

Neural Control and Autonomic Regulation Section NEWSLETTER



March, 2003



Dr. John Coote,
University of Birmingham,
UK

**Carl Ludwig Distinguished Lecturer for
EB 2003**

**"The Significance for Circulatory Control of the Paraventricular Nucleus"
Saturday, April 12,
10:30 AM - 11:30 AM, Room 9**

The **Carl Ludwig Distinguished Lecture** at Experimental Biology 2003 will be given by **Dr. John Coote**, University of Birmingham, UK. This lectureship is named in honor of Carl Ludwig in recognition of his many and important contributions to understanding autonomic regulatory mechanisms. The lectureship is sponsored by the Neural Control and Autonomic Regulation Section of the American Physiological Society.

Dr. Coote is Professor and Head of the Department of Physiology at the University of Birmingham, UK. Research in Dr. Coote's laboratory focuses on functional and

anatomical aspects of central nervous cardiovascular regulation and blood pressure control. Dr. Coote has been a leader in research leading to understanding of the cellular mechanisms underlying autonomic nervous activity patterns in both animals and humans. Studies have been mainly concerned with how the brain generates a pattern of activity in sympathetic outflows to the heart and various vascular beds which are fundamental to different types of behavior associated with survival, enabling an adequate defense against life threatening stimuli. Some examples are the "fight or flight" response, exercise, energy conservation and balance, fluid volume regulation, temperature regulation and even sleep. For this purpose, Dr. Coote and colleagues have conducted anatomical studies to locate neurons and trace pathways and to identify neurotransmitters using immunohistochemistry. Functional studies have been performed using electrophysiological and neuropharmacological approaches to determine the influence of identified neurons and pathways in altering sympathetic activity in animals and parasympathetic activity to the heart in humans. Experiments involve the recording of sympathetic activity and vascular and cardiac parameters in anesthetized animals and humans.

Dr. Coote will also attend the **NCAR Reception/Business meeting** on Sunday, April 13, at 6:30 pm in the Marriott Hotel, Coronado Room. Please attend and use this opportunity to meet Dr. Coote and mingle with other NCAR members.



Experimental Biology 2003

Translating the Genome

Friday, April 11 - Tuesday, April 15 · San Diego, CA

Many events are planned for the annual Experimental Biology Meeting. These include the **Carl Ludwig Distinguished Lecture on Saturday, April 12** and a **NCAR Reception and Business Meeting on Sunday, April 13 (Marriott, Coronado Room)**. In addition, we have a one symposium and three featured topics sponsored by NCAR. There is also other programming that may be of interest to NCAR members. Some of these symposia and featured topics are presented below. Check your program and the APS website for additional information on these and other sessions of interest.

Carl Ludwig Distinguished Lectureship

The Significance for Circulatory Control of the Paraventricular Nucleus, John Coote, University of Birmingham,
Saturday, April 12, 10:30 - 11:30 am, Room 9
Special Topics , Saturday, April 12, 11:30 am - 12:30 pm, Room 9

Sponsored Symposium

Neurogenic Hypertension, Chaired by Alan Sved (Speakers include Vito Campese, Murray Esler, Alan Sved, and Ronald Victor, Sunday, April 13, 8:00 - 10:00 am, Room 8

Sponsored Featured Topics

The Regulation of Sympathetic Nerve Activity in Chronic Heart Failure, Chaired by Irving Zucker,
Saturday, April 12, 3:15 - 5:15 pm, Room 3

Oxidant Mechanisms in Neural Regulation of Cardiovascular Function, Chaired by Robin Davisson,
Sunday, April 13, 3:15 - 5:15 pm, Room 10

Identifying Genes and Targets in Cardiovascular Autonomic Pathophysiological States, Chaired by Julian Paton,
Tuesday, April 13, 10:30 am - 12:30 pm, Room 9

Other Programming of Interest

Modulation of Respiratory Motoneurons from Molecules to Behavior, Chaired by Albert Berger,
Saturday, April 12, 8:00-10:00 am, Room 5

