

BMS 655: CANCER BIOLOGY JOURNAL CLUB Fall 2008

Tuesdays 3:00-4:00
GenNYsis Center Rm 217 (2ND floor conference room), East Campus

Coordinators

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Format and Scope

- This class will focus on the molecular and cellular biology of cancer through review of current literature.
- This is a graduate level course, and basic knowledge of cancer biology (etiology, pathology, terminology, research models, techniques, etc) is assumed. Although no textbook will be used for this class, general texts in Cancer Biology will be made available to students with limited prior coursework in this area.
- The basic class format will be presentation and discussion of original research papers, which will be chosen by the instructors. Companion review articles will also be assigned for some sessions.
- Each student will be responsible for at least one assigned presentation during the semester. PDFs of papers will be distributed to students via email at least one week prior to the presentation date. Students are encouraged to meet with the course coordinators to discuss their assigned papers during preparation for their presentations.
- Students are expected to read all assigned papers (including reviews) prior to class each week. In addition, students will be required to bring at least two written questions for each paper to class, as well as for use in preparing presentations.
- All students will be required to complete an evaluation/comment form for every presentation, which will provide anonymous feedback to the speaker.

Grading

- This course is graded on a Satisfactory/Unsatisfactory basis.
- Evaluation will be based on attendance and preparation (20%), participation in class discussions (20%), completion of evaluation forms (20%) and research paper presentations (40%).
- **To pass this course, active participation (in addition to any assigned presentations) is necessary.**

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Date	Topic/Paper (see next page for full citations)	Presenter
Sept 2	No Class (start reading!!)	
<u>Topic 1: p53</u>		
Sept 9	Review: Riley et al, 2008 Paper: Lain et al, 2008	_____
Sept 16	Paper: Qian and Chen, 2008	_____
Sept 23	Review: Eskelinen and Saftig, BBA in press Paper: Tasdemir et al, 2008	_____
Sept 30	No Class, Break	
Oct 7	Review: Kroemer and Pouyssegur 2008 Paper: Kawauchi et al, 2008	_____
Oct 14	No Class, BMS retreat	
<u>Topic 2: Nuclear Receptors</u>		
Oct 21	Review: Nagy and Schwabe 2004 Paper: Pozzi et al, 2007	_____
Oct 28	Paper: Schug et al, 2007	_____
Nov 4	Paper: Cano et al, 2007	_____
Nov 11	Paper: Martinez et al, 2008	_____
<u>Topic 3: Epithelial-Mesenchymal Transition (EMT)</u>		
Nov 18	Review: Levayer and Lecuit, 2008 Paper: Ansieau et al, 2008	_____
Nov 25	Paper: Arima et al, 2008	_____
Dec 2	Paper: Mani et al, 2008	_____

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Topic 1: p53 (Sept 9 - Oct 7)

- Review: Riley et al, *Transcriptional control of human p53-regulated genes*. Nat Rev Mol Cell Bio 9:402-412, 2008
- Lain et al, *Discovery, in vivo activity, and mechanism of action of a small-molecule p53 activator*. Cancer Cell 13:454-463, 2008
- Qian and Chen, *ID1, Inhibitor of Differentiation/DNA binding, is an effector of the p53-dependent DNA damage response pathway*. J Biol Chem 283:22410-22416, 2008
- Review: Eskelinen and Saftig. *Autophagy: a lysosomal degradation pathway with a central role in health and disease*. BBA, article in press
- Tasdemir et al *Regulation of autophagy by cytoplasmic p53*. Nat Cell Biol 10:676- 687, 2008
- Review: Kroemer and Pouyssegur. *Tumor cell metabolism: cancer's Achilles heel*. Cancer Cell 13:472-482, 2008
- Kawauchi et al, *p53 regulates glucose metabolism through an IKK–NF- κ B pathway and inhibits cell transformation*. Nat Cell Biol 10:611-618, 2008

Topic 2: Nuclear Receptors (Oct 21 - Nov 11)

- Review: Nagy and Schwabe 2004 *Mechanism of the nuclear receptor molecular switch*. TIBS 29:317-324, 2004
- Pozzi et al, *Peroxisomal proliferator-activated receptor alpha dependent inhibition of endothelial cell proliferation and tumorigenesis*. J Biol Chem 282:17685-17692, 2007
- Schug et al, *Dual transcriptional activities underlie opposing effects of retinoic acid on cell survival*. Cell 129:723-733, 2007
- Cano et al. *Stromal-epithelial cell interactions and androgen receptor-coregulator recruitment is altered in the tissue microenvironment of prostate cancer*. Cancer Res. 67:511-519, 2007
- Martinez et al. *RNA editing of androgen receptor gene-transcripts in prostate cancer cells*. J Biol Chem. 2008 Aug 14 [Epub ahead of print]

Topic 3: Epithelial Mesenchymal Transition (Nov 18 - Dec 2)

- Review: Levayer and Lecuit. *Breaking down EMT*. Nat Cell Biol 10:757-759, 2008
- Ansieau et al, *Induction of EMT by twist proteins as a collateral effect of tumor-promoting inactivation of premature senescence*. Cancer Cell 14:79-89, 2008
- Arima et al. *Rb depletion results in deregulation of E-cadherin and induction of cellular phenotypic changes that are characteristic of epithelial-to-mesenchymal transition*. Cancer Res 68:5104-5112, 2008
- Mani et al, *The epithelial-mesenchymal transition generates cells with properties of stem cells*. Cell 133:704-715, 2008

Evaluator: _____

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Speaker: _____ Date: _____

PLEASE PROVIDE DETAILED COMMENTS AND SCORE FOR EACH SECTION!!!

Scientific Quality of Presentation:

Background Information: Did the speaker provide enough background so that you could understand the significance, goals and experimental approaches of the paper?

C B- B B+ A- A

Methodology: Was the goal or central question of the paper clearly stated? Did the speaker explain the methodologies so that you could understand how the experiments were done and whether the techniques were appropriate? Did the speaker critically evaluate the techniques? Were alternative approaches suggested by the speaker?

C B- B B+ A- A

Results: Did the speaker clearly/logically explain all figures? Were the results explained in sufficient detail? Was the data summarized into a "take home message"?

C B- B B+ A- A

Interpretation and Conclusions: