January 13, 2022

NAVBO NewsBEAT

Lots of Upcoming Events this Month

We have a great line up for the rest this month!

Don't miss today's InFocus session - **Pathogenic Endothelial Cell Development** at 1:00pmET.

Next week attend this year's first symposium: **Thrombosis and Vascular Occlusive Disorders** on Tuesday, January 18 and an exciting **Journal Club** on a recent paper covering new technology: lymphangion-chip, on Thursday, January 20.

Then on Tuesday, January 25, attend our second **Career Development Forum** on Managing a Research Lab with panelists Luisa Iruela-Arispe, Stryder Meadows and Teresa Sanchez. Have questions for these panelists? Send them to careerforum@navbo.org.

On Thursday, January 27 we'll hold an InFocus session on **Lymphatic-Vascular Crosstalk**. And finally, NAVBO is co-sponsoring the International Mini-Symposium - Vascular Immunity, Inflammation and Atherosclerosis. More details about this event are below.

See details on all of these sessions in our Calendar of Events

David Shima

On Sunday January 2nd we tragically lost Dave Shima, a brilliant young scientist, friend and colleague. I first came to know Dave in 1991 when he joined my laboratory in the Vascular Biology Program (formerly the Surgical Research Laboratory) at Boston Children's Hospital (BCH) as a PhD student in the Harvard Medical School Cell and Developmental Biology Program (now the Biological and Biomedical Sciences Program). Dave received his PhD in 1995 with his thesis entitled, "Identification of Vascular Endothelial Growth Factor (VEGF) as an Oxygen-Regulated Mediator of Ocular Angiogenesis".

Dave, myself and our colleagues published a number of impactful papers on VEGF, its expression and regulation as well as VEGF isoforms distribution and their specific functions. He then did postdoctoral work at the Imperial Cancer Research Fund in London with Graham Warren with whom Dave published a series of major papers on Golgi.

Motivation by their longtime friendship and collaborative work on VEGF while at BCH, Dave next joined Tony Adamis at Eyetech Pharmaceuticals where they, along with their associates including Eric Ng with whom Dave had worked while in my lab, brought the first anti-VEGF therapeutic to clinic in the form of Macugen, a VEGF-specific aptamer, which was FDA-approved in December 2004 for the treatment of wet age-related macular degeneration.

Following his tenure at Eyetech, Dave served in leadership positions at a number of biotechnology and pharmaceutical companies including, Jerini Ophthalmic, Inc., Ophthotech Roche, Gyroscope Therapeutics and Re-Vana, while maintaining the position of Rothes Professor at University College London. Dave had an enduring fascination with vascular endothelial cell fenestrations and published novel work on their biogenesis.

Dave was a creative and gifted researcher and leader, a thoughtful and committed mentor, a loyal friend, and a loving and dedicated father to Dylan, Santi and Rafi, and husband to Carolina. His good friend, co-worker, collaborator and mentee Eric Ng has **posted on LinkedIn** a wonderful remembrance about his relationship with Dave and has given me permission to share that with the NAVBO readership.

Dave will be greatly missed. He has left a legacy that will extend far beyond his too short life.

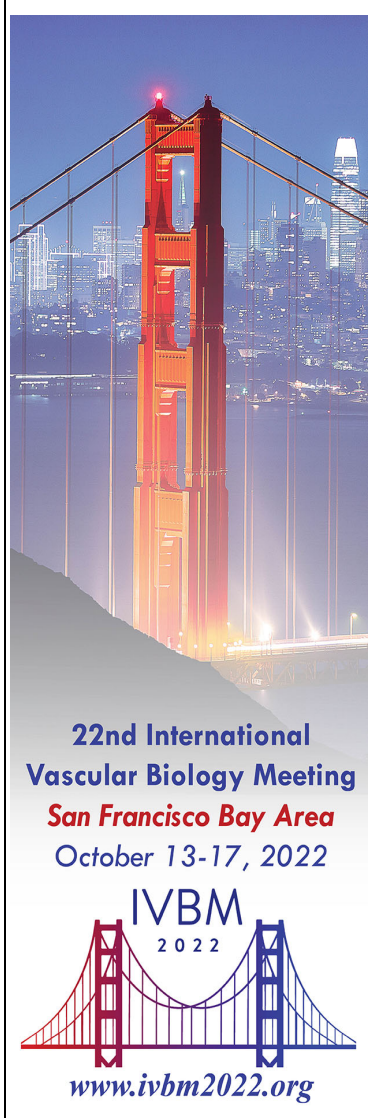
Patricia D'Amore

In this issue...