New Insights on Neuroimmune Interactions in Autonomic Regulation, Chaired by Yvette Tache,
Saturday, April 12, 8:00-10:00 am, Room 9

The Pons: a Critical Component in Respiratory Control, Chaired by Donald McCrimmon,
Sunday, April 13, 10:30 am - 12:30 pm, Room 3

Edward F. Adolph Distinguished Lectureship, Neural Circulatory Control during Exercise: Insights from Animal and Human Studies, Jere Mitchell, Monday, April 14, 8:00 - 10:00 am, Room 6A

Reflex Regulation of Airway Function and Breathing, Chaired by Lu-Yuan Lee/ Brendan Canning,
Monday, April 14, 3:15 - 5:15 pm, Room 11A

Neurohumoral Control of Body Fluid Volume and Arterial Pressure, Chaired by Simon Malpas/Terry Thrasher,
Monday April 14, 3:15 - 5:15 pm, Room 11B

AT-1 and AT-2 Receptors: Cellular Action?, Chaired by Sumners/Meredith Hay,
Tuesday, April 15, 8:00 - 10:00 am, Room 9

Functional Brainstem Anatomy: Can We Tell Cardiovascular and Respiratory Neurons Apart?, Paul Gray,
Tuesday, April 15, 8:00 - 10:00 am, Room 10

Special Topics Forum at EB2003

What function do A5 neurons have in autonomic regulation?

Approximately 11:30 am on Saturday, April 12, Room 9

(immediately following the NCAR Distinguished Lecture)

A wealth of anatomical data indicates that a group of noradrenergic neurons in the ventrolateral pons, the A5 neurons, provide extensive innervation of sympathetic and parasympathetic preganglionic neurons. However, our understanding of the role of these neurons in the control of autonomic function is extremely limited. This Special Topics Forum will focus on what role these neurons may play in integrated autonomic regulation, with a discussion of how different investigators view the role of these neurons. Because data do not currently exist to firmly support a specific role of these neurons in autonomic regulation, a focus of the session will be on how to potentially study the role of these neurons, or any group of neurons with connections to preganglionic neurons, in autonomic regulation. The Moderator, Alan Sved, and four Discussants, Patrice Guyenet, Geoff Head, Ida Llewellyn-Smith, and Shaun Morrison, will briefly present their ideas on this topic, followed by an open (and hopefully lively) discussion. Please plan on attending and participating.

Please come and actively participate. This session will occur immediately following the Carl Ludwig Distinguished Lecture, to be delivered by Dr. John Coote, at 10:30 am on Saturday, April 12, Convention Center Room 9.

The NCAR Programming committee is planning for the Special Topics Forum to be an annual event at the EB meeting. If you want to suggest a topic for a future Special Topics Forum, please contact Robin Davisson (robin-davisson@uiowa.edu) or any other member of the NCAR steering committee (see last page of newsletter).

NCAR BUSINESS MEETING AND RECEPTION FOR THE DISTINGUISHED LECTURER

Sunday, April 13, 6:30 PM

Marriott Hotel, Coronado Room

Everyone is invited to the NCAR reception on Sunday evening. This will be your chance to meet with the distinguished lecturer and mingle with other NCAR members. We will have a short business meeting and announce the winners of our Brody and Young Investigator Awards. Please make plans to attend!

NCAR PROGRAMMING FOR EB 2004

The EB 2003 meeting is rapidly approaching, but it is already time to start thinking about EB 2004. Now is your chance to propose a Symposium or Featured Topic session for that meeting. Organize your own session, and make sure that the science you want to be presented at EB has a forum. This is your opportunity to organize a great program around your primary research interest.

NCAR is responsible for scheduling three Featured Topic sessions and one Symposium at EB 2004. The programming of these sessions is entirely in the hands of our section, and it is our responsibility to ensure that we have high quality programming. Details about symposia and featured topics is presented below.

If you want to propose a Featured Topic or Symposium, please contact Alan Sved (sved@pitt.edu or 412-624-6996), the NCAR Programming Committee representative. The NCAR Programming Committee is meeting just prior to the start of EB 2003 to decide programming for EB 2004, so please contact Dr. Sved before March 21, 2003.

