

Vladimir Štrbak, M.D.,D.Sc.

Head of Laboratory of Neurohumoral Regulation, Institute of Experimental Endocrinology of the Slovak Academy of Sciences, Vlarska 3, Bratislava 83306, Slovak Republic

Head of the Institute of Normal and Pathological Physiology of the Slovak Medical University, Limbova 12, Bratislava 83303, Slovak Republic

Chairman of the Scientific Committee of the Slovak Academy of Sciences for Medical Sciences

Born 1943 in Nimnica, Slovakia

Academic degrees

M.D. 1966 Medical faculty Comenius University, Bratislava

Ph.D. 1974 Slovak Academy of Sciences, Bratislava

D.Sc. 1990 Slovak Academy of Sciences, Bratislava

Major positions and appointment:

1991-1992 chairman of the Board of Scientists of the Slovak Academy of Sciences
1996-1997 vicechairman of Scientific Grant Agency of the Ministry of Education of the Slovak Republic and Slovak Academy of Sciences (VEGA)
1996-1998 chairman of Scientific Grant Agency of the Ministry of Education of the Slovak Republic and Slovak Academy of Sciences (VEGA)
1993-1999 Member of Committee for Medical and Pharmaceutical sciences VEGA
1993-1999 vicechairman of the Evaluation Committee of the Slovak Academy of Sciences
1993-1996 chairman of the evaluation Committee for medical and pharmaceutical sciences
1990-2003 vicedirector of the Institute of Experimental Endocrinology of the Slovak Academy of Sciences
1994-2006 chairman of the Slovak Physiological Society of the Slovak Medical Society
1996-2002 chairman of the Scientific Committee of the Slovak Academy of Sciences for Medical Sciences
2003-2007 director of the Institute of Experimental Endocrinology of the Slovak Academy of Sciences (Centre of Excellence supported by European Commission)
2001-2003 Member of the Committee of the Agency for support of science and technology
1994-2006 Council Member of the of the Federation of European Physiological Societies
1997-2010 chairman of the Committee for Doctor of Sciences habilitation in the field of Animal Physiology in the Slovak Republic

Present appointments

1997- member of the Committee for Doctor of Sciences habilitation in the field of Animal Physiology in the Czech Republic
2006- Council Member of the of the International Society for Pathophysiology
2008- Member of the Scientific Committee of the Centre of Neuroscience of the Czech Republic
2010- chairman of the Scientific Committee of the Slovak Academy of Sciences for Medical Sciences
2010 member of the Committee of the Agency for support of science and technology for Support of human resources a science popularization

Publications: 111 Medline papers, editor of 2 books, author of one monograph and chapters in several monographs, chapters textbooks for medical faculties (physiology and pathophysiology)

Citations 786 SCI

Editorial boards of scientific journals

Cellular and Molecular Neurobiology (USA, NIH) - editor for Europe *Physiological Research* (Prague): Member of the International Editorial/Advisory Board *Iugoslavica Physiologica et Pharmacologica Acta*: Member of the International Advisory Board *General Physiology and Biophysics* (Bratislava) editor

Organization of scientific events:

Organizer and chairman of the Local Org Committee of the Joint Conference of the Slovak Physiological Society, the Physiological Society and Federation of the European Physiological Societies, Bratislava, September 11-14, 2007

Organizer and chairman of the five International symposia on Hormones in Milk,

President of the International Symposium on Cell volume and function 1997

President International Organizing Committee : the First Joint Conference of Physiologists from Central Europe, Piešťany 5.-8. februara 2002

Chairman Symposium :Cell Volume: Regulation and Function, poriadaneho ako súčasť the First Joint Conference of Physiologists from Central Europe, Piešťany 5.-8. februara 2002

Chairman Oral Session Cell Physiology I, Congress of Physiology 2002 (Joint Scientific Meeting of The Physiological Society, the Scandinavian Physiological Society and German Physiological Society, March 15-19, 2002, Tübingen, Germany

