



Annual IBNS Meeting 2015

by Gregory Barord

Abstract Submission, Venue & Program

It is that great time of the year again to begin putting together abstracts for our upcoming meeting, which will be here before we know it! Abstract submission for the Annual Meeting in Victoria, BC, Canada, June 2-7, 2015, will be open on December 1, 2014. The IBNS Program Committee is soliciting abstracts for oral and poster presentations. Abstracts may be prepared on any subject related to the general area of behavioral neuroscience. Both members and nonmembers may submit abstracts. Data must be original and not previously published. The Abstract Priority deadline is February 13, 2015. All abstracts received after this date will be considered for posters only and must be received by March 23, 2015. Please share your great work submit your abstract at www.IBNSconnect.org.

The meeting venue, The Fairmont Empress Hotel, is regarded as one of 500 best hotels in the world (Conde Nast Gold List and Travel + Leisure). The hotel sits along the Inner Harbor in Victoria, British Columbia, near the city centre and amazing views. Prepare yourself to walk down the same halls as kings, queens, and celebrities, as the Fairmont Empress has a long list of prominent clientele. Now they can add our IBNS group to that list! If that isn't enough, immerse yourself in the unique architecture of Vancouver Island, when meetings are not in session of course! Please stay up to date with the latest information at www.IBNSconnect.org.

Highlights of the meeting will include another round of wonderful speakers!

Keynote Speaker:

Jaak Panksepp (Ph.D.), Bowling Green University, Bowling Green, OH, USA

Presidential Lecture:

Stephen Kent (Ph.D.), La Trobe University, Melbourne, Australia

Bench-to-Bedside Lecture:

Bill Deakin (Ph.D.), University of Manchester, United Kingdom

Keynote Speaker:

George F. Koob (Ph.D.), The Scripps Research Institute, La Jolla, CA, USA

Save the Dates!

2015 IBNS Meeting

Fairmont Empress

June 2 – 7, 2015

Victoria, BC Canada

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IBNS 24th Annual Meeting - Victoria, British Columbia, Canada - June 2-7, 2015

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IBNS CALL FOR NEWS

Would you like to submit an article or member news for our next IBNS News edition? We would love to hear from you!

Please make your submission to [Elena Choleris](mailto:Elena.Choleris)

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SUBMIT YOUR ABSTRACT

Please submit your abstracts after December 1, for the Annual IBNS Meeting in lovely Victoria, BC, Canada; June 2-7, 2015 by visiting the link: www.IBNSconnect.org

IMPORTANT DATES

December 1, 2014

Registration, abstract, hotel, Travel Award, and Exhibitor Forms available at the following link:
www.IBNSconnect.org

January 23, 2015

IBNS Meeting Travel Award Applications Deadline

February 6, 2015

Travel Award Recipient Notification

February 13, 2015

Abstract PRIORITY deadline
(abstracts submitted after this deadline will be considered for posters only and **must be received by March 23, 2015**)

For additional information, please visit the IBNS website or contact Marianne Van Wagner, Executive Coordinator, at ibns@IBNSconnect.org

Upcoming Events

Visit the **IBNS Booth #3239** during your attendance at SfN 2014. Take this opportunity to get information on our next meeting in Victoria, BC, Canada, network with the IBNS leadership or just say hello. We will be there Sun, Nov 16, 9:30 AM - Wed Nov 19, 5:00 PM.

Also, join us for an **IBNS Social** at SfN 2014 on Sunday, Nov 16. This event will be held at the Renaissance Hotel, Washington D.C. from 6:30 - 8:00 p.m. There will be a cash bar and light appetizers will be served.

We hope to see you there!

Follow us:



The sound of emotions: Stefan Brudzynski's two brain systems that initiate emotional states

by Elena Choleris in consultation with Stefan Brudzynski



The 2014 IBNS Outstanding Achievement Award for Scientific Contributions to the field of Behavioral Neuroscience went

to Stefan M. Brudzynski during the last IBNS meeting in Las Vegas in June 2014. It is appropriate at this time, to look closer at his life-long research endeavors. His brief self-written biography was published 4 years ago in the IBNS News Bulletin (November 2010, vol. 24, issue 4), so this article will focus predominantly on his research career and results of his studies on the neurochemical and anatomical origin of basic emotions and their vocal expression.

