

## ISHR Outstanding Investigator Award

The purpose of this annual award is to recognize an outstanding scientist who (i) is making major and independent contributions to the advancement of cardiovascular science, and (ii) is leading a growing research program likely to play a major role in the future. The main criteria for selecting awardees are scientific excellence, independence, and potential for future research contributions. While the Peter Harris Award recognizes lifelong accomplishments and the Richard Bing Award recognizes young investigators, the Outstanding Investigator Award (presented annually) is targeted at established investigators who are in the intermediate phase of their academic career.

In non-Congress years, the Outstanding Investigator Award is presented at one of the ISHR Section meetings on a rotating basis. The winner presents a major lecture and receives a \$1,500 honorarium and a plaque. An announcement of this Award is published in *Heart News and Views*, and posted in the ISHR website. The winner receives free registration and reimbursement for travel expenses (up to a maximum of \$1500 when the recipient delivers the lecture at his/her local Section meeting, and \$3,000 when inter-continental travel is required).

Nominations for the Outstanding Investigator Award are sought by the Secretary General from members of the International Council, members of the Editorial Board of the *Journal of Molecular and Cellular Cardiology*, and the Councils of ISHR Sections. In addition, the Secretary General publishes an open invitation in the ISHR Website for members to submit nominations.



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ISHR

## The Outstanding Investigator Award 2018



Award Winner

Dr. Steven P. Jones

“Non-catabolic Fates of Glucose in the Heart”

## Steven P Jones, PhD

## 2018 Award Winner Amsterdam, The Netherlands

Professor Steven P. Jones received his PhD in Physiology in 2002 from the Louisiana State University Health Sciences Center in Shreveport, Louisiana, USA. There, he studied integrative physiology under Professor David J. Lefer, and during this time he attended his first ISHR conference (2001). After graduation, he joined Professor Eduardo Marbán's laboratory at Johns Hopkins University, where he focused on mitochondrial function, gene transfer, and confocal imaging with the goal of developing a deeper understanding of the metabolism-dependent mechanisms of cell death and survival. During graduate school and his postdoctoral fellowship, Dr. Jones won several awards from the American Physiological Society and the American Society for Pharmacology and Experimental Therapeutics. In 2004, he was recruited to the University of Louisville where he began his independent research program. Within his first year, he earned an American Heart Association (AHA) Scientist Development Grant, then his first R01 in the following year (2006) and has maintained NIH funding since then. Dr. Jones has risen through the ranks to be Professor of Medicine. During this time, Dr. Jones became a Fellow of the American Heart Association and earned the University of Louisville's honorific title of University Scholar.

Dr. Jones' expertise has been broadly recognized by his regular service on editorial boards and review panels for the American Heart Association (AHA) and the United States' National Institutes of Health (NIH). He has served in multiple roles with the AHA, including, most recently, serving on the Committee for Scientific Sessions Programming and the Melvin L. Marcus Competition Committee. Dr. Jones has served in multiple NIH review capacities and, since 2015, he has been a regular member of the "Myocardial Ischemia and Metabolism" (MIM) NIH study section, which he

will also chair from 2018-2020. Dr. Jones serves on the editorial boards of several journals, including *Journal of Molecular and Cellular Cardiology*, *Basic Research in Cardiology*, and *Circulation Research*. Since 2012, Dr. Jones has also been Associate/Consulting Editor for *American Journal of Physiology—Heart and Circulatory Physiology*. He also coaches a competitive middle school girls' field hockey team and enjoys spending time with his family.

During his training, Dr. Jones was interested in how metabolic events coordinate cell fate and function. His own independent laboratory has maintained this theme. The Jones laboratory is broadly interested in the molecular explanations of ventricular remodeling and heart failure. This group focuses on the non-catabolic use of glucose in cardiac health and disease. Within this context, the laboratory has addressed the critical role of glucose utilization in a glycolytic accessory pathway known as the hexosamine biosynthetic pathway (HBP). The HBP produces a nucleotide-sugar (UDP-GlcNAc), which is used for several purposes, including the production of the post-translational modification known as O-GlcNAc. This unique form of glycosylation has been implicated in a variety of diseases, particularly cardiovascular disease, cancer, and diabetes.

The Jones laboratory has elucidated the role of O-GlcNAc in the context of acute cardiac myocyte injury where they showed that enhanced O-GlcNAcylation limits mitochondrial permeability transition pore formation and, by extension, cell death. After being the first group to demonstrate the cardioprotective effect of O-GlcNAcylation *in vivo*, his group then showed that O-GlcNAcylation is an essential pro-adaptive signal during infarct-induced heart failure. More recently, his group has begun to unravel the molecular regulation of the O-GlcNAcylation system—work that has significant impli-

cations for a variety of diseases. The newest efforts from his group have expanded their purview from metabolism-mediated cell survival to an integration of metabolic cues with shaping the extracellular matrix. This alternative route of glucose disposal relates directly to ventricular remodeling and reflects a larger, integrative view of glucose metabolism in the heart.

Dr. Jones takes pride in contributing to the training of others. In addition to innovative scientific pursuits, the Jones laboratory provides a fertile training environment for biomedical professionals. This is made possible by supplementing traditional training resources with exposure to a wide gamut of approaches and not being afraid of going against conventional wisdom. Because of the central role of the trainees in the Jones laboratory, he insists that they are acknowledged for their contributions to this Outstanding Investigator Award.

### *Previous Award Winners...*

**Jolanda van der Velden, PhD: 2017**

**Xander Wehrens, MD, PhD: 2017**

**Johannes Backs, MD, PhD: 2016**

**Thomas Thum, PhD: 2015**

**Åsa Gustafsson, PhD: 2014**

**Deepak Srivastava, MD: 2013**

**Thomas Eschenhagen, MD: 2012**

**Walter J. Koch, PhD: 2011**

**Jeffrey D. Molkentin, PhD: 2010**

**Mathias Gautel, MD, PhD: 2009**

**Joseph Loscalzo, MD: 2006**

**Eric Olson, PhD: 2005**

**Issei Komuro, MD, PhD: 2003**

**Peter Carmeliet, MD, PhD: 2002**