Peter K. Lauf and Norma C. Adragna Travel Award

Award: $1,000
Deadline: Coincides with PR Physiological Society meeting abstract deadline
Contact: PR Physiological Society. Email: prps.aps.pr.chapter@gmail.com

Dr. Peter Lauf and Dr. Norma Adragna are Professors at Wright State University Boonshoft School of Medicine, Dayton, Ohio. They have a broad experience in biomedical research and training of graduate students. Dr. Lauf was instrumental in the creation of the PR Physiological Society in 2009 and made a significant contribution to the Society by the foundation of an early career physiologist travel award that carries his name and that of his dearly wife Dr. Adragna: The Peter K. Lauf and Norma C. Adragna Travel Award.

Peter K. Lauf and Norma C. Adragna Travel Award honors an outstanding and early career stage (undergraduate student, graduate student or post-doctoral fellow) researcher who conducts physiological research in Puerto Rico. The award is designed to assist with travel expenses that the awardee incurs in attending the Experimental Biology meeting in order to present his/her work.

To be eligible for the Peter K. Lauf and Norma C. Adragna Travel Award, the applicant: (1) must be a member of the Puerto Rico Physiological Society in good standing; (2) must be studying for a doctoral degree or have received a doctoral degree within the past 5 years; and (3) must submit an abstract as presenting author (i.e. first author) to the annual meeting of the Puerto Rico Physiological Society and attend the meeting to present his/her work. The awardee will be recognized at the annual meeting of the Puerto Rico Physiological Society and the reimbursement check will be presented to him/her after submitting evidence of participation in the annual Experimental Biology meeting.
Dr. Peter K Lauf, currently Professor of Pathology, and Pharmacology and Toxicology (joint), at Boonshoft School of Medicine, was Professor and Chair of Physiology and Biophysics (1985-2003), Golding Research Professor, and University Professor (2003-2008) at Wright State University, in Dayton, OH.

Lauf was born in Germany and in 1945 survived the Allied bombing and complete destruction of his hometown Wuerzburg. After graduating in 1954 from a humanistic Gymnasium with many years Latin and Greek, he studied Medicine and Physiology at the University of Freiburg/Germany and finished his M.D. degree with a thesis in Physiology under the great German Neurophysiologist Paul Hoffmann and the Pharmacologist Albrecht Fleckenstein in 1960. This was followed with residencies in internal medicine at State Hospitals and at the Aschoff Institute of Pathology in Freiburg under Franz Buechner. After being a Fellow of the Deutsche Forschungsgemeinschaft at the Max Planck Institute of Immunoochemistry (Otto Westphal) in Freiburg from 1962-1964, Lauf immigrated to the U.S. to become Research Associate at The Child Research Center in Detroit with David Poulik (1965-1967) with Adjunct Assistant Professor Status of Biochemistry at Wayne State University (1966-1967). In 1968 he moved to Dan Tosteson’s Department of Physiology and Pharmacology at Duke University as Assistant Professor, where he became Associate Professor in 1971 and Full Professor in 1978. In 1985 Lauf assumed the Chair of Physiology and Biophysics at Wright State University School of Medicine in Dayton, OH, from which he retired in 2003 to be elected University Professor. Since 2008, Lauf is Professor Emeritus in Pathology, with a joint appointment of Wright State’s Pharmacology and Toxicology department where together with his colleague and spouse Dr. Norma C Adragna he does research and publishes on various aspects of electroneutral cotransporters and the Na/K pump in cultured lens epithelial cells.

Research highlights during Lauf’s career were first demonstrations of: 1) RNA synthesis with ³H-cytidine and cell cycle with ³H-thymidine, respectively, in Ehrlich ascites tumor cells (1962), 2) polypeptide heterogeneity of human red cell membrane proteins (Nature, 1965), 3) activation of the Na/K pump by an immunological reaction (1970), 4) correlation of ³H-ouabain binding with Na/K pump activity in human and animal erythrocytes (1976-78), 5) solute diffusion across the C5b-9 membrane lesion of complement (1978); 6) Discovery of N-ethylmaleimide and osmotically stimulated Cl-dependent K transport in red blood cells (K-Cl cotransport, now KCC 1980-1982), 7) kinetic and thermodynamic characterization, and ionic and redox dependence of K-Cl cotransport in red cells (1991-2000), 8) regulation of K-Cl cotransport by kinases and phosphatases (2000-2004), 9) K-Cl cotransport isoforms 1, 2a, and 3 in various cell lines (2004-2008), 10) aquaporin mediated water transport in Jellyfish nematocytes (2011), 11) in silico evidence for canonical Bcl-2 motifs in the Na/K pump (2013) and 12) direct interaction of Bcl-2 proteins with the Na/K pump (2015). Lauf and colleagues published over 160 research papers and book chapters, and nearly 200 abstracts. He lectured worldwide at meetings and universities. His research was supported by the National Institute of Health for almost 30 years which he also served in many study sections.

In his free time, Lauf enjoys playing his piano and harpsichord, golfing and skiing in the Rockies.
Dr. Norma C. Adragna was born in Argentina, where she obtained her Diploma in Biochemistry and her Ph.D. in Biochemistry with specialization in Biophysics from the National University of Cordoba, where she was also Teaching Assistant in Physico-Chemistry, and Research Fellow at the National Research Council of Argentina. Other positions held during her career are Research Associate at the National University of Buenos Aires, Visiting Investigator at the Center for Nuclear Studies in Saclay, France, NIH Fogarty International Fellow and Research Associate at Harvard University and Medical Research Assistant Professor at Duke University Medical Center. At Wright State University, Dr. Adragna became Associate Professor and Professor of Pharmacology and Toxicology at Boonshoft School of Medicine. She also served for two years as interim chair of the department.

Throughout her career she received numerous awards from the American Heart Association and other institutions. She was director of many Ph.D. and M.S. student theses, served in numerous graduate student thesis committees and taught research to undergraduate students.

Research highlights during Adragna’s career are 1) recognition of Na-independent K carrier movements in human red blood cells, currently known as the Na-K-2Cl and K-Cl cotransporters, in collaboration with Luis Beauge, 2) first in establishing a correlation between Na/Na exchanger and Na-K Cl cotransport in hypertension in collaboration with Daniel C. Tosteson, and Mitzy Canessa, 3) thermodynamics of K-Cl cotransport and establishing its proton sensor mechanism in red cells in collaboration with Peter K Lauf, 4) the role of vascular smooth muscle K-Cl cotransport in vascular dilation in collaboration with Richard White, 5) the first demonstration of KCC isoform 1,3 and 4 expression in vascular smooth muscle with Mauricio DiFulvio and Thomas M Lincoln, 6) various signal transduction mechanisms of K-Cl cotransport, and 7) regulation of bidirectional K-Cl cotransport in cell lines with constitutively activated KCC3 T/A double mutants in collaboration with Kristopher T. Kahle and Peter K Lauf. 8) Currently she is also interested in Nanotoxicology and Nanomedicine.

Adragna published more than 100 research papers, reviews and book chapters, and over 150 abstracts, she also lectured worldwide in Europe, South America, China and Japan. Her work was supported by the American Heart Association, the NIH, NSF and other agencies. In addition, she collaborated with numerous international scientists, is reviewer for more than 30 peer-reviewed journals and serves on editorial boards.

Norma Adragna is married to and has collaborated for decades with her husband Peter K. Lauf.