

**Pathology 575: Frontiers in Pathology**  
**Cellular Homeostasis Research Lecture Series**  
**Spring 2007**

**Class No.:** 046-40865D  
**Units:** 2 units per spring, maximum up to 8 units  
**Day:** Thursday  
**Time:** 12:00 – 1:30 p.m.  
**Location:** McKibben Hall, Room 156

**Course Coordinators:**

Hidekazu Tsukamoto, D.V.M., Ph.D.	Vijay K. Kalra, Ph.D.	Yuan-Ping Han, Ph.D.
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**Course Description:** Weekly research lectures by leading investigators in the field of cellular homeostasis.

**Student Attendance:** The student attendance will be recorded for all seminars (Thursdays, noon - 1:30 p.m.). The last class will be **Thursday, April 26, 2007**. Attendance to a majority of the seminars is required.

**Student Comprehension:** The student will be required to understand the hypothesis, results obtained and interpretation of the findings presented by each lecturer. Pertinent literature will be available on Blackboard (<https://totale.usc.edu>) one week prior to each lecture. Immediately after each lecture, the students will have a separate Q&A discussion session with the speaker to help promote the understanding of the speaker's research from both scientific and philosophical view points. Following the lecture series, the student will prepare a 20-min summary presentation on an assigned lecture topic. This presentation session will take place in the last 4 classes. Student's presentation will be held in MMR 408 (conference room). In addition, the student is required to prepare a term paper on the topic covered by the selected speaker.

**Student Evaluation:** Each student will be evaluated by: 1.) seminar attendance and participation in discussions (10%); 2.) a 20-min summary presentation on the selected paper (40%) and 3.) a term paper assignment (50%).

**Student Presentation:** Each presentation should be 20 min either via PowerPoint or overhead, summarizing: 1.) background; 2.) a central hypothesis; 3.) key findings presented during a lecture; 4.) other studies related to the lecture; and 5.) interpretation and conclusions including YOUR OWN THOUGHTS AND OPINIONS. Each presentation will be followed by a 10 min question/discussion session. If you choose to do a PowerPoint presentation, email the file to Rosy Macias at [rmacias@usc.edu](mailto:rmacias@usc.edu), bring a CD or USB memory stick (no Zips please) to her office (MMR 412) by 11:00 a.m. of assigned Thursday (assigned days will be handed out later in the course).

**Term Paper:** The term paper consists of a discussion on the assigned lecture topic. The paper should be 8-10 pages in length, double-spaced, and with the following four requirements:

- 1.) List and discuss the most critical findings presented in the seminar
- 2.) Discuss how these findings relate to human health and diseases
- 3.) Include references (all authors and full titles)
- 4.) Include half to one page summary of your essay

The term paper is due in Dr. Tsukamoto's office (MMR 414) on or before **Friday, May 4, 2007**.

**Grading:** Letter grading (A-C) will be given based on the above criteria.

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Spring 2007 Schedule

- January 11     Student Orientation
- January 18     Kenneth S. Zaret, Ph.D., Fox Chase  
Cancer Center *Signals that initiate liver and pancreas development*  
(Moderator: Hide Tsukamoto, D.V.M.; Ph.D./Kasper Wang, M.D.)
- January 25     Mani Pashmforoush, M.D., Ph.D., Keck School of Medicine of USC  
*Transcriptional pathways for cardiac arrhythmias*  
(Moderator: Vijay Kalra, PhD)
- February 1     Randal J. Kaufman, Ph.D., University of Michigan Medical Center  
*The unfolded protein response: A decision of life vs. death.*  
(Moderator: Amy Lee, Ph.D.)
- February 8     John F. Engelhardt, Ph.D., University of Iowa, College of Medicine  
*Redox-dependent endosomal signaling by NADPH oxidase toll*  
(Moderator: Ebi Zandi, Ph.D.)
- February 15    Michael Gale Jr.; Ph.D. University of Texas Southwestern Medical Center  
*Triggering and control of innate defenses against hepatitis C virus*  
(Moderator: James Ou, Ph.D.)
- February 22    Suzanne Pfeffer, Ph.D. Stanford University School of Medicine  
*Regulation of receptor trafficking by Rab GTPases*  
(Moderator: Vijay Kalra, Ph.D.)
- March 1        Stephen A. Duncan, D. Phil, Medical College of Wisconsin  
*Control of liver and heart development by GATA4 and GATA6*  
(Moderator: Kasper Wang, M.D.)
- March 8        Vishva M. Dixit, M.D., Genetech  
*The Inflammasome: a dynamic caspase activating apparatus*  
(Moderator: Vijay Kalra, Ph.D.)
- March 15       Spring Break (March 12–17, 2006)
- March 22       Soichi Kojima, Ph.D., Molecular Cell Pathology Research Unit, Japan  
*Detection and prevention of liver diseases by targeting TGF-beta activation reaction  
and transglutaminase-induced hepatic cell death*  
(Moderator: Hide Tsukamoto, Ph.D.)
- March 29       Carl P. Blobel, M.D., Ph.D.  
*ADAMs: key molecules in EGF-receptor signaling and prostate cancer*  
(Moderator: Yuan-Ping Han, Ph.D.)
- April 5, 12, 19 & 26     Student presentations (MMR 408 – conference room)