Member of the Advisory Committee pre 3rd FEPS Congress Nice, 28 June - 3 July 2003

Chairman and organizer of the symposium Cell volume: regulation and functional impact, 3rd Congress of Federation of European Physiological Societies, Nice 28. VI.-2.7.2003, Nice,

Member of the International Program Committee of the International Conference

Risk factors and health: from molecule to the scientific basis of prevention, Belgrade/Zrenjanin, November 7-9, 2003, organized by Serbian Physiological Society under auspices of Federation of European Physiological Societies, International Society of Pathophysiology, International Union of Physiological Sciences

Organizer and chairman Symposium Cell Volume, physiological and pathophysiological aspects, 5th International Congress of Pathophysiology, June 28-July 1, 2006, Beijing, China, published in Chinese Journal of Pathophysiology, June 2006, Volume 22, No 13, Supplement p. 167

Organizer and president of the Joint Meeting of The Slovak Physiological Society, The Physiological Society and The Federation of European Physiological Societies, Bratislava September 11-14, 2007

Organizer and chairman of the session Cell Volume Regulation and Cell Functions The Physiology of Anion Transport and Cell Volume Regulation (August 3-6, Okazaki, Japan) *Symposium following the I UPS Congress (Kyoto)* <http://www.nips.ac/p/patcvr/index.html>

Future commitments:

Organizer and chairman of the Symposium Cell Volume Regulation at the 6th International Congress of Pathophysiology, Montreal, September 22-25, 2010 http://www.ispmontreal2010.com/PRELIMINARY_SCHEDULE_ISPvl.pdf

Most important stays abroad:

One year postdoctoral fellowship in Oregon Health Sciences University in Portland (1977-1978), 1980-1997 INSERM U 297, Faculte de Medecine Nord, Marseille- repeated visits as visiting professor and cooperation resulting in several common publications sponsored by CNRS or INSERM.

Major research interests

Developmental neuroendocrinology, hormones in milk, regulation of peptide secretion, present cell swelling induced exocytosis

Awards and prizes

Award of the Slovak Physiological Society for the best publication of the year: 1974, 1981, 1997
Jesenius medal of the Slovak Academy of Sciences for merit in Medical Sciences, 2003
Gold medal of the Slovak Medical Society, 2003
Gold Reiman medal for prevention in medicine.1980
Honorary membership of the Slovak Medical Society (since 2007)
Lafberger medal of the Czech Physiological Society for merit in Physiology, 2003
Medal of The Serbian Physiological Society for merit in Physiology

Invited lectures:

Štrbak V: Hormones in Milk, International Conference of The Society for Research in Human Milk and Lactation: 1990 Monterey, California

Štrbak V.: Passive immunization with monoclonal antibody to AVP. French Neuroendocrine Society, September 22.-27,1992 Nancy, France:

Štrbak V.: Long-term effects of breastfeeding on infant morbidity, thyroid function, and lipoprotein metabolism. The 1995 International Conference of The Society for Research in Human Milk and Lactation, July 24-26,1995, La Trinidad, Tlaxcala, Mexico. 1995 Tlaxcala, Mexico

Charvat honorary lecture: Endocrine Days of the Czech and Slovak Endocrinological Societies 1998: V. Štrbak: The role of TRH in different systems

Štrbak V. and Greer M.A.: Regulation of hormone secretion by acute cell volume changes. International Conference on: Cell Volume: Signalling and Regulation, Max Plank Institute, Berlin, October 25-28, 2000.

Štrbak V.: Cell Swelling Induced Peptide Hormone Release, UNESCO-USA-Caucasus Workshop The regulation of Cell Hydration in Norm and Pathology, October 14-19, 2002 Yerevan, Armenia.

