



NewsBEAT

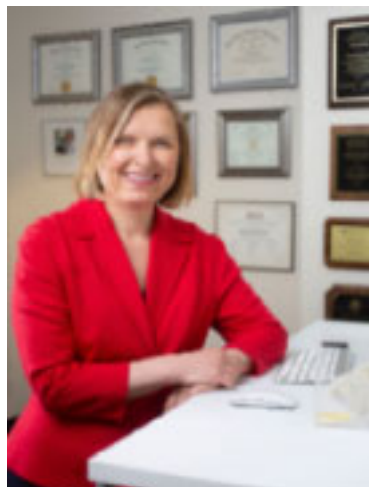
[Membership](#) | [Events](#) | [Awards](#) | [Resources](#)



CellBiologics
A CELL ABOVE THE REST
Endothelial Cells Human & Mouse
www.cellbiologics.com 1.312.226.8198 service@cellbiologics.com



NAVBO Webinars



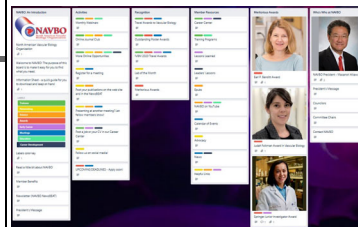
Today's Webinar

Dr. Irina Petrache, National Jewish Health, will present her talk "Lung Injury Repair by the Pulmonary Microvasculature" in our webinar series on June 3 at 1:00pmET. [Click here](#) for more information and to register.

In this issue...

- [Webinar](#)
- [Vasculata](#)
- [VB2021](#)
- [Lymphatic Forum 2021](#)
- [Focus Session](#)
- [Symposia](#)
- [Leaders' Lessons](#)
- [Lab of the Month](#)
- [Member News](#)
- [Spotlight on Trainees](#)
- [Member Publications](#)
- [Industry News](#)
- [Calendar of Events](#)
- [Job Postings](#)

NAVBO Quick Overview



Meetings/Events



Upcoming Webinar

Our July 1 webinar "Chromatin Remodeling and Gene Regulation in Vascular Homeostasis and Disease" will feature **Dr. Marlene Rabinovitch**, of Stanford University. [More information is on our web site.](#)



Mark your calendars for these webinars. And bookmark this [page on our web site](#) for more exciting 2021 webinars.

Virtual Vasculata 2021

Plan to Attend Vasculata 2021!

July 13-15

[Register Now](#)

*Affordable registration fees, no travel expenses - there's no reason not to attend!
Early bird deadline is June 15.*

Featured Workshop:
Innovations in Vascular Imaging
Tissue clearing and light sheet microscopy for quantitative 3D analysis workshop supported by **Miltenyi Biotec**.



Miltenyi Biotec

[See the Preliminary Program](#)

Vascular Biology 2021

Plan now to submit an abstract for Vascular Biology 2021. We will be accepting abstracts for in-person posters and short talks as well as ePosters. In addition, we will be holding Virtual Poster Sessions. [Find out more on our web site.](#)

[Submit an Abstract](#)

SAVE THE DATE!

LYMPHATIC FORUM 2021

Exploring the Lymphatic Continuum Virtual Meeting

May 31-June 5, 2021

[Registration open through June 5](#)



Vasculata 2021

Virtual July 13-15

**Now Accepting Abstracts
Registration is Open**



Plan to join us from October 24-28, 2021 at the Asilomar Conference Center in Monterey, California! **Vascular Biology 2021** will feature the Developmental Vascular Biology & Genetics and the Vascular Matrix Biology & Bioengineering Workshops. The registration site will be open soon! [See the program on our web site.](#)

Lymphatic Forum 2021

EXPLORING THE LYMPHATIC CONTINUUM • VIRTUAL MEETING

LYMPHATIC FORUM 2021

May 31 - June 5, 2021

Registration is open for the Lymphatic Forum through June 5

Next Focus Session

Focusing on Organ Specific Vasculature



Join us Thursday, June 24 at 1:00pmET

Presentations include:

Slit2-Robo signaling promotes glomerular vascularization
- Dr. Jinyu Li, Yale University School of Medicine