The first experimental experiences that shaped the direction of Stefan's research were from his home University of Łódź in Poland, back in mid-1960s. He participated in studies of aggressive behavior of cats using mostly electrical stimulation of the hypothalamus. The results of electrostimulation allowed for thorough mapping of the hypothalamus and analysis of behavioral manifestations, but the method was not specific and many behavioral patterns were of a mixed nature (e.g., elements of aggressive and defensive symptoms). The first milestone in Stefan's own research was achieved in his doctoral dissertation (1977) and the ensuing publications using the method of chemostimulation, when behavior was induced by intracerebral injections of selective pharmacological agents. The results of these studies provided evidence that cholinergic stimulation of cat's hypothalamus induced defensive, not aggressive response. Moreover, these cholinergically-induced responses were truly emotional in nature, having strong autonomic, endocrine, and behavioral components (vocalization). It was clear that cholinergic stimulation of vast areas of the basal forebrain, diencephalon, and even mesencephalon

induces aversive emotional response termed at that time emotional-defensive response. These results provided clues as to quantitative measurement of emotional expression by vocalization.

The second milestone in Stefan's research was to replicate these findings in the rat brain. Stefan said that "it was a thrilling discovery in the early 1990 that injection of cholinergic agents into the homolog areas of the rat brain induced powerful vocalization above the human audible range of frequencies, in the ultrasonic range (calls known as 22 kHz calls) that were also accompanied by autonomic and defensive manifestations". This was the first experimental demonstration that species-typical 22 kHz vocalizations, that previous studies with rats had showed to signal emotional responses, can be directly, pharmacologically induced in the rat brain. This response was thereupon mapped in the rat brain and was found to be induced from a homolog system to that in the cat brain. Ensuing studies by Stefan provided unexpected results. The notion at the time was that intracerebral injections activated some brain structures that send descending signals to motor nuclei in the brain stem that initiate vocalization and other responses.



Stefan in his laboratory in 1990

However, Stefan's research showed that cholinergic initiation of the vocalization and accompanying emotional response instead activated an ascending system, i.e., a cholinergic system originating in the brain stem tegmentum and projecting up to the diencephalic and basal forebrain limbic structures. Stefan's following behavioral, anatomical, and electrophysiological studies provided convincing direct evidence for the existence and functions of that ascending system.

Parallel studies in Stefan's laboratory have shown that there were two types of ultrasonic calls that could be induced pharmacologically in the rat brain: long 22 kHz calls and short calls of higher frequency. The high frequency calls matched those known from earlier behavioral studies as 50 kHz vocalizations. Subsequently, Stefan's studies were the first to show that 50 kHz vocalizations could be blocked by haloperidol, a dopamine antagonist. A large number of resulting studies from Stefan's and from Jaak Panksepp's laboratory thereafter showed that 50 kHz vocalizations represent the expression of positive emotional states and are driven by the ascending dopaminergic system originating also from tegmentum (a component of the dopaminergic mesolimbic pathway).

In the series of publications that followed, Stefan suggested the existence of two parallel ascending mesolimbic tegmental brain systems that initiate emotional states: the cholinergic component originating from the laterodorsal tegmentum initiates aversive emotional states, and the dopaminergic component originating from the ventral tegmental area initiates positive emotional states. In the most recent of Stefan's publications, the functional role of these ascending systems was further explained and presented as two selective components of the ascending reticular system, in addition to the well-known non-specific

reticular activating system. These additional and parallel arousal systems are functioning as basic regulators for selective negative emotional arousal, or selective positive emotional arousal. These studies provided new insight into the origin of animal and human basic emotional states and their primary neurochemical nature.

