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Call for Volunteers

Volunteer for the NAVBO Online Programming Committee

The NAVBO Online Programming Committee is responsible for much of the online programming including the InFocus Sessions and Symposia that you see throughout the year. Members of the committee select the speakers and organize the InFocus Sessions and coordinate with the Symposia organizer (usually a senior NAVBO member who proposed the session). Committee members manage the program from start to finish, including promotion, reaching out to the speakers, and running the webinar; giving them the opportunity to network with fellow trainees as well as established investigators.

The committee is comprised of early stage investigators, primarily postdocs, and **we are looking for four new members**. There are two co-chairs, Hasina Outtz Reed and Cynthia St. Hilaire. If you are interested in joining us, please email info@navbo.org.

Membership, Communications and Diversity, Equity and Inclusion Committees

There are more opportunities to serve your fellow NAVBO members - the Membership Committee aims to maintain and create membership value for NAVBO members; the Communications Committee is involved with all the means by which NAVBO communicates with the vascular community including the web site, the newsletter, social posts, etc. and of course, our Diversity, Equity and Inclusion Committee, which strives to increase diversity within the NAVBO and broader vascular biology community.

If any of these committees interest you, please email info@navbo.org.

Summer Program



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.

[Read More](#)

Lymphatic Summit

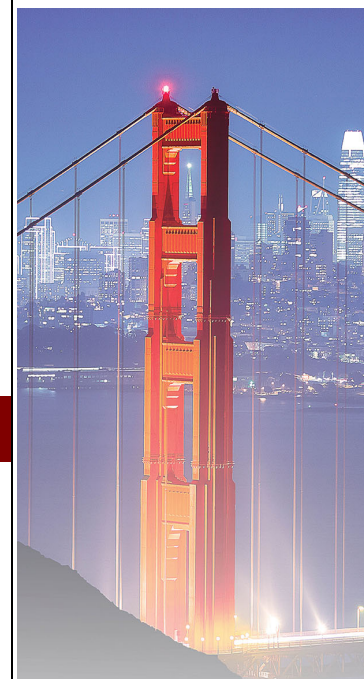
In this issue...

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Meetings/Events



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



22nd International Vascular Biology Meeting
San Francisco Bay Area
 October 13-17, 2022



www.ivbm2022.org

Webinar Series



[Corporate Partners](#)

Special thanks to the Lymphatic Education & Research Network for the opportunity to send NAVBO members, **Harish Palleti Janardhan**, University of Massachusetts Medical School and **Anjali Gupta**, Boston Children's Hospital/Harvard Medical School, to the Virtual Lymphatic Summit 2021: The Continuum from Evolving Research to State-of-the-Art Lymphatic Management.

Member News

Welcome to our New Members:

Hanqiang Deng, Yale University
Yanbo Fan, University of Cincinnati
Tse Wing Winnie Ho, University of Toronto
Daniel Jovin, Yale School of Medicine
Corey Scipione, University Health Network

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

Spotlight on Trainees

Strategic planning for enhancing the postdoctoral experience

The National Postdoctoral Association has released its [2021-2024 Strategic Plan](#), which highlights the organization's priorities of "... diversifying the research community, advocating for equity and opportunities within it, and maintaining the intentional, dependable service this important community deserves." The NPA was formed in 2002 with the aim of encouraging improvements to the postdoctoral experience in the US. The organization sponsors an annual networking meeting for postdocs and makes available to member NPA chapters a Postdoc Symposium Toolkit to help postdocs create a collaborative environment at their home institutions. Is there an NPA chapter at your institution?

Originally published in our November 4 issue

Recent Member Publications

Primary lymphoedema

Nature Reviews Disease Primers

Lymphoedema is the swelling of one or several parts of the body owing to lymph accumulation in the extracellular space. It is often chronic, worsens if untreated, predisposes to infections and causes an important reduction in quality of life. [Read more](#)

Genetic investigation of fibromuscular dysplasia identifies risk loci and shared genetics with common cardiovascular diseases

Nature Communications

Fibromuscular dysplasia (FMD) is an arteriopathy associated with hypertension, stroke and myocardial infarction, affecting mostly women. We report results from the first genome-wide association meta-analysis of six studies including 1556 FMD cases and 7100 controls. [Read more](#)

