

The novel insights of proteoglycans in mineralized tissues

March 25 2018

The 47th Annual Meeting of the American Association for Dental Research (AADR), held in conjunction with the 42nd Annual Meeting of the Canadian Association for Dental Research (CADR), featured a symposium titled "The Novel Insights of Proteoglycans in Mineralized Tissues." The AADR/CADR Annual Meeting is in Fort Lauderdale, Fla. from March 21-24, 2018.

Proteoglycans are present on the cell surface and in the extracellular matrices (ECM) of all mineralized tissues, but the exact role of these heavily glycosylated proteins in bone and teeth are not well understood. In addition to being structural proteins, proteoglycans are capable of affecting both intracellular and extracellular events, such as the assembly of ECM and the transduction of signaling cascades.

"Mechanistic insights into the molecular and cellular functions of proteoglycans in mineralized tissues will reveal both the sophistication of the regulatory mechanism and the challenges that remain in uncovering the entirety of their biological functions," said session chair Xiaofang Wang, Texas A&M University College of Dentistry, Dallas. "This [symposium](#) aims to provide an update of recent discoveries on the role of proteoglycans in mineralized tissues."

These discoveries are striking examples of proteoglycans previously ascribed functions largely structural proteins, that have now been shown to have important molecular and [cellular functions](#) directing bone and tooth development. The novel insights into the understudied roles of

these heavily glycosylated molecules presented in this symposium offer an exciting new frontier for scientific inquiry, especially for those with an interest in mineralized [tissue](#) biology, craniofacial development, matrix biology and glycobiology, amongst others.

This symposium featured talks from Marian Young, National Institutes of Dental and Craniofacial Research, NIH, Bethesda, Md.; Xiaofang Wang, Texas A&M University College of Dentistry, Dallas and Shuo Chen, University of Texas at San Antonio.

Provided by International & American Associations for Dental Research

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