Presently, Stefan is Professor of Psychology and Neuroscience (since 2001) at Brock University in the Department of Psychology and in the Department of Biological Sciences. Stefan is also member and Director of the Centre of Neuroscience at Brock University and teaches Neuroscience and Neuro-psychopharmacology at Brock and, as a guest faculty in some American Universities. In addition to the IBNS Outstanding Achievement Award, Stefan has numerous awards and distinctions both for research and for teaching (from University of Lodz, Poland, University of Western Ontario, Canada, Niagara University, USA, and Brock University, Canada), including the Golden Certificate Award from Elsevier Publishers as a top reviewer in Behavioural Brain Research, and the Brock Award for Distinguished Research and Creativity. Stefan is member of over 10 scientific societies and ad hoc reviewer for over 40 journals. He is Editor of the Handbook of Mammalian Vocalization published by Academic Press/Elsevier in 2010 and organized two satellite symposia at our meetings. He has joined IBNS in 1993, became IBNS Fellow in 2005, and has been serving on the IBNS Council and IBNS committees since 2004 (e.g., the Organizing Committee of the Whistler meeting). Presently, Stefan is IBNS Officer, having served as a Treasurer and member of the Executive Committee since 2006. He claimed in his auto-biography published in this Bulletin earlier this year, "I treat my membership in the IBNS as a special one. Professional contacts with my IBNS colleagues have been interesting and enriching [and our Society offers] a unique chance for scientific discussions and further development". We are all grateful for his commitment to our society. He certainly is very deserving of the IBNS Outstanding Achievement Award!

Welcome and Congratulations to our New 2014 IBNS Fellows!

by Davide Amato

Jared W. Young



I am an Assistant Professor in the Department of Psychiatry at the University of California, San Diego (UCSD). I received my Ph.D.

in Neuroscience from the University of Edinburgh with a thesis investigating the role of nicotinic receptors in cognitive functioning. Thereafter, I conducted my Post-Doc at UCSD in Prof. Mark Geyer's lab in 2006 where I focused on the neurobiological underpinnings of cognitive and behavioral functioning of rodents showing psychiatric-like symptoms. Prof. Geyer encouraged me to expand the aim of these investigations using cross-species translational tools. This opportunity resulted in a grant funding the development of the 5-choice continuous performance task using humans and rodent's models of normal and psychiatric mental functioning. The results of these studies allowed the making of a reliable, and globally used, test to measure aspects of cognition that are dramatically altered in common psychiatric diseases. I contributed to the development of the human Behavioral Pattern Monitor (based on the rodent paradigm) to describe the altered behavioral profile of patients with schizophrenia and affective disorders. This project highlighted relevant biomarkers consistent with bipolar mania in patients. I am extremely enthusiastic in working in the field of Behavioral Neuroscience and I feel privileged to have been associated with the International Behavioral Neuroscience Society for nearly 10 years. I am extremely honored to be inducted into the IBNS College of Fellows!

Charles Heyser



I am a Research Scientist and Director of the Behavioral Testing Core in the Department of Neurosciences at the University of

California, San Diego (UCSD). I grew up in the small town of McKnightstown (PA) and attended the University of Pittsburgh where I received a degree in Psychology. I spent the next 4 years exploring the world and while working as a research technician at the Bowman Gray School of Medicine I met Dr. Charlie Mactutus and Dr. Rosemarie Booze who set me on the path to graduate school at Binghamton University. There, I worked with Dr. Linda Spear and Dr. Norman Spear and it was during this time that I attended the first meeting of IBNS in 1992, in San Antonio (TX). After receiving a PhD, I transitioned to the west coast as a Postdoctoral Fellow in the laboratory of Dr. George Koob at the Scripps Research Institute. During this time I also taught as a lecturer at UCSD. My first class in Physiological Psychology was almost 3 times the size of my hometown... I greatly enjoyed teaching and accepted a tenure-track position at Franklin & Marshall College and then after 14 years, I left the comforts of my tenured job as an Associate Professor to start the Testing Core at UCSD. My research interests include psychopharmacology (particularly drugs of abuse) and learning and memory across the lifespan. I am something of a radical behaviorist. When I am not studying behavior, my favorite hobby is photography. Receiving the College of Fellows award truly honor my intellectual interests and my professional career. I deeply thank the IBNS.