Meetings/Events

NAVBO ONLINE

Webinars - 1st Thursday
InFocus Sessions - 2nd and 4th Thursdays
Journal Clubs - 3rd Thursdays
Special Sessions on Tuesdays (check schedule)



International Mini-symposium

Vascular Immunity, Inflammation and Atherosclerosis

This mini-symposium offers an update on the progress in the field of vascular immunity, inflammation and atherosclerosis achieved in recent years. The mini-symposium includes lectures by internationally recognized investigators who will highlight new developments and knowledge in basic, translational and clinical sciences of the mechanisms that promote migration of leukocytes into inflamed tissue, and the consequences of those interactions for the promotion and regression of inflammation. The ultimate goal of this mini-symposium is to elicit critical scientific exchange and collaboration for future research. Speakers include: **Göran K Hansson**, Karolinska Institutet, **Peter Libby**, Harvard Medical School and Brigham and Women's Hospital, **Yong-Jian Geng**, University of Texas Health Science Center at Houston, **Lena Jonasson**, Linköping University, **Marc Feldmann**, Imperial College London, **Jan Nilsson**, Lund University, **Daniel Ketelhuth**, University of Southern Denmark and Karolinska Institutet, **Esther Lutgens**, University of Amsterdam, **Giuseppina Caligiuri**, University Hospital Xavier Bichat, **Norbert Gerdes**, University Hospital Düsseldorf, and **Peder S Olofsson**, Karolinska Institutet. The session will take place on January 27 from 1:30 and 6:30 PM(CET).

More information is available here.

Lessons Learned

Dr. Miranda Good is an Assistant Professor of Medicine at the Molecular Cardiology Research Institute at Tufts Medical Center in Boston. She started out at the University of Arizona where she completed both her undergraduate and PhD in the laboratory of Dr. Janis Burt, PhD. She began her post-doctoral work in Dr. Brant Isakson's laboratory at the University of Virginia where she received an F32 and then a K99/R00. Dr. Good transitioned to the R00 and started her own laboratory in January 2020 at Tufts Medical Center.

Dr. Good shares a few lessons that she has learned and she believes there will be many more to come. She notes that everyone's journeys are all different, and she hopes we can continue embracing all our different paths and encourage each other to keep doing amazing science!

She covers the following ideas - Go with the flow!, Problem solving, Scientific environment is more important than scientific topic and Science is not 24/7. Her final advice - Keep calm and science on!

Read her valuable lessons learned here!

Lab of the Month

Lab of the Month - January 2022

The Lab of Dr. Miranda Good

This month we are highlighting the lab of Dr. Miranda Good, who is an Assistant Professor at Tufts Medical Center. Find out more about Dr. Good's lab by visiting her page in our Lab of the Month listing.

Member News

Welcome to our New Members:

Erika Boerman, University of Missouri
Jonathan Brown, Vanderbilt University Medical Center

Corporate Partners

Applied BioPhysics
Quantifying Cell Behavior

CellBiologics
A CELL ABOVE THE REST

DMT

FUJIFILM
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VISUALSONICS

Miltenyi Biotec

VEC TECHNOLOGIES
The Vascular Endothelial Cell Company

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CENTER FOR CARDIOVASCULAR DISEASES AND SCIENCES

OMRF

The Company of Biologists

GORE

NOVARTIS

DEPARTMENT OF BIOENGINEERING
UNIVERSITY of WASHINGTON

frontiers in Cardiovascular Medicine
Impact Factor 6.050

VB2021 Exhibitors

Adriana Franco Acevedo, UCLA
Mathias Francois, The Centenary Institute, The University of Sydney
Cristhian Gutierrez Huerta, Medical College of Wisconsin
Kristen Kelly, UC Irvine
Michael Murphy, University Vascular Surgery
Jalees Rehman, University of Illinois, College of Medicine
Karthik Suresh, Johns Hopkins University School of Medicine