KRAS-driven model of Gorham-Stout disease effectively treated with trametinib

JCI Insight

Gorham-Stout disease (GSD) is a sporadically occurring lymphatic disorder. Patients with GSD develop ectopic lymphatics in bone, gradually lose bone, and can have life-threatening complications, such as chylothorax. The etiology of GSD is poorly understood, and current treatments for this disease are inadequate for most patients. [Read more](#)

Interferon-alpha or -beta facilitates SARS-CoV-2 pulmonary vascular infection by inducing ACE2

Angiogenesis

Severe viral pneumonia caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is characterized by a hyperinflammatory state typified by elevated circulating pro-inflammatory cytokines, frequently leading to potentially lethal vascular complications including thromboembolism, disseminated intracellular coagulopathy and vasculitis. [Read more](#)

Myofibre injury induces capillary disruption and regeneration of disorganized microvascular networks

The Journal of Physiology

Injury to skeletal muscle disrupts myofibres and their microvascular supply. While the regeneration of myofibres is well described, little is known of how the microcirculation is affected by skeletal muscle injury or its recovery during regeneration. Nevertheless, the microvasculature must also recover to restore skeletal muscle function. [Read more](#)

Effect of age on the vascular proteome in middle cerebral arteries and mesenteric resistance arteries in mice

Mechanisms of Ageing and Development

Aging is associated with hypertension and brain blood flow dysregulation, which are major risk factors for cardiovascular and neurodegenerative diseases. Structural remodeling, endothelial dysfunction, or hypercontractility of resistance vessels may cause increased total peripheral resistance and hypertension. [Read more](#)

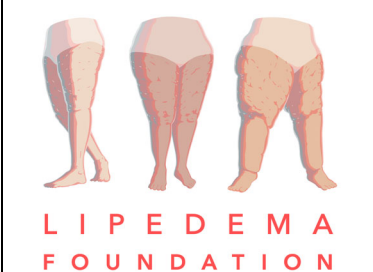
Vascular calcium signaling and aging

The Journal of Physiology

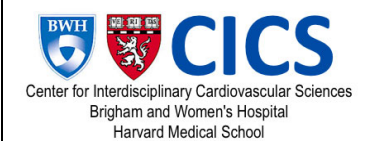
Changes in cellular Ca²⁺ levels have major influences on vascular function and blood pressure regulation. Vascular smooth muscle cells (SMCs) and endothelial cells (ECs) orchestrate vascular



Corporate Members



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VB2021 Exhibitors



activity in distinct ways, often involving highly-specific fluctuations in Ca²⁺ signaling. [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

COVID-19 and cardiac disorders

Alida Caforio, writing in [UpToDate](#), reviews clinical literature through October 2101 on cardiac manifestations of COVID-19 infection in adults. Dr. Caforio notes that patients with COVID-19 present with a variety of cardiac conditions, some with no clinical evidence of heart disease, some without symptoms of heart disease but cardiac test abnormalities, and some with diagnosed symptomatic heart disease. Conditions associated with myocardial injury, including myocarditis, stress cardiomyopathy, and myocardial infarction, are common in patients hospitalized with COVID-19, but their underlying causes, as well as an etiologic link with SARS-CoV-2 infection, remain to be established.

Biofabrication of tissues for vascular repair

[Kozaniti and colleagues summarize](#) the state-of-the-art around preparation of biofabricated tissues for cardiac valves and vascular networks, created using 3D printing and related technologies. Based on the criteria for successful constructs as defined by the authors (“...non-cytotoxicity, biodegradation, biocompatibility with preserved mechanical strength and structural integrity.”), useable biomimetic grafts remain at some distance, although notable improvements have been made using scaffold-free approaches.

Improved immunocompatibility of pig organs for human transplant

Surgeons at NYU Langone Health have attached to a human patient a [kidney grown in a pig](#) genetically-altered to remove prominent graft-host antigens. The organ worked normally for more than 50 hours, making urine and the waste product creatinine shortly after attachment to the arterial circulation. While major ethical and regulatory hurdles remain, the prospects for using pigs as a source of donor hearts, livers, and other organs has sparked excitement among transplant surgeons, who typically contend with a profound shortage of donor organs suitable for transplant into their patients.

