



# THE HISTORY OF PHYSIOLOGY GROUP NEWSLETTER

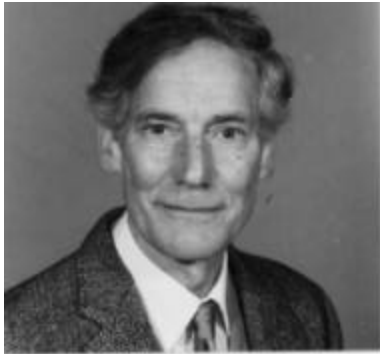
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**MESSAGE FROM THE CHAIR, Henry Brown, M.D.**

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I and the other officers are again inviting you with pleasure to the outstanding Special Topics Session on the “History and Physiology of High Altitude Decompression Sickness” arranged under the able program chairpersonship of Dr. Suzanne Schneider. The topic is not only of historical interest, but also timely because it touches on the exciting cutting edge of space medicine research. The beautiful city of San Diego of World War II days when our carrier left its planes there at the conclusion of hostilities has grown into an even lovelier place. The fine beaches, as many of you know, also have great places to jog, as do nearby parks. The hospitable hotels and restaurants will entice us all.

The Society sponsored buffet luncheon on Sunday, April 13th will be furnished without charge to the History Group Members just prior to the business meeting and the fine lecture to follow by Dr. Michael Powell. The History Special Topics Session will be held the following day, April 14. The exact times, places and topics of these meetings and lectures can be found elsewhere in this newsletter.

I send my best wishes and look forward to welcoming all of you at the History Group functions of Experimental Biology 2003.

Henry Brown  
Chair, History of Physiology Group

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**THE BUSINESS MEETING OF THE HISTORY OF PHYSIOLOGY GROUP**

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The History of Physiology Group will have a buffet luncheon business meeting and History of Physiology Lecture on Sunday, April 13<sup>th</sup>, from 12:01-1:30 pm in the Newport Beach Room at the Marriott in San Diego. Following a hopefully not too gaseous buffet luncheon and a brief business meeting, Dr. Michael Powell, a research physiologist at the NASA Johnson Space Center, Environmental Physiology Laboratory, will give a presentation entitled “Barophysiology: a four-hundred year odyssey”. All individuals that will be attending the luncheon before the business meeting starts need to advise Linda Jean Comley of APS of this fact. She can be contacted at [Lcomley@The-APS.org](mailto:Lcomley@The-APS.org).

## THE FEATURED TOPIC SPONSORED BY THE HISTORY OF PHYSIOLOGY GROUP

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The Special Topics session on the History and Physiology of High Altitude Decompression Sickness will be held Monday, April 14<sup>th</sup>, from 3:15 to 5:15 in Room 4 of the Convention Center. Two keynote speakers, Drs. Michael Gernhardt and James Webb, will discuss efforts by NASA and the Air Force to understand and prevent DCS. Three short presentations will follow.



Dr. Gernhardt was born May 4, 1956 in Mansfield, Ohio. He received a B.A. degree in physics from Vanderbilt University in 1978, a master-of-science degree and a doctorate in bioengineering from the University of Pennsylvania, in 1983 and 1991, respectively. From 1977 to 1984, Gernhardt worked as a professional deep-sea diver and project engineer on a variety of oil field construction and repair projects around the world. He logged over 700 deep-sea dives and has experience in air, mixed gas, bounce bell and saturation diving. During his diving career Gernhardt attended graduate school at the University of Pennsylvania and worked with Dr. Christian Lamerbsten to develop a new theoretical decompression model based on tissue gas bubble dynamics.

He then participated in the development and field implementation of a variety of new decompression tables. In 1988 he founded Oceaneering Space Systems, a company formed to transfer undersea technology and operational experience to the International Space Station program. From 1988 to his selection by NASA in 1992, he worked on the development of new astronaut and robot-compatible tools for performing maintenance on the Space Station. He was instrumental in the development of the exercise prebreathe countermeasure recently introduced during ISS extravehicular activities and was the first to use the countermeasure during the STS-104 mission in July, 2001. He is veteran of four Space Shuttle missions and is currently assigned to another mission when Shuttle operations resume.