Visualizing the effects of aging on hepatic blood bile barrier using two-photon intravital imaging
- Dr. Tirthadipa Pradhan-Sundd, University of Pittsburgh School of Medicine

Characterization of the zebrafish meningeal layers and their resident cells
- Dr. Marina Venero Galanternik, NIH/NICDH

[Register](#)

Symposium

Human Organoid Systems to Study Vascular Toxicity

Tuesday, June 15, 2021 at 1:00pmET

Organized by **Andreas Beyer, Medical College of Wisconsin**

Speakers:
Milica Radisic, University of Toronto
Jonathan W. Song, The Ohio State University
Lee Esak, Cornell University
Janee Terwoord, Medical College of Wisconsin
Zsolt Bagi, Augusta University



For more information, [click here](#) or click the button to register.

[Register](#)

Shaping Cell Behavior

Vascular Biology 2021



Journal Club

Join us on June 17 for our next Journal Club



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



Webinar Series



Corporate Partners



Quantifying Cell Behavior



Corporate Members



VB2020 Supporters



Tuesday, June 22, 2021 at 1:00pm

Organized by **Katie Bentley, The Francis Crick Institute**

Speakers:
Filopodia speed up Notch patterning and tip cell selection
Katie Bentley, The Francis Crick Institute

The different shapes of tip cells
Claudio Franco, Instituto de Medicina Molecular

Victoria Bautch, University of North Carolina at Chapel Hill

For more information, [click here](#) or click the button to register.

[Register](#)

Online Symposia and Focus Sessions are Sponsored by the NAVBO Online Program Committee

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 stay current in terms of your scientific approach the skills? How do you go about re-invigorating your research to keep it fresh?**

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

Great question. We took advantage of an “accident”, a new research direction that came out of an unexpected dataset that included changes in endomucin. Then that turned into a whole new avenue of research for the lab. So how do you keep your skills and abilities fresh? I think skills are tougher because I am not in the lab, but I try to go to seminars because I find even seminars not in your own field are enlightening in terms of methods that people use. So, if I go to one in neurobiology, for me, I am a vascular person; but I still can hear some approach that they are using that would be helpful to me. That is not the only reason I go to seminars, obviously, but it does turn out to be a nice side benefit. We actually have had a technology seminar series in the past at Schepens and plan to start those again soon. With these seminars, we bring in local experts or people from companies to talk about new platforms that are out there that we might not know about, so that is a helpful thing. These interactions tell you what is possible and help generate discussion. In general, I think going to seminars is really a good thing...you can read a manuscript, but you just do not get the dynamic nature of the technology. I really appreciate going to seminars where people are doing different things in terms of keeping the research alive. Some of my best ideas I think I get by going to seminars that are not in my field and seeing the crossover in the similarity of the ideas. I think it's also important to read the literature, but more than anything it is important to talk to people. I love going to give seminars at other places and then talking to faculty about what they are doing. They are able to explain the assays and approaches they are using in way more detail than you can get out of a seminar or a paper. That is what I find helps give me some new ideas regarding technology and cutting-edge approaches. I definitely do not read enough manuscripts.... well, as much as I should. When I have to have to read manuscripts to write a grant or review a grant, I am always so sad because I see something and think, “I should have read that before—it is a 2017 paper!” “There is only so much time in the day, so I do the best I can.

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

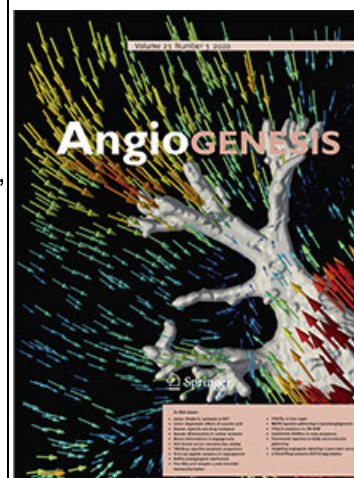
I use two approaches. One is networking, obviously. That is going to meetings, having robust discussions, and getting on the phone with colleagues. I may not have used that when I started the lab; I think it was following the literature a lot. Really, going to a NAVBO meeting (to give a plug for NAVBO meetings), is probably the best way that I have learned about new approaches and new skillsets. But second, because we have moved into a lot of areas, it means that we really need to reach out to other experts and to collaborate. The moment we would start to think about moving from retinal analysis to brain vasculature in Alzheimer's it means we have to go talk to folks who are leaders in the Alzheimer's field or in the blood-