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

Spotlight on Trainees

NIH gauges value of MD/PhD programs on long-term trainee success

As part of its ongoing efforts to assess of benefits of dual-degree medical education, NIH's Office of Extramural Research has released results of an analysis focused on the experiences of >33,000 predoctoral trainees, including M.D./Ph.D. (or equivalent) who were enrolled in NIH-funded institutional training programs and voluntarily reported their age, gender, race and ethnicity. Those surveyed included trainees affiliated with either a Medical Scientist Training Program or other T32 pre-doctoral training programs who began their training between 1975 and 1998. Trainees enrolled in MSTP programs were more successful in subsequently receiving research program grant awards as PIs, but only after 15 or more years had passed, perhaps reflecting time needed to complete clinical training. Trainees who enrolled before 1985 – thus entering the system around the time of the NIH budget doubling – likewise were more successful. While confounding variables do exist (non-NIH funding availability, institutional standing, intrinsic trainee aptitude, etc.), the findings favor continued support for dual-degree programs.

Recent Member Publications

Novel engineered, membrane-tethered VEGF-A variants promote formation of filopodia, proliferation, survival, and cord or tube formation by endothelial cells via persistent VEGFR2/ERK signaling and activation of CDC42/ROCK pathways

FASEB Journal

Therapeutic angiogenesis would be clinically valuable in situations such as peripheral vascular disease in diabetic patients and tissue reperfusion following ischemia or injury, but approaches using traditional isoforms of vascular endothelial growth factor-A (VEGF) have had little success. Read more

Lymphatic endothelial cell fate specification in the mammalian embryo: An historical perspective

Developmental Biology

Development of the mammalian lymphatic vasculature is a stepwise process requiring the specification of lymphatic endothelial cell progenitors in the embryonic veins, and their subsequent budding to give rise to most of the mature lymphatic vasculature. Read more

Lymphangion-chip: a microphysiological system which supports co-culture and bidirectional signaling of lymphatic endothelial and muscle cells

Lab on a Chip

The pathophysiology of several lymphatic diseases, such as lymphedema, depends on the function of lymphangions that drive lymph flow. Even though the signaling between the two main cellular components of a lymphangion, endothelial cells (LECs) and muscle cells (LMCs), is responsible for crucial lymphatic functions, there are no in vitro models that have included both cell types. 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

AAMC invites nominations for 2022 awards

The American Association of Medical Colleges annually celebrates outstanding contributions to medical education, patient care, life sciences research, and community engagement. Nominations are now open for a family of awards, including those recognizing Excellence in Medical Education and Distinguished Research in the Biomedical Sciences. Guidelines for submission of nominations (due Jan. 28, 2022) and selection criteria for these and other AAMC awards can be found at aamc.org/awards. Awardees in 2021 included NIH luminaries Francis Collins and Anthony Fauci, as well as cancer immunotherapy pioneer Suzanne Topalian.

'Humanized' pig heart transplanted into heart failure patient

The New York Times reports that the blood circulation of a 57-year-old patient is being largely driven by a genetically-modified pig heart that he received on January 6, 2022. The donor animal had a total of 10 genetic modifications, including knock-out of the alpha-1,3-galactosyltransferase associated with aggressive host versus graft response. Long-term outcome remains uncertain, but the patient has tolerated the xenotransplantation successfully thus far. Hopes are high that this approach to creating transplantable tissue

can help alleviate the dire shortage of donor organs: on average, a dozen people die each day while awaiting transplant.

COVID-19 considerations for spring 2022 NIH grant applications
Investigators preparing to submit NIH grant applications for spring 2022 due dates are advised that applications should *not* include contingency or recovery plans for problems resulting from the COVID-19 pandemic. Instead, applicants have the opportunity to address pandemic impacts on scoreable issues in the biosketch's personal statement; reviewers will be instructed to weigh these impacts when scoring applications. In addition, NIH has also extended the deadline for submitting post-submission materials, including preliminary data.