Guidelines for Programming for APS

For **symposium**, each organizer will be allocated monies for use in the reimbursement of relevant travel expenses (airfare, per diem, housing, etc.) of invited speaker(s), both member and nonmember. The amount provided to each organizer from APS funds will not exceed \$4,000. All APS-sponsored symposium speakers and chairs will receive complimentary registration. The symposium organizer will direct the allocation of speaker travel reimbursement. The organizer may raise additional funds from outside sources. APS does not provide honoraria.

Featured topics are similar to *minisymposia* in that they are pre-formed (prior to the mailing of the Call for Papers) oral sessions including a session title, chairperson and not more than two *featured presenters*. Featured presenters, or invited speakers, may present work not represented by a submitted abstract. Complimentary registration is available for not more than two invited speakers. All other presentations are selected from the submitted abstracts. Abstract authors choose the preferred *featured topic* category from the call for papers as an indication that they are willing to present their research in both an oral and poster format. Either the chairperson of the featured topic or the primary sponsoring section's Joint Program Committee Representative is responsible for selecting which abstracts to include in the featured topic session. NCAR, via APS funding, provides each featured topic organizer \$750 for each featured topic to be used in support of travel or activities related to the featured topic session, including registration and travel expenses. More information regarding Featured Topics and Symposia can be found on the APS website http://www.the-aps.org/sect_groups/neural/auto.htm.

IN MEMORIUM

Giuseppe Sant' Ambrogio



Giuseppe Sant' Ambrogio died on 4 October 2002 after a lengthy illness. He will be greatly missed not only by his family but also by his many friends and colleagues throughout the world. He trained as a doctor at the University of Milan, graduating *cum laude* in 1956. His humanity and compassion would have made him a fine 'real physician', as his mother had hoped, but he chose a more academic career as a physiologist.

His career was of great distinction. He joined the Department of Human Physiology in Milan, conducting research on the diaphragm and on respiratory reflexes. But his research was somewhat restricted by the heavy workload occasioned by an unlimited entry of medical students. He had 'sabbaticals' in Lexington KY (twice), Oxford and London (as Royal Society/Accademia Lincei Fellow), and later moved to the University of Texas in Galveston. Here, with his wife Franca he developed a laboratory to study laryngeal innervation. He became a, or rather the, international

authority on this subject, and he and Franca were joined by a host of visitors from around the world. He was in great demand for international meetings where his talks usually ran over time, to the appreciation and enjoyment of his audience; his scientific enthusiasm and curiosity always illuminated the subjects he discussed. In 1999 he received an ATS Recognition Award for Scientific Accomplishment.

As well as being a distinguished physiologist, Giuseppe was a fine historian of respiratory and other branches of physiology. Digging out historical anecdotes and oddities was as much research to him as digging out laryngeal nerve fibres.

He retained his love of Italy, where he and Franca had a home in the foothills of the Alps near Lake Como. His scientific contributions are established in his publications, but his many friends will retain affectionate memories of his great powers of friendship, modesty, integrity and sense of humour, ingrained qualities he also applied to his work.

Giuseppe leaves behind his wife Franca, their three children and their grandchildren, all living in the US. The members of his family share his wonderful qualities, and we deeply sympathise with them.

John Widdicombe
University of London

PROGRAMS REQUESTED FOR IUPS 2005

APS members are being asked to submit programming ideas for the 2005 IUPS meeting, which will be held in San Diego as part of the Experimental Biology Meeting. The theme of the Congress is "From Genomes to Functions" and the International Scientific Programming Committee is seeking program suggestions that compliment the theme. Programming suggestions are being requested for symposia, workshops, featured topics, and individuals to present a distinguished lectureship in some area of physiology, or for novel programming idea (e.g., the "Controversies" symposium held in New Zealand in 2001). More information about this programming opportunity can be obtained from the APS website at the following address: <http://www.iups2005.org/announce/programcall.htm>. This is a chance for you to organize session at a large scientific conference with the support of the APS and IUPS!

NEURAL CONTROL AND AUTONOMIC REGULATION SECTION COMMITTEES

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