 19 - 20, 2021	Stanford Drug Discovery Symposium 2021
April 27 - 30, 2021	Experimental Biology 2021
May 31 - June 5, 2021	Lymphatic Forum 2021
October 24 - 28, 2021	Vascular Biology 2021
October 24 - 27, 2021	ISA 2021

Job Postings

Job Title	Company	Location
Postdoctoral Fellow - Boston Children's Hospital and Harvard Medical School	Boston Children's Hospital	Boston, MA
Postdoctoral Scholar	Case Western Reserve University	Cleveland, OH
Postdoctoral Fellow - Boston Children's Hospital, Harvard Medical School	Boston Children's Hospital	Boston, MA
Research Associate	University of Virginia	Charlottesville, VA
Postdoctoral Fellow in Translational Genetics	University of California, San Francisco	San Francisco, CA

North American Vascular Biology Organization
18501 Kingshill Road | Germantown, MD 20874
(301) 760-7745

North American Vascular Biology Organization
18501 Kingshill Road | Germantown, MD 20874
(301) 760-7745