

Chondroitin Sulfate Proteoglycans in Cancer: Expression and Functional Studies

George W. Yip

Department of Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, Singapore Corresponding author, E-mail: georgeyip@nus.edu.sg

Abstract

A chondroitin sulfate proteoglycan consists of a core protein backbone with one or more covalently linked chondroitin sulfate side chains. Chondroitin sulfate is made up of repeating subunits of N-acetylgalactosamine alternating with glucuronic acid residues. These molecules are ubiquitously located, and may be present intracellularly, on the cell surface and in the extracellular matrix. Although they were previously thought to perform mainly structural roles in the body, recent studies have shown that they are of fundamental importance in regulating various physiological and pathological processes and are able to bind to different growth and signalling factors. In this talk, recent data will be presented to show the expression and functional significance of these molecules in various cancer types. Their potential use in patient prognosis and treatment will also be discussed.

Keywords: Cancer, Chondroitin sulfate, Patient prognosis, Proteoglycan

Proceedings of RSU Research Conference (2019) Published online: Copyright © 2016-2019 Rangsit University