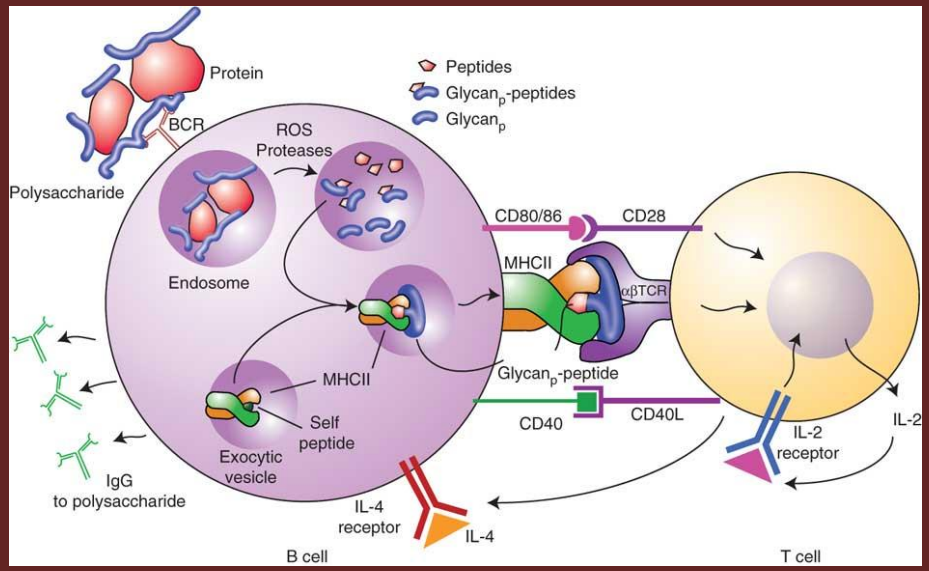
Fikri Y. Avci, Ph.D.

Instructor in Microbiology and Immunology
Harvard Medical School



"T cells like sweet epitopes: A new model for glycoconjugate action"

Monday, March 18, 2013
11:00 - 11:50 am
CCRC Auditorium

THE CENTER FOR *Molecular Medicine*

Host: Stephen Dalton

Presentation Abstract

Capsular polysaccharides are found on the surfaces of many pathogenic bacteria. Each bacterial pathogen possesses a polysaccharide with unique structure that is distinctively recognized by our immune cells. Because these polysaccharides are located on the surface of pathogens, they are easily accessible by the immune system and therefore are essential vaccine candidates. To induce polysaccharide specific professional immune response (e.g., T cell mediated B cell response), these polysaccharides are conjugated with carrier proteins and the conjugation products are called glycoconjugate vaccines. In a series of experiments we have established the model that describes how glycoconjugate vaccines interact with the adaptive arm of the immune system. Moreover, based on the mechanisms discovered, we designed and synthesized a prototype new-generation vaccine that is substantially more immunogenic and protective than a currently available vaccine.

Dr. Avci is a candidate for a faculty position in the UGA Center for Molecular Medicine. Dr. Avci's research is focused on the chemistry and biology of mammalian and microbial glycans. Dr. Avci received his Ph.D. in chemistry and chemical biology under the direction of Robert Linhardt, Rensselaer Polytechnic Institute. His postdoctoral studies were in the laboratory of Dennis Kasper at Harvard Medical School. He is currently an Instructor in Microbiology and Immunology at the Harvard Medical School.