Remembering Bob Adamec

by Stefan M. Brudzynski and Jacqueline Blundell

Robert E. Adamec



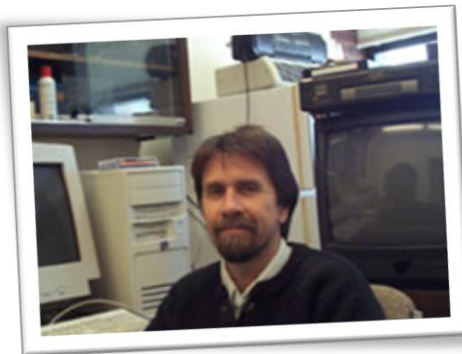
(December 12, 1944 - February 11, 2014)

With immense sadness we learned that Robert (Bob) E. Adamec, former IBNS President (2005-2006), passed away in February of 2014 after a long and devastating illness. We lost a good colleague and collaborator, passionate scientist, and active member of our Society, who contributed countless hours of his time to IBNS.

Bob was born in December 12th 1944 in Yonkers, NY, United States. He studied Psychology at the Middlebury College in Vermont where he specialized in Physiological Psychology and graduated in 1966. He moved to Canada and graduated with an MSc degree in Psychology at McGill University in Montreal in 1969 and received his PhD degree from the same University in 1978 under supervision of a well-known Canadian Psychologist, Ronald Melzack, the author of the gate control theory of pain. Bob accomplished his postdoctoral training at Dalhousie University and moved to Toronto. He received his first academic position in the Department of Psychiatry at the University of Toronto and position of co-director of the Scott Laboratory in 1981. He left Toronto in 1984 and accepted the position of Associate Professor in the Department of Psychology at Memorial University of Newfoundland in St. John's, NL and was promoted to the rank of Full Professor in that Department in 1990. In 1993, he received special recognition as University Research Professor, which he

held until 1999. He was granted Professor Emeritus in 2012.

Bob received numerous distinctions and awards, including the IBNS Outstanding Achievement Award in 2010. He has been a Fellow of IBNS since 1995, and he was a Fellow of the Canadian Psychological Association and National Science Foundation (USA). He spent significant time serving on the Canadian Medical Research Council (predecessor of the Canadian Institutes of Health Research, a counterpart of American NIH) as Scientific Officer and then Chair of the Behavioral Sciences Committee (1992-1994). He continued this service as a member of the Advisory Board of the Canadian Institutes of Health Research for Institutes of Neurosciences, Mental Health, and Alcoholism.



Bob Adamec in his laboratory in 2002

Within our Society, Bob was the main organizer of the satellite symposium on Defensive Behavior together with Bob Blanchard, Newton Canteras, and Iain McGregor in 2004. He served as Canadian Councilor (2002-2003), as Chair of the Animal Use and Ethics committee, and then became President Elect in 2004. Bob served as President and Immediate Past-President of IBNS from 2005 to 2007 and was instrumental, as the first Canadian President, in helping to organize the first Canadian IBNS meeting in Whistler, BC in 2006 at the heart of the Canadian Rocky Mountains.

Bob's research was centered on the neurobiology of defense and anxiety and the functions of the limbic system. He combined ethologically oriented behavioral studies with neurophysiological and behavioral-pharmacological methods to investigate how limbic systems circuits mediate lasting changes in fearful and anxious behavior. His studies included two models of pathological behaviors: anxiety and limbic epilepsy. For these models, he used the kindling model of epilepsy to study the impact of repeated seizures on limbic system function and on anxious behavior in rats. He also studied anxiety associated with traumatic stress in behavioral tests involving non injurious exposure of a rat to a non-aggressive cat. Using this approach, Bob was able to demonstrate lasting increases in anxiety-like behavior in rats (persisting for at least 3 weeks) as well as in startle responses and basal corticosterone levels. His further studies aimed at identifying the molecular mechanisms underlying lasting changes in fearful and defensive behaviors. Ultimately, Bob's goal was to make a significant contribution in understanding the development and advancing the treatment of acquired anxiety disorders such as PTSD. Bob published 104 publications. His last article appeared posthumously in May 2014 in PLoS One. His publications were widely known and were cited overall by 2600 authors. He was recognized as an authority on the functions of the limbic system and negative emotional states.

