

Department of Biological Sciences

Seminar Announcement

Cysteine Proteinases and their Inhibitors

Cysteine proteinases comprise a large group of enzymes having several basic fold topographies. The first, the papain family includes a number of vertebrate intracellular enzymes called the cathepsins. Cathepsin K has been implicated in such diseases as osteoporosis and rheumatoid arthritis. One of the major goals among pharmaceutical companies is to develop an effective inhibitor of cathepsin K. I will describe the structure of a complex of one such inhibitor with cathepsin K that revealed an unexpected covalent enzyme inhibitor complex. The second topography, that of an enzyme with a chymotrypsin architecture but with with a Cysteine nucleophile instead of a serine. These enzymes are prevalent among icosahedral viruses and are the major enzymes involved in processing the primary translation product, a polyprotein to the individual proteins required for viral assembly and infectivity. I will discuss the 3C and 2A proteinases from picornaviruses in this lecture.

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NUS
National University
of Singapore

Date: Friday Nov 1, 2002
Venue: LT 20
Time: 4 - 5 pm
Host: Prof Hew Choy Leong

All are welcome