VB20 Guest Societies



Affiliated Journals



Cardiovascular Pathology



brain-barrier field. I think that I learn a lot about new technologies and scientific perspectives from those collaborations. That's probably the most productive way because it is taking your skillsets, adapting them to a collaboration, and then having a robust discussion with your collaborator about what skillsets are needed. It's when you bring those two areas of expertise together, you find how it fits. If you are reading it in a journal, and thinking, "oh, I might be able to use this as a future approach", you then might try using it. There is a lot of trial-and-error you may go through and realize this may not have been the right approach, and it's not working super well. That I find more challenging than going out and seeking experts to collaborate with and then having a robust crosstalk about how best to onboard new scientific things. For me, it seems to be mainly about networking.

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

I think one important thing is conferences--real in-person conferences when you go for days and listen to lectures and learn new things in a focused way. I think it is very important and, actually, I encourage my students to go to seminars where they can be exposed to new assays, new methods, new technologies, and new directions. I think going to seminars and conferences is an important way to stay current. Also, of course, reading the primary literature is critical. I think the research team can help as well. I may hear about some new technique and I will ask one of my students to explore deeper and then present the information at a group meeting. That way we can all share in the discussion, but not everyone needs to go deep into the paper; I like that approach.

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

I believe it is important that you are constantly refreshing your skills and your approaches to research. How do you do that? Well, I think that the most common means are the ones I think we would all identify--seminars, the literature, and scientific meetings. I think it is really important to pay attention to the research trends that are going on around us using our "peripheral vision" rather than just staying focused on our own research. Trying to understand how science is changing and how that might help our own research move forward in the laboratory is critical. Collaborations are really important; you cannot do everything in science alone anymore. Research techniques are moving ahead too quickly, and there will come a day when you cannot do it all. So, having good collaborations within the institution and outside the institution is critical. With postdocs and graduate students, I think it is important to give them the opportunity to learn new things that they can bring back to the lab. For example, we have jumped into single cell sequencing which everybody is doing these days it seems. But having a postdoc who could go over to the sequencing center and spend a few weeks over there learning the technique, trying to understand how it works, figuring out what the limitations are and then bringing that information back into the lab has been critical to our research. This is something that I do not have time to do, but the post doc did this. I think that if you really want to have the research be reinvigorated, (depending on where you are in your career) take a sabbatical, even if it is three months or six months or a year. If you can get a sabbatical, I think it is well worth it. But you do not want to do that, really, before you have tenure, and you are probably not eligible to do it anyway. I did a sabbatical, and it was one of the best things I ever did for my research. I went to the NIH for a year and worked on a project there that was peripherally related to what I do in my lab, but the research there also gave me a chance to learn some new techniques and meet new people. The other important part about a sabbatical is that it usually enhances your network quite a bit.

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

I try to stay current by doing really practical things like attending relevant conferences because I find that really helps to keep me up to date much more easily and efficiently than sitting down trying to read the literature. I like to work with collaborators to introduce new methods. If you don't have the expertise to do something, find someone who does and work with them, and you will learn. Apply for small grants when you want to do something different, as they can be a good source to get the seed money to start. And the other thing that I've learned really, only very recently, is that it is okay to let your students and postdocs lead those proposals. If they decide that they want to pursue a project they are passionate about and write a small grant, it's incredible experience for them. That has worked for me a couple of times, and what I'm finding is if I let my students pursue their ideas in this way, they actually teach me new approaches; they teach me things that allow me to feel more comfortable in a new field. That's really something very powerful that I wish I would have clued into earlier.