In the last years of his life, he became gravely ill with a particularly aggressive form of Parkinson's disease. Bob passed away on February 11, 2014 at age 69 and is survived by his beloved wife, Aileen. He will be greatly missed within the IBNS community.

Member News

Honors and Awards:



Indiana University has appointed **Sue Carter**, (former IBNS President) a pioneering leader in the field of behavioral neuroendocrinology, as director of The

Kinsey Institute for Research in Sex, Gender and Reproduction, effective Nov. 1.

The Kinsey Institute at Indiana University Bloomington was founded in 1947 by its namesake, zoologist Alfred Kinsey. Carter, also Rudy Professor of Biology, plans to support and extend the efforts begun by Kinsey with an added emphasis on understanding the science of love, nurture and longevity.

Recent findings, many of which are built upon scientific research models originated by Carter, have revealed that the same basic neurobiological processes and systems that support healthy sexual responses are necessary for love and well-being. At the biological heart of the experience of love, as well as sexual behavior, is a small hormone known as oxytocin. Oxytocin, and the neural systems that oxytocin regulates, in turn protect and heal. An initial focus of Carter's plans for The Kinsey Institute will be the development of a Kinsey Institute Resource Center, intended to increase collaborations among members of the IU academic community, and globally. This center will offer access to noninvasive technologies necessary to understand the biology and health benefits of human social and emotional relationships.

Currently Carter is the principal investigator of a \$4.8 million grant from the National Institutes of Health for

research involving the developmental consequences of birth interventions. This work, which uses an animal model to examine the possible effects for infants of the use of oxytocin (medically known as Pitocin) to induce labor, will continue at IU Bloomington.

Carter comes to IU Bloomington from the University of North Carolina at Chapel Hill, where she was professor of psychiatry. She was previously co-director of the Brain-Body Center at the University of Illinois at Chicago, and prior to that Distinguished University Professor at the University of Maryland. Her prior appointments have been in the departments of psychology, zoology and biology, and she helped found the interdisciplinary Ph.D. program in neural and behavioral biology at the University of Illinois at Urbana-Champaign. Carter is a Fellow of the American Association for the Advancement of Science and the International Behavioral Neuroscience Society, and she was awarded the Matthew J. Wayner-NNOXe Pharmaceutical Award for Translational Research.

- *IU Bloomington Newsroom*

<http://news.indiana.edu/releases/iu/2014/10/new-kinsey-director-announced.shtml>



Jared W. Young, Ph.D., Assistant Professor in the Department of Psychiatry UCSD, recently received a Biobehavioral Research Award for

Innovative New Scientists 2014 (R01 grant). Dr. Young will begin to delineate the mechanism(s) by which some patients with bipolar disorder switch from extreme behaviors, cycling from mania to depression, and back again. Dr. Young said, "2014 has been wonderful time in my career!"



Joanna Workman, Ph.D., currently a postdoctoral fellow working with Dr. Liisa Galea at the University of British Columbia, has

accepted a tenure-track position as Assistant Professor in the Psychology Department of University at Albany - State University of New York, beginning January 2015. Her laboratory will focus on the neuroendocrine mechanisms of how motherhood alters both short- and long-term cognitive and affective behaviors.



Emily Hankosky, Ph.D. Candidate in the Psychology Department at University of Illinois, Urbana-Champaign was recently awarded a Ruth L.

Kirschstein individual fellowship for a 2-year period of funding.

Publications:



Former IBNS President, Kelly Lambert's work was discussed in the Times of India recently, in an article entitled, 'Be Your Own Prozac.' In it, she explains how people can 'activate' the brain's neurochemicals themselves. Kelly G. Lambert, professor of neuroscience at RandolphMacon College in Ashland, Virginia, has been involved in studying the mammalian brain and is one of the foremost researchers on neurochemicals. She has written two popular books, 'Lifting Depression' and 'The Lab Rat Chronicles', besides textbooks. Currently, she is writing 'Cracking the Brain's Code: Making Smart Decisions in an Uncertain World'. See the article at the address below.

<http://timesofindia.indiatimes.com/home/stoi/dee-p-focus/Be-your-own-prozac/articleshow/44946136.cms>