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International Association
for Dental Research

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Dr. Hunter Receives IADR Biological Mineralization Award

Alexandria, Va. – Dr. Graeme Hunter, University of Western Ontario, Canada, is the recipient of the 2009 Biological Mineralization Award, which will be presented by the International Association for Dental Research (IADR) at its 87th General Session & Exhibition in Miami, Florida, USA, on April 1, 2009.

Dr. Hunter has had a long and distinguished career in dental research, focusing on the physical biochemistry of biomineralization – specifically, the roles of mammalian proteins in the regulation of crystal formation and growth. His work has had, and continues to have, broad-ranging importance for understanding the formation of mineralized tissues – both skeletal and dental – as well as pathological calcifications such as dental calculus and kidney stones.

Dr. Hunter completed undergraduate studies and earned his Ph.D. in Biochemistry at the University of Glasgow. He then held a European Molecular Biology Organization postdoctoral fellowship at Stanford University and carried out a second postdoctoral fellowship from 1981-1983 in the Medical Research Council Group in Periodontal Physiology in Toronto – his introduction to the world of dental research. After a research associateship at Mount Sinai Hospital, he has held important academic positions in Departments of Oral Biology, first at the University of Alberta (1988-1991) and presently at the University of Western Ontario (since 1991). At Western's School of Dentistry, Dr. Hunter served as Chair of the Division of Oral Biology from 1994-1999 and Assistant Director (Research) from 1996-2006.

Over a 10-year period (1987-1996), Dr. Hunter studied the provisional calcification of cartilage that occurs during the development of the mandibular condyle and other bones that form by endochondral ossification. These ingenious studies included mathematical modeling and development of a “pseudo-steady-state” titration assay. These studies led Dr. Hunter to propose a radical new role for proteoglycans as promoters of calcification, rather than inhibitors as was generally thought.

Most recently, Dr. Hunter has been studying the crystallization of calcium oxalate – the most common mineral found in kidney stones. He has applied novel confocal microscopy techniques to quantify crystal growth and to study face-specific binding of proteins. Notably, Dr. Hunter has pioneered the use of molecular dynamics to study biomineralization. This technique has already provided atomic-level information about the interaction between osteopontin and calcium oxalate crystals.

The Biological Mineralization Award is generously supported by Unilever Oral Care. One of the 16 IADR Distinguished Scientist Awards, it is one of the highest honors bestowed by IADR. The award consists of a cash award and a plaque and is designed to stimulate, encourage, and recognize basic research in the field of biological mineralization.

About the International Association for Dental Research

The International Association for Dental Research (IADR) is a nonprofit organization with more than 11,300 individual members worldwide, dedicated to: (1) advancing research and increasing knowledge to improve oral health, (2) supporting the oral health research community, and (3) facilitating the communication and application of research findings for the improvement of oral health worldwide.

To learn more about IADR, visit www.iadr.org.