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

That's a great question, and it's hard to address because we get so locked into what we're doing and the techniques we've developed. I think it sounds simple, but it can start by going to seminars outside your area of expertise, listening to webinars about new techniques and talking to colleagues who are using these new techniques. When I go to a meeting, a seminar or read a paper, I'm selfishly always thinking about how I can use this to help our research projects. Sometimes a new topic, or a topic you already love, can be presented so beautifully it makes you feel inspired. Go out and use all the different online forums that have grown since the pandemic.

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

Staying current in terms of scientific approach and skills at this point primarily relies on bringing people in who bring those skills or finding them via collaboration. I go to meetings and find out what people are doing, how they are approaching things, and what are the new toys they are using. I don't think it's that hard - I think the hard thing is to not jump on every new thing and just do what everyone else is doing. In terms of reinvigorating my research, I have gone on sabbaticals. The first time, I went to Rosa Beddington's lab and did developmental biology. The second time, I stayed at UNC and went to my colleague's lab to learn zebrafish. Then, we started doing zebrafish in my lab, and it was a whole new model and this whole new thing. I think it helped my science a lot, and it also helped me in terms of recharging the batteries. I think every once in a while, taking a break and doing either a mini sabbatical or a real sabbatical is a really good idea.

[Find more lessons from leaders on our web site.](#)

Lab of the Month



Lab of the Month - June 2021

[The Lab of Dr. Isabella Grumbach](#)

This month we are highlighting the lab of Dr. Isabella Grumbach, who is a Professor at the University of Iowa. Find out more about Dr. Grumbach's lab by [visiting her page](#) in our Lab of the Month listing.

Member News

Welcome to our New Members:

Jumobi Arowolo, UIC
Susmita Bhattarai, LSU Health Sciences Center -Shreveport
Maria Thea Rane Clarin, University of Tsukuba
Mingyuan Du, University of Pittsburgh
Avishek Ghosh, Boston Children's Hospital
Michael Harrison, Weill Cornell Medicine
Priscilla Kyi, Medical College of Wisconsin
Huu Tuan Nguyen, Massachusetts Institute of Technology
Grace Pea, University of Missouri
Shajae Pinnock, Johns Hopkins University
Utsab Subedi, LSU Health Sciences Center Shreveport
Ada Tadeo, California Polytechnic State University

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



Spotlight on Trainees

Embracing ignorance on the road to discovery

[from NAVBO Editor Bill Huckle] While organizing various Virginia Tech Grad School files for digitizing, I stumbled across a marvelous essay by NAVBO stalwart [Martin Schwartz](#), published in 2008 while he was on faculty at UVA. The piece, titled "The

importance of stupidity in scientific research," is both a tongue-in-cheek recollection of Martin's own realization that pushing beyond the boundaries of our knowledge is precisely what we are called to do as scientists, and also an appeal to us as mentors to instill in our trainees a sense of comfort and even exhilaration when grappling with their ignorance. The aim of a prelim exam, Martin wrote, "...isn't to see if the student gets all the answers right. If they do, it's the faculty who failed the exam. The point is to identify the student's weaknesses, partly to see where they need to invest some effort and partly to see whether the student's knowledge fails at a sufficiently high level that they are ready to take on a research project." "The more comfortable we become with being stupid," he concluded, "the deeper we will wade into the unknown and the more likely we are to make big discoveries."

Recent Member Publications

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.

Loss of Primary Cilia Protein IFT20 Dysregulates Lymphatic Vessel Patterning in Development and Inflammation

Frontiers in Cell and Developmental Biology

Microenvironmental signals produced during development or inflammation stimulate lymphatic endothelial cells to undergo lymphangiogenesis, in which they sprout, proliferate, and migrate to expand the vascular network. Many cell types detect changes in extracellular conditions via primary cilia, microtubule-based cellular protrusions that house specialized membrane receptors and signaling complexes. [Read more](#)

Primordial GATA6 macrophages function as extravascular platelets in sterile injury

Science

Most multicellular organisms have a major body cavity that harbors immune cells. In primordial species such as purple sea urchins, these cells perform phagocytic functions but are also crucial in repairing injuries. In mammals, the peritoneal cavity contains large numbers of resident GATA6+ macrophages, which may function similarly. However, it is unclear how cavity macrophages suspended in the fluid phase (peritoneal fluid) identify and migrate toward injuries. [Read more](#)