Štrbak V., Benicky J., Greer S.E., Bačova Z., Najvirtova M., Greer M.A.: Cell swelling-induced exocytotic secretion. 20003rd FEPS (Federation of European Physiological Societies) Congress, Nice 28.VI.-2.7.2003: **organizer, chairman and speaker of the Congress Symposium** Cell volume: regulation and functional impact

Štrbak V., Benicky J., Greer S.E., Bačova Z., Najvirtova M., Greer M.A.: Cell swelling-induced peptide hormone secretion. International Symposium Cell Volume & Signal Transduction, Dayton, Ohio, September 20-24, 2003.

Štrbak V.: Cell volume regulation and peptide secretion. Risk factors and health: from molecule to the scientific basis of prevention, Belgrade/Zrenjanin, November 7-9,2003, International conference organized by Serbian Physiological Society under auspices of Federation of European Physiological Societies, International Society of Pathophysiology, International Union of Physiological Sciences.

Štrbak V: Cell volume regulation: Relation to ischemia and cell proliferation. Inflammation 2004, First

Romanian Symposium with International Participation, Sambata de Sus, Romania, April 20-23, 2004.

International Brain Research Organization Advanced School of Neuroscience, IASN 2004, Crimea, September 16-27. Lektor:

Štrbak V.: Cell volume induced hormone secretion: studies on signal transduction and specificity

Štrbak V.: Methods for studying of cell swelling.

Štrbak V.: TRH and Cardiovascular system

Kotor, Montenegro, May 3.-7. 2005, 49th Medical Students Congress

Štrbak V.:

Cell swelling induced peptide hormone secretion. Le 72eme Congres de la Societe de Physiologia, les 27, 28 et 29 Juin 2005 a Rennes, France

Štrbak V.: Unique signaling pathway for swelling induced hormone secretion. MOLECULAR, CELLULAR AND INTEGRATIVE BASIS OF HEALTH, DISEASE AND THERAPY, The first congress of Physiological Sciences of Serbia and Montenegro with International participation, Belgrade, November 9-12, 2005.

V. Štrbak, Z. Bačova, M. Orečna, R. Hafko: Cell swelling-induced peptide hormone secretion, pathophysiological implications. 5th International Congress of Pathophysiology, June 28-July 1, 2006, Beijing, China, Symposium Cell Volume, physiological and pathophysiological aspects, Chinese Journal of Pathophysiology, June 2006, Volume 22, No 13, Supplement p. 167

V. Štrbak: Swelling-induced secretion: general ancient response of cells to hypotonicity. UNESCO seminar Mechanisms of mechanotransduction in living cells, Yerevan 1-4 August 2006

V. Štrbak, M. Orečna, M. Hafko, J. Podskočova, D. Chorvat Jr., Z. Bačova: Different secretory response of pancreatic islets and insulin secreting cell lines INS-1 and INS-IE to osmotic stimuli and extracellular Ca²⁺. Cell Volume Control, Functions, Molecules, Interactions. The 6th Int. Symposium on Cell Volume Regulation in Health and Disease, Salzburg 2007, Austria, p. 50

Štrbak V.: Cell volume regulation - Physiological and Pathophysiological implications. 10th Congress of the Romanian Society of Physiological Sciences, Cluj-Napoca, 5th-7th June, 2008. Physiologia, Physiology 2008 vol. 18: Nr 2 (58), p.70, abstract 186.

Štrbak V., Bačova Z., Orečna M., Hafko R.: Cell swelling-induced peptide hormone secretion, Pathophysiological implications. 5th International Symposium on Cell/Tissue injury and Cytoprotection/organprotection. September 17-19, 2008, Yalta, Ukraine. Program and Abstracts

Štrbak V., Bačova Z., Orečna M, Hafko R: Physiological and Pathophysiological aspects of cell swelling-induced peptide secretion. The 7th ational Congress on Laboratory Medicine and The 3rd Immunopathology Symposium, October 20th - 22nd , 2008, Rin Grand Hotel, Bucharest, Romania. Program and Abstracts p. 90.

