

Glycolipids and glycoproteins as cell adhesion receptors

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Project description: The goal of our project is to provide molecular level information of microbe-host interactions. There is an urgent need for novel, more specific and targeted means to control infections. For making that possible detailed information of bacterial pathogenesis is needed. Our main focus is on the mechanisms of streptococcal interactions with host cell surface carbohydrates and innate immune molecules. Some cell surface carbohydrates, e.g. Gal α 1-4Gal, are also cancer related antigens and we are studying possibilities to use bacterial adhesins as tools for the specific detection of such structures. Our current studies focus on (1) polymorphism and biological activity of innate immune molecules in human saliva such as scavenger receptor Gp340, and (2) Gal α 1-4Gal- containing glycoconjugates as streptococcal adhesion receptors and (3) the possible role of glycolipids as cancer markers.

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Number of Ph.Ds. supervised 2010-2015: 1

External funding in 2015: Finnish Cultural foundation, Turku University Foundation

