



Sergei Boudko, PhD

Sergei Boudko is an Assistant Professor in the Department of Medicine, the Division of Nephrology at Vanderbilt University Medical Center, as well as an Assistant Professor in the Department of Biochemistry at Vanderbilt University. He is a mentor in the Aspirnaut™ program (K-20 STEM Pipeline for underserved and diverse youth from rural areas) and an Associate Director of the Center for Matrix Biology at the Vanderbilt University Medical Center.

Sergei earned his Ph.D. at the University of Basel, Switzerland in 2003, studying the folding of collagen triple helix from single and trimerized chains in the laboratory of Prof. PD Jürgen Engel at Biozentrum. He then spent two years in the laboratory of Prof. Michael Rossmann at Purdue University working on viral proteins

and learning structural methods. In 2006, Sergei joined the group of Prof. Hans Peter Bächinger at Shriners Hospital for Children, OR, where he re-engaged his research on collagen folding with an emphasis on trimerization domains and the development of tools for producing functional collagen fragments.

Sergei's current projects are focused on deciphering molecular mechanisms of assembly, stability, and function of extracellular matrix proteins using structural methods to better understand the molecular biology of kidney diseases and develop new therapies based on protein replacement and pharmacological chaperones. He is a member of the American Society for Matrix Biology, the American Society for Biochemistry and Molecular Biology, and the American Society of Nephrology. If elected to the council of ASMB, Sergei will work to integrate structural biology communities into ASMB and bring educational resources to the members.

Personal Statement: I have been a member of the ASMB society since 2010. Our society provides a very stimulating exchange of ideas, updates on the most recent progress in the field, and ways to communicate and learn from leaders in their specific fields. Of special importance, ASMB cares about young scientists learning the field and getting known, thus providing continuity in the dynamically developing Matrix Biology world.

Our society does a great job by bringing people together (via meetings and workshops), providing opportunities to publish research (via journals, Matrix Biology, and Matrix Biology Plus), recognizing researchers (via Investigators awards), mentoring young investigators (mentoring breakfasts), keeping us up to date with the recent advances and news (newsletters), and helping students (poster and travel awards). I feel that there is also a need for an educational role in the ASMB. Despite growing interest in Matrix Biology, there are no courses available for it. On the other hand, our society has numerous researchers and educators who publish and edit fantastic reviews and read different courses to students. I believe that an online course on matrix biology from very basic principles to the status and challenges would be highly appreciated by not only students but, also, anyone interested in Matrix Biology. I would highly promote and support the development of such a course.



Davy Vanhoutte, PhD

Dr. Davy Vanhoutte is an Assistant Professor in the Department of Molecular Cardiovascular Biology at Cincinnati Children's Hospital in Cincinnati, Ohio. For the last 20 years, his research has centered on deciphering novel molecular mechanisms through which the extracellular matrix (ECM) dictates (patho-) physiological remodeling of the heart and skeletal muscle. Davy obtained his Ph.D. from the University of Leuven in Belgium under the mentorship of Dr. Stephane Heymans and Dr. Frans Van de Werf, where he identified several stress-induced matricellular proteins as critical extracellular regulators of inflammation and adverse collagen remodeling during hypertensive, ischemic and inflammatory heart disease. For his postdoctoral training, Davy joined the laboratory of Dr. Jeffery Molkenin at Cincinnati Children's Hospital Medical Center. Here, his combined studies made fundamental contributions to our current understanding of the thrombospondin (Thbs) family of matricellular proteins. While traditionally characterized as secreted proteins, his work revealed an essential role for Thbs in modulating protein homeostasis, secretory pathway activity, ECM production, growth factor activity, and cell membrane integrity within muscle cells. Now an assistant professor at Cincinnati Children's Hospital, Dr. Vanhoutte's independent research program builds upon these foundational findings with the long-term goal of developing innovative, personalized therapies for a wide range of cardiac and skeletal muscle disorders.