The changing landscape of atherosclerosis

Nature

Emerging evidence has spurred a considerable evolution of concepts relating to atherosclerosis, and has called into question many previous notions. Here I review this evidence, and discuss its implications for understanding of atherosclerosis. [Read more](#)

Dysregulation of Amphiregulin stimulates the pathogenesis of cystic lymphangioma

PNAS

Along with blood vessels, lymphatic vessels play an important role in the circulation of body fluid and recruitment of immune cells. Postnatal lymphangiogenesis commonly occurs from preexisting lymphatic vessels by sprouting, which is induced by lymphangiogenic factors such as vascular endothelial growth factor C (VEGF-C). [Read more](#)

Vascular PDGFR-alpha protects against BBB dysfunction after stroke in mice

Angiogenesis

Blood-brain barrier (BBB) dysfunction underlies the pathogenesis of many neurological diseases. Platelet-derived growth factor receptor-alpha (PDGFR α) induces hemorrhagic transformation (HT) downstream of tissue plasminogen activator in thrombolytic therapy of acute stroke. Thus, PDGFs are attractive therapeutic targets for BBB dysfunction. [Read more](#)

The P-type ATPase transporter ATP7A promotes angiogenesis by limiting autophagic degradation of VEGFR2

Nature Communications

VEGFR2 (KDR/Fik1) signaling in endothelial cells (ECs) plays a central role in angiogenesis. The P-type ATPase transporter ATP7A regulates copper homeostasis, and its role in VEGFR2 signaling and angiogenesis is entirely unknown. Here, we describe the unexpected crosstalk between the Copper transporter ATP7A, autophagy, and VEGFR2 degradation. [Read more](#)

Interplay Between Reactive Oxygen/Reactive Nitrogen Species and Metabolism in Vascular Biology and Disease

Antioxidants & Redox Signaling

Reactive oxygen species (ROS; e.g., superoxide [O₂⁻] and hydrogen peroxide [H₂O₂]) and reactive nitrogen species (RNS; e.g., nitric oxide [NO[•]]) at the physiological level function as signaling molecules that mediate many biological responses, including cell proliferation, migration, differentiation, and gene expression. [Read more](#)

Mitofusin-2 stabilizes adherens junctions and suppresses endothelial inflammation via modulation of β -catenin signaling

Nature Communications

Endothelial barrier integrity is ensured by the stability of the adherens junction (AJ) complexes comprised of vascular endothelial (VE)-cadherin as well as accessory proteins such as β -

catenin and p120-catenin. Disruption of the endothelial barrier due to disassembly of AJs results in tissue edema and the influx of inflammatory cells. [Read more](#)

Targeting G α 13-integrin interaction ameliorates systemic inflammation

Nature Communications

Systemic inflammation as manifested in sepsis is an excessive, life-threatening inflammatory response to severe bacterial or viral infection or extensive injury. It is also a thrombo-inflammatory condition associated with vascular leakage/hemorrhage and thrombosis that is not effectively treated by current anti-inflammatory or anti-thrombotic drugs. [Read more](#)

Endothelium–gut communication: IGF-1Rs crosstalk with microbiota

EMBO Reports

The gut, with its extensive microbiota, plays a fundamental role in metabolism. While alterations of the gut microbiota can induce dysfunction of the endothelium, it remains unclear whether the endothelium can directly impact the gut microbiota. [Read more](#)

RAMP2-AS1 Regulates Endothelial Homeostasis and Aging

Frontiers in Cell and Developmental Biology

The homeostasis of vascular endothelium is crucial for cardiovascular health and endothelial cell (EC) aging and dysfunction could negatively impact vascular function. Leveraging transcriptome profiles from ECs subjected to various stimuli, including time-series data obtained from ECs under physiological pulsatile flow vs. pathophysiological oscillatory flow, we performed principal component analysis (PCA) to identify key genes contributing to divergent transcriptional states of ECs. [Read more](#)

Single-cell metabolic imaging reveals a SLC2A3-dependent glycolytic burst in motile endothelial cells

Nature Metabolism

Single-cell motility is spatially heterogeneous and driven by metabolic energy. Directly linking cell motility to cell metabolism is technically challenging but biologically important. Here, we use single-cell metabolic imaging to measure glycolysis in individual endothelial cells with genetically encoded biosensors capable of deciphering metabolic heterogeneity at subcellular resolution.

[Read more](#)

Industry News

Cell Press explores community manuscript review

At one time or another, all scientists have experienced delays in the publication of their findings owing to the need to redirect a manuscript declined by an initially targeted journal – an inherently sequential process. To expedite the publication process and to help articles reach an optimal audience, Cell Press has announced a pilot [Community Review](#) program. This program would enable multiple journals in the Cell Press portfolio simultaneously to consider publication, engaging the efforts of an advocate for the submitted work throughout peer review. In principle, community review helps “...authors find the right home for their paper and provides them with structured peer review that outlines options for revision and publication; a dedicated, primary point of contact; and an integrated, effective process.” Questions and pre-submission inquiries may be directed to community@cell.com.

Why can we trust the information produced by scientific research?

The US National Academies of Sciences, Engineering, and Medicine have launched a web-based primer, [Decoding Science](#), through which the general public can become better acquainted with how the scientific process changes what we know. Site visitors are encouraged to understand the importance of experimental reproducibility, how to reconcile conflicting findings from seemingly similar studies, and the value of failure in lighting the path to discovery. The site materials were based on [Reproducibility and Replicability in Science](#), a 2019 consensus report of the NASEM that examined the subject of reproducibility as both a component of confidence in findings and a driver of deeper understanding. The timing is good, in view of current levels of vaccine skepticism.

AAMC group shares details on FY2022 White House budget request

The American Association of Medical Colleges' Ad Hoc Group for Medical Research, a coalition of key healthcare stakeholders, has applauded President Biden's historic proposed funding level for the [NIH in FY2022](#), recognizing the role of medical research in improving health for patients in the U.S. and around the globe. The advocacy group has recommended an NIH base budget of at least \$46.1 billion and pledges to work with lawmakers to build on the President's proposal toward this goal. The group remains concerned about lingering financial impacts of the coronavirus pandemic on research progress and on the research workforce. The [RISE Act](#), reintroduced by Congress in February to provide relief to institutions of higher education, research institutions, and researchers, would allow the NIH to rebuild and further diversify the research workforce infrastructure and also continue to expand its investment in new research to provide better health for patients.

Calendar of Events

June 3, 2021

[Lung injury repair by the pulmonary](#)

	microvasculature
June 15, 2021	Human Organoid Systems to Study Vascular Toxicity
June 22, 2021	NAVBO Symposium: Shaping Cell Behavior
July 1, 2021	Chromatin Remodeling and Gene Regulation in Vascular Homeostasis and Disease
July 13 - 15, 2021	Vasculata 2021
October 24 - 28, 2021	Vascular Biology 2021
October 24 - 27, 2021	ISA 2021
October 28 & 29, 2021	International Scientific Meeting for PIK3CA Related Conditions
November 1 - 4, 2021	36th Annual Critical Issues in Tumor Microenvironment: Angiogenesis, Metastasis and Immunology

Job Postings

Job Title	Company	Location
Research Assistant	University of Pennsylvania	Philadelphia, PA
Postdoctoral Associate	Rutgers University	Newark, NJ
Postdoctoral Fellow in Translational Genetics	University of California, San Francisco	San Francisco, CA
Postdoctoral Fellowship in Lymphatic Vascular Biology	University of South Florida	Tampa, FL
Postdoctoral Fellow in Vascular Cell Signaling	LSU Health Sciences Center - Shreveport	Shreveport, LA
Postdoctoral Fellow in Vascular Biology and Immunology	University of Pennsylvania	Philadelphia, PA
Post-doc or Research Associate	Case Cardiovascular Institute	Cleveland, OH

North American Vascular Biology

Organization

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

[Mailing Preferences / Unsubscribe](#)



North American Vascular Biology

Organization

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

[Unsubscribe](#)

