

Immunology 305gc. Neuro-immunology in development, regeneration and disease – (New Course)

Catalog Number: 98545

Beth Stevens (Medical School) and Clifford Woolf (Medical School)

Quarter course (spring term). Th., 5–7.

It is increasingly clear that the nervous system and immune system share parallel molecular pathways, and communication between neurons and immune cells play significant roles in homeostasis and disease. This course will investigate current topics in neuro-immunology: CNS development, chronic pain, neuro-degeneration, aging, axon regeneration, auto-immunity and infection. We will focus our discussions on molecular mechanisms shared by the immune and nervous systems and the molecular cross-talk between these two systems.

Each class will cover a specific topic in neuro-immunology. Students should be prepared to lead discussions on pre-selected papers for each session.

Lectures:

April 11 - Course Introduction/overview: ‘Neuroimmunology’ Redefined

April 18 - Neural-Immune Interactions in Pain: Clifford Woolf

April 25 - Neuro-immune Mechanisms of Infectious Diseases: Ulrich Von Andrian

May 2 - Inflammation and Axon Regeneration: Larry Benowitz

May 9 - Immune Activation in Amyotrophic Lateral Sclerosis: Mike Carroll/Isaac Chiu

May 16 - Role of Macrophage Lineage Cells in Neurodegenerative Diseases (AD): Joseph El Khoury

May 23 - Autoimmunity in the CNS / Immune Mechanisms of MS: Vijay Kuchroo

May 30 - Neural-Immune Signaling During Brain Wiring/Development: Beth Stevens

Spring 2013

Meeting Dates: Thursdays; April 11, 18, 25; May 2, 9, 16, 23, 30

First Meeting: Thursday, April 11, 2013

Final Meeting: Thursday, May 30, 2013

Location: Jeffrey Modell Immunology Center, Room 258

Class size: 20 students

Course Heads: Beth Stevens, beth.stevens@childrens.harvard.edu, Clifford

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