Originally published in our November 4 issue

Call for Papers

Microcirculation

The Official Journal of the Microcirculatory Society, Inc., the British Microcirculation Society, the Australia & New Zealand Microcirculation Society, and the Japanese Society for Microcirculation

Lymphatic Pathophysiology

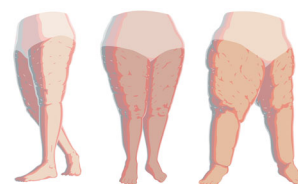
The journal *Microcirculation* is pleased to announce that it will be publishing a Special Topics Issue on “Lymphatic Pathophysiology” to feature the emerging role of lymphatics in the progression in disease states. This Special Issue represents a collaborative interest between the Microcirculatory Society, North American Vascular Biology Organization, Lymphatic Education & Research Network, and the organizers of the 2021 Lymphatic Forum. The issues will be edited by Dr. Jerome Breslin (University of South Florida), Dr. Sanjukta Chakraborty (Texas A&M University Health Science Center), Dr. Jorge Castorena-Gonzalez (Tulane University), Dr. Joseph Rutkowski (Texas A&M University), and Dr. Brandon Dixon (Georgia Institute of Technology).

The intent of the special issue is to highlight the emergent multi-functional role of the lymphatic vasculature, its relationships with inflammation, and the intersecting contributions to altered tissue haemostasis during pathophysiology. Articles can focus on aspects of lymphatic contractile function, lymph transport and/or lymphangiogenesis that play key roles in multiple diseases.

Focused reviews and original research articles will be considered for this special issue. Submissions using novel models or imaging techniques to determine some of these key alterations are especially encouraged. Articles should be 3000-5000 words including figure legends (references excluded). Following peer-review, all papers will be published 'In Press' as soon as they are accepted and in the online special issue.

Please inform both Jerome Breslin (breslin@usf.edu) and Sanjukta Chakraborty (schakraborty@tamu.edu) of your intent to contribute, and provide a tentative title.

Deadline for intent to submit: November 1, 2021
Deadline for submission: March 1, 2022



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VB21 Guest Society



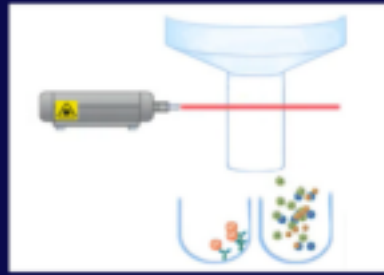
Affiliated Journals



Cardiovascular
Pathology

 frontiers Impact Factor 6.050
in Cardiovascular
Medicine

Emerging Methods in Profiling Endothelial Cells at Single-Cell Resolution



Zhen B. Chen
City of Hope,
Department of Diabetes
Complications and
Metabolism



Naseeb Kaur Malhi
City of Hope,
Department of Diabetes
Complications and
Metabolism

JOVE | Methods Collections

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](#).



Impact Factor 6.050

frontiers

in Cardiovascular
Medicine

Extracellular Vesicles in Cardiovascular Inflammation and Calcification

Topic Editors: Jona Benjamin Krohn, Elena Aikawa, Masanori Aikawa, Susmita Sahoo, Joshua D Hutcheson and Jason E. Fish

Submission Deadline: 12/31/2021

This research topic is sponsored by NAVBO

[Visit the site for more information](#)



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

[Visit this website for more information.](#)

Calendar of Events

November 18, 2021	Webinar featuring George Davis: Defining the key growth factor-dependent signaling and extracellular matrix remodeling events necessary for capillary network assembly and maturation
December 2, 2021	Webinar Featuring Rui Benedito: Understanding angiogenesis through multispectral genetic mosaics
December 8, 2021	Victor J. Dzau Distinguished Lecture in Cardiovascular Medicine
January 6, 2022	Webinar Featuring Karthik Suresh: Mitochondrial ROS-induced Ca ²⁺ influx and microvascular endothelial cell dysfunction in pulmonary arterial hypertension (PAH)
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	Toronto General Research Institute, University Health Network	Toronto, Ontario, Canada
Physiology and Molecular Systems Medicine: Assistant Professor (Tenure Track)	Medical College of Wisconsin	Milwaukee, WI
Postdoctoral Research Associate	Weill Cornell Medicine	New York, NY
Postdoctoral Researcher	University of Pennsylvania	Philadelphia, PA
Assistant and Associate Professor, Basic Science and Engineering (BASE) Initiative, Stanford University	Stanford University School of Medicine	Stanford, CA
Postdoctoral Fellow	Rutgers University	Newark, NJ
Postdoctoral Traineeship	National Institutes of Health	Bethesda, MD

North American Vascular Biology Organization

18501 Kingshill Road | Germantown, MD
20874
(301) 760-7745

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