



*Excellence and innovation in
contemporary bioscience
education.*

2010
TEN YEARS
ON

EXPLORING PROTEIN STRUCTURE AND CATALYTIC FUNCTION

This program offers students a comprehensive overview of the hierarchical structure and functional diversity of proteins. Enzyme action is explored through laboratory work and the use of bioinformatics software.

Students discover how proteins are synthesised; they explore how proteins behave when external environmental parameters such as pH and temperature vary. They also investigate the role of enzymes in regulating biochemical reactions and explore an application of molecular biology in medicine in the design of drugs to block active and binding sites of proteins.

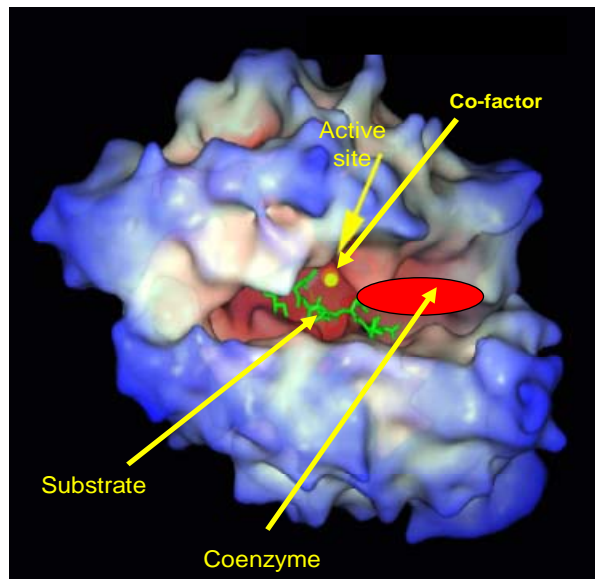
Task 1:

Students use a spectrophotometer to analyse the effect of temperature and pH on the ability of the enzyme amylase to digest starch.

Task 2:

Students explore and compare the 3D structure of swine and human amylase using Cn3D software.

On completion of this program students will have the knowledge and data to complete a summary report related to a biochemical process as part of school assessed coursework for Unit 3 Biology.



Program features:

Introductory lecture.
Pre-laboratory lecture.
Laboratory tasks guided by a scientist mentor.
Use of bioinformatics tools in exploring protein structure and enzyme action.
Lunch at the University of Melbourne.
School assessed coursework provision.

Scheduling: Term 1

YEAR LEVEL: UNIT 3 VCE BIOLOGY,
BOOKING CODE: VCE 301
STANDARD RATE \$25-00/STUDENT

Contact Administrative Assistant for booking enquiries:
E-mail: gtac@gtac.edu.au or Phone 03 9340 3600