



Project Title:

Development and Implementation of a functional histology learning system for UBC DMD and MD students.

Project Summary *(150 words maximum)*

At UBC we use a structured lab, and a problem-based learning case [for which I am responsible] to teach fundamentals of functional histology, to DMD and MD students.

OBJECTIVE: To develop and implement an online functional histology learning system that is interactive and fosters active learning.

1: To implement a quiz-based histology system on the web that uses common tissues to aid student understanding of functional histology.

2: To develop tools that will allow student analysis of cell and tissue structure in 3 dimensions. The Focussed Ion Beam Scanning Electron Microscope will be used to dissect and reconstruct 3D structures as annotated Quicktime movies. Students will be able to manipulate 3D structures to view structural elements and their interconnections.

3: To use micro-computerized tomography (MicroCT) analysis of selected tissues, to generate quicktime movies showing 3D structures. This objective will be focused on the craniofacial bones and teeth.