

**PHCEU 7975 Fall semester 2008**  
**Journal Club – In Vivo Cell-based Therapeutics**

**Scope and theme:** This course will highlight recent progress in bringing cell therapies to clinical use, including review of published work describing in vivo preclinical and clinical trials on cell-based approaches to producing new therapeutic outcomes. Autologous and heterologous cell transformations, genetic manipulations, ex vivo manipulations, stem cell exploitation, and regenerative medicine to produce clinical benefits are all parts of this developing scenario in pharmaceuticals. Application of therapeutically engineered cells in vivo in animal models or human clinical trials is the focus.

**Instructor:** **David Grainger**, Professor of Pharmaceutics; **Shawn Owen**, Pharmaceutics

**Instructor Contact Information:**

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**Lecture Time:** **Mondays, 3-4pm**  
**Location:** **HSEB 4100B**

**Course Materials:**

All course materials will be posted on WebCT and/or assigned in class. These materials primarily comprise the literature to be presented by the assigned speakers, and to be pre-reviewed by all students.

A series of published articles representing the different approaches to using cells for in vivo clinically relevant therapies will be selected, posted on-line in advance, orally presented, reviewed, and critiqued. Students should choose one published article to present and use the article as a basis for their oral presentation and critical review. Supplementary materials can be added to complement the presentation.

**Terminal behavior objectives**

By completing this course, students should be able to:

- understand the potential of new cell-based therapies for human clinical trial use;
- understand the diversity of techniques currently used in vivo to prove utility for cell-based therapies.

Further, students will receive graded practice in:

- oral technical presentation summaries of cell therapy topics
- writing of short, succinct critical technical peer evaluations of class presentations by fellow students

## Assessment and Grading Criteria

All students will make one 25-minute oral technical presentation in class on a peer-reviewed published piece of scientific literature taken from a recognized scientific journal with IMPACT FACTOR >3.0 that discusses an approach to in vivo cell-based therapy. The article must describe preclinical in vivo or clinical trial in vivo data along with a full description of the cell-based therapeutic technique applied. In vitro studies alone are not sufficient. These articles should be selected by the student from the accessible published scientific literature database (e.g., PubMed or SciFinder, etc.). These student-selected articles must be emailed as a .pdf file to the instructor by 4pm on the Friday PRIOR to their class day presentation to be posted on WebCT for class access. Presentations should be made in an electronic presentation format (e.g., Keynote™ or PowerPoint™ or other) and provide (1) review of the paper's content and (2) key points, as well as (3) critical review of the science (strengths and weaknesses).

Students not presenting will write an executive summary of one presentation from each class session. This summary will be a maximum of two pages long (preferably less) and convey the main topic of the presentation, key points made by the presenter about the topic, and then their own critical analysis of the topic's importance to advancement of the cell therapy concept. Students must evaluate each presentation as coming from a hired consultant who represents this concept or service as a necessary value to an evolving clinical therapy. Please assess the topic's importance to in vivo treatment modalities. Each assessment is due at the start of the next class period after the presentation was made.

*A primary criterion for both oral and written assignment is the use of critical evaluation skills (NOT EVERYTHING YOU HEAR OR READ IS TRUE OR CREDIBLE – address this point).*

## Attendance

Students are expected to arrive on time, fully attend and participate in ALL class sessions. Students may miss ONE class session without penalty. Missing more than one class session will result in an incomplete grade. Two tardies (arrival in the classroom after 3pm) to class will count as one absence. Extenuating circumstances should be discussed with the instructor **before** the absence occurs, not post-facto.

## Accommodations for Disabled Students:

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you require such accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for necessary and appropriate accommodations.

All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.