Štrbak V.: Cell volume regulation - possible pathophysiological implications. Symposium on Current trends in Physiological Sciences, dedicated to prof. Richard Burian. December 17-18, 2008 Belgrade

Vladimir Štrbak, Zuzana Bacova, Jana Galcikova, Jana Matejikova, Martina Orecna, Roman Hafko, Tana Ravingerova: Cell swelling-induced peptide secretion; possible pathophysiological implications 40th NIPS International Symposium 2009 "The Physiology of Anion Transport" and "Cell Volume Regulation" August 3-6, 2009, Okazaki Conference Center, National Institutes of Natural Sciences, Myodaiji, Okazaki, Aichi, JAPAN,

Vladimir Štrbak, Zuzana Bacova, Jana Galcikova, Jana Matejikova, Martina Orecna, Roman Hafko, Tana Ravingerova: Cell volume mediated ischemic preconditioning Current Trends in Physiological Sciences, KRAGUJEVAC, SEPTEMBER 17-20, 2009

M. Orecna, Z. Bacova, R. Hafko, V. Toporcerova, V. Strbak: DIFFERENT ROLE OF CALCIUM IN CELL SWELLING-INDUCED INSULIN SECRETION FROM PANCREATIC ISLETS AND TUMOR CELL LINE INS-IE Molecular mechanisms of intracellular calcium signalling, 11.-14.10.09 Kiev (Program and Abstract Book, p.4)

BAČOVA, Zuzana - HAFKO, Roman - OREČNA, Martina - TOPORCEROVA, Veronika - KOHUT, Peter - HAPALA, Ivan - ŠTRBAK, Vladimír. Role of Cholesterol and SNARE Protein in Cell Swelling Induced Insulin Secretion. 6th International Congress of Pathophysiology (ISP). 22.-25.10.2010, Montreal, Canada. Book of Abstracts, 0-080.

Membership in the International Scientific organizations
Endocrine Society (USA)
International Union of Physiological Sciences (IUPS)
European Peptide Society
Council Member of the of the International Society for Pathophysiology

Scientific Activities abroad:

Visits lasting less than 1 month

Institute for Medical and Biological problems, Moskva, USSR (Interkozmos), December 6-12,1975 Institute for Medical and Biological problems, Moskva, USSR (Interkozmos) January 6-16, 1976 Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest,

Hungary May 4-9,1976

Institute for Medical and Biological problems, Moskva, USSR (Interkozmos), October 23-29,1979
Laboratoire de Neuroendocrinologie Experimentale, Faculte de Medecine Nord, Marseille 13326, November 13-29,1981
Institute of Biochemistry, Tashkent, Uzbekistan, November 18-29,1985 Hopital Necker-Paris, France, Prof Czernichow October 5-9,.1986 Laboratoire de Neuroendocrinologie Experimentale, Faculte de Medecine Nord, Marseille 13326, Novemeber

24.-December 11,1995

Endocrinology, Oregon Health Sciences University, Portland, Oregon 97201, June 2.- July.7.1996
Laboratoire de Neuroendocrinologie Experimentale, Faculte de Medecine Nord, Marseille 13326
September 9-

23, 1997

Bogomoletz Institute of Physiology, Nat. Acad.Sci., Kyiv, Ukraine May 18-28, 2004

Longer visits

October 26- October 25,. 1978
Endocrinology, Department of Medicine, Oregon Health Sciences University, Portland, Oregon 97201

April 20, August 10, 1983
Laboratoire de Neuroendocrinologie Experimentale, Faculte de Medecine Nord, Marseille 13326

October 5- December 13,1986
Laboratoire de Neuroendocrinologie Experimentale, Faculte de Medecine Nord, Marseille 13326
-visiting profesor

September 18- December 18, 1990

Laboratoire de Neuroendocrinologie Experimentale, Faculte de Medecine Nord, Marseille 13326- visiting professor

June 15-July 16, 1994

Endocrinology, Oregon Health Sciences University, Portland, Oregon 97201

June 14-July 23, 1995

Endocrinology, Oregon Health Sciences University, Portland, Oregon 97201