

Microbiology 412

Research Topics in Immunology

Calendar description Specialized, advanced immunology course - for students interested in immunological research and the latest cutting edge developments in the field. Presentations, paper reviews, discussion. Prerequisites: MICB 302 & MICB 402

Purpose:

This is a specialized, advanced immunology course designed for those students interested in immunological research and the latest cutting edge developments in the field. Both MICB 302 and MICB 402 are prerequisites for this course. It will be of particular interest to students thinking about a graduate research career in immunology. This course is designed to be for a small number of students to maximize student participation, discussion and individual presentations.

Instructor:

Drs P. Johnson and K. Harder

Course Outline:

This course will cover up to date research topics in immunology and the latest major breakthroughs in the field. Because of this, the topics will change from year to year. The research topics will also vary with each professor asking the students to research the latest findings in a particular specialized area of interest. The focus of this fourth year class is for students to learn and teach themselves. They are asked to research a particular topic from the literature and then to present the key findings to the class in the form of a powerpoint presentation. Students also participate in class discussions, summaries and debates. Students learn from each other and work both individually and in groups. There are also lots of opportunities for class discussion and for students to integrate their new knowledge with their foundational immunology knowledge and with work from other disciplines. It is very much a student focused class with emphasis on self-directed learning. Recent topics have included cancer immunotherapy, trained immunity, gut-microbiome interactions, macrophage heterogeneity, chronic inflammatory diseases, lung inflammation, immune responses in pregnancy.

Learning objectives:

At the end of the course, the students will have a current and in-depth understanding of cutting edge immunology research in some areas of Immunology. They will learn to review, critique and evaluate primary scientific literature and to think about key and future areas of immunological research and how today's research findings relate to the improvement of Canada's health and can lead to tomorrow's new therapeutics.

Evaluation:

This will be assessed on an on-going basis through participation in class discussion, asking questions in class and participation in class debates and summaries. Students will be assessed on their ability to research a topic and from their class presentations. Students are required to provide a written summary and perspective on each research topic. There will be no final exam.

Prerequisites: MICB 302 and MICB 402