Dr. James Webb is a Lead Scientist for Wyle Laboratories at the School of Aerospace Medicine in San Antonio, Texas where he is actively involved in altitude decompression research. He is certified in Aerospace Physiology by the Aerospace Medical Association and is a fellow of that group. His Ph.D. in biochemical ecology is from the University of Washington in Seattle and he has been an Associate Professor of Biology at the USAF Academy in Colorado. Jim holds a multi-engine, FAA Airline Transport Pilot certificate and is a former USAF fighter pilot and heavy transport pilot.

## HISTORY OF PHYSIOLOGY GROUP POSTERS WILL BE ON DISPLAY ON MONDAY IN THE CONVENTION CENTER

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Eight excellent abstracts were received this year for poster presentations in the History of Physiology section. Come by and see the following posters on Monday, April 14<sup>th</sup> in the Convention Center Exhibit Hall. History Posters will be numbered from D687 to D695 and will be manned by the authors from 12:45 to 3:00 pm.

Schneider, S.M., M.Gernhardt, and K. Loftin. Characterization of an exercise prebreathe protocol to prevent decompression sickness in astronauts.

Dean, J.B. International high altitude expedition to the Andes Mountains, Chile: a retrospective look through the camera of Dr. Ross A. McFarland.

Wong, S.C., T.S. Neuman, J.B. West, and G.K. Prisk. Sport SCUBA dives alter the distribution of  $V_A/Q$  in the human lung.

Brown, H. Bischoff and the intracranial connections and function of the lower four cranial nerves.

Stepanek, J. Exercise prebreathe protocols for altitude decompression sickness risk mitigation: early contributions of Mayo Clinic.

Prisk, G.K., J.M. Fine, T.K. Cooper, J.B. West. Ventilation-perfusion inequality in the lung is unchanged 24 hours following extravehicular activity from the International Space Station.

Dean, J.B. Pioneering research on explosive decompression (ED) and the incidence of decompression sickness (DCS) during world war two, 1939-1945.

Webb, J.T. Altitude decompression sickness-cause, pathogenesis, protection.

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#### CALL FOR PROGRAM SUGGESTIONS FOR EXPERIMENTAL BIOLOGY 2004 AND THEREAFTER

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It is time to plan for future programs by the History of Physiology Group for EB 2004 and our options are to sponsor a two-hour symposium with three or possibly four speakers (\$4,000 limit) or to have a featured topic presentation or lecture with no more than two speakers (\$1,000 limit). As in 2003, it is possible to couple the featured topic with selected free communications on the chosen subject. Please email suggestions before April 1, 2003 to [Tipton@email.arizona.edu](mailto:Tipton@email.arizona.edu), or to [sscheid@unm.edu](mailto:sscheid@unm.edu).

The program committee is proposing for the IUPS meeting in 2005 in San Diego a featured topic tentatively entitled, "Mosso and Muscular Fatigue: 116 years later". The later refers to the fact that Mosso gave a lecture and demonstration with his ergometer on muscular fatigue at the 1889 IUPS meeting. In accordance with the suggestions of the current IUPS Program Committee, we are seeking nominations of a renown foreign expert who would present a 45 minute lecture on the topic before the five selected relevant abstracts are presented. Since program suggestions have to be submitted in May, we need your recommendations on or before April 1, 2003. Please email them to either [sscheid@unm.edu](mailto:sscheid@unm.edu) or to [Tipton@email.arizona.edu](mailto:Tipton@email.arizona.edu).

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#### THE HISTORY OF PHYSIOLOGY NEW BOOK CORNER

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Maddox, Brenda. *Rosalind Franklin: the Dark Lady of DNA*. Harper Collins, 2002.

A recent review (by Angela N.H. Creager in the American Scientist Jan-Feb. 2003 (1:64-66) states: "Ever since James Watson published *The Double Helix* in 1968 scientists and feminists

alike have complained about the inaccuracy and misogyny of his representation of Rosalind Franklin, whose x-ray diffraction patterns proved crucial parameters for the DNA model he built with Francis Crick". Franklin "was easily milked by Watson and Crick for information about Franklins's unpublished findings. The two men got further details from her write-up in an unpublished report to the Medical Research Council (MRC) passed to them by their Cambridge Colleague, Max Perutz. It has been common place at assert that Franklin was effectively cheated out of a Nobel prize even though the prize was awarded to Watson, Crick and Wilson four years after her death, and the prize is never awarded posthumously".

## KNOW AND CONTACT YOUR LEADERS IN THE HISTORY OF PHYSIOLOGY GROUP

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