Summer Programs

PRIDE CVD-CGE

Cardiovascular Disease Comorbidities, Genetics and Epidemiology
July 11-27, 2022 at the University of Washington in St. Louis

The NHLBI-funded "Programs to Increase Diversity Among Individuals Engaged in Health-Related Research" support junior faculty underrepresented in biomedical research.

Space is limited for the mentored program starting summer 2022. **Apply early!**

Learn more . . .

Children's Hospital of Pittsburgh offers an eight-week paid summer internship program designed for undergraduate students from underrepresented groups from any college or university who wish to learn the rationale, design strategies, methods and other aspects of biomedical research by engaging in studies related to the heart, lung and blood fields under the direct supervision of experienced researchers.

Applications for the 2022 program will be available on-line at www.chp.edu in early January 2022. Selected participants are notified in April. The 2022 program will commence in June and conclude at the end of July. Participants are expected to complete the 8-week program. Housing is provided.

Please download the flyer and post it.

Learn more . . .

Call for Papers

Are you using leading-edge techniques to profile endothelial cells at single-cell resolution? Consider submitting your work to a new JoVE collection guest-edited by NAVBO members, **Dr Zhen Bouman Chen** (2020 Springer Junior Investigator Award winner)

and Dr. **Naseeb Malhi** at City of Hope! For more information or to submit an abstract, please email zhenchen@coh.org or ***follow this link.***

frontiers in Cell and Developmental Biology

Impact Factor 6.684

Lymphatic System: Organ Specific Functions in Health and Disease

Topic Editors: Tsutomu Kume, Young-Kwon Hong, Zoltán Jakus and Kaska Koltowska

The journal Frontiers in Cell and Developmental Biology has launched a new Research Topic on “Lymphatic System: Organ Specific Functions in Health and Disease” to feature the cellular and molecular mechanisms that govern the formation and regulation of lymphatic vascular heterogeneity in different organs/tissues. This Research Topic will be edited by Dr. Tsutomu Kume (Northwestern University, USA), Dr. Young-Kwon Hong (University of Southern California, USA), Dr. Zoltán Jakus (Semmelweis University Budapest, Hungary) and Dr. Kaska Koltowska (Uppsala University, Sweden).

The intent of the Research Topic is to enhance understanding of organ-specific lymphatic functions in health and disease. The scope of the Research Topic is to focus on recent and novel advances in lymphatic vascular heterogeneity and organ-specific lymphatic functions with an emphasis on cellular and molecular processes. We welcome original research, reviews, and opinion articles, falling under, but not limited to, the following areas:

• Organ-specific lymphatic cell identity and origin
• Lymphatic vessel morphogenesis in different organs
• Organ-specific lymphatic function
• Impaired organ-specific lymphatic function in pathological processes
• Signaling pathways under physiological and pathological conditions
• Cell-cell communication
• Organotypic chemokines and cytokines
• Organ-specific modulation of immune responses

Deadline for abstract: January 15, 2022
Deadline for manuscript: May 21, 2022

Visit this website for more information.

Calendar of Events

January 13, 2022	**InFocus** - Pathogenic Endothelial Cell Development
January 18, 2022	Symposium: Thrombosis and Vascular Occlusive Disorders
January 20, 2022	Journal Club - January 2022
January 27, 2022	International Mini-Symposium - Vascular Immunity, Inflammation and Atherosclerosis
February 3, 2022	Webinar Featuring George Truskey
March 18-19, 2022	4th Annual Gulf Coast Vascular Research Consortium

Visit the NAVBO Calendar of Events for more meetings

Job Postings

Job Title	Company	Location
Postdoctoral Fellow – Cardiovascular Biology	University of Pittsburgh	Pittsburgh, PA

Postdoctoral Position in Vascular Research at Northwestern University	Northwestern University	Chicago, IL
Postdoctoral Fellows	University of Michigan	Ann Arbor, MI
Postdoctoral Fellow in Immunology and Nanotechnology	Univ of Illinois Col of Med	Chicago, IL
Postdoctoral Fellow in Vascular Biology and Inflammation	Univ of Illinois Col of Med	Chicago, IL

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

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