Dr. Vanhoutte serves on the editorial board of the journals *Matrix Biology*, *Matrix Biology Plus* and *Scientific Reports*, as invited peer-reviewer for various internationally renowned scientific journals, and received numerous awards and invitations to speak at national and international conferences. In addition, Davy has been a dedicated and active member of the *American Society for Matrix Biology* (ASMB) since joining in 2018, consistently contributing to its mission and advancing its activities. For example, he has organized and chaired scientific sessions at the ASMB Biennial Meetings in 2018, 2021, and 2023; in 2019, he became a member of the ASMB *Outreach and Communication Committee*, and he currently serves as its co-chair alongside Dr. Joan Chang from the University of Manchester, UK. Furthermore, he co-founded the *ASMB eSymposia*, further highlighting his leadership and commitment to advancing our field. Besides this, Dr. Vanhoutte is also member of the *Membership and Diversity, Equity, and Inclusion (DEI) Committee*, where he brings a unique perspective as an immigrant and a member of the LGBTQIAP+ community, ensuring that underrepresented voices are heard and valued.

Dr. Vanhoutte envisions a future for ASMB that not only builds upon its strong foundation but also introduces forward-thinking initiatives designed to expand its impact and inclusivity. His goals include increasing ASMB's visibility within the broader scientific community and developing programs that attract new members—particularly focusing on the needs of the next generation of matrix biologists. This vision includes initiatives centered on career development, as well as diversity, equity, and inclusion (DEI), ensuring that all voices are heard and supported. He is also committed to fostering greater collaboration and interaction with the International Society of Matrix Biology (ISMB) and other sister organizations globally, further strengthening the society's influence and reach. As co-chair of ASMB's Outreach and Communication Committee, Dr. Vanhoutte will be uniquely positioned to effectively promote, implement, and translate ASMB's future strategic priorities into concrete actions that directly benefit the membership, helping ASMB thrive in a rapidly evolving scientific landscape.



Yao Yao, PhD, FAHA

Yao Yao is an Associate Professor in the Department of Molecular Pharmacology and Physiology at the Morsani College of Medicine University of South Florida.

Yao earned his Ph.D. degree at Stony Brook University (State University of New York at Stony Brook). For his postdoctoral training, Yao joined the Patricia and John Rosenwald Laboratory of Neurobiology and Genetics at The Rockefeller University. Yao obtained a tenure-track Assistant Professor position at the University of Minnesota and moved to the University of Georgia, where he was promoted to Associate Professor with tenure. Recently, Yao joined the University of South Florida Morsani College of Medicine as a tenured Associate Professor.

Yao's research interest is laminin biology in the CNS. Specifically, Yao studies the turnover and function of laminin in the brain under both physiological and pathological conditions in a cell-specific manner. Using a variety of laminin conditional knockout/knock-in and reporter mouse lines, the Yao lab has established that different cells synthesize distinct laminin isoforms in the CNS, and that different laminin isoforms differentially regulate blood-brain barrier integrity and stroke pathogenesis. They continue to characterize laminin turnover and explore laminin function in various neurological disorders in a cell-specific manner. The goal of their work is to fully understand the biochemistry & function of laminin in the CNS and develop novel therapies for neurological disorders by targeting laminin and/or its downstream signaling molecules.

Yao has published 63 peer-reviewed papers and delivered 74 invited talks. His research is well funded by NIH and other funding agencies. Yao was elected as a Fellow of the American Heart Association (FAHA), and received several awards, including the STaR Young Investigator Award and the ISC Stroke Basic Science Award from the American Heart Association (AHA). Yao is a standing member of the CMBG study section at NIH and serves as an ad hoc reviewer for several other study sections/special emphasis panels at NIH and other funding agencies. Yao also serves as an Associate Editor for several journals in the field, including *Fluids and Barriers of the CNS* and *CNS Neuroscience & Therapeutics*.

Yao is a member of many associations and societies, including ASMB and AHA. He is serving on the ASMB Membership and Diversity/Equity/Inclusion (DEI) Committee and Spring Brain Conference Board and Program Committee. Yao is committed to diversity and eager to serve and give back to the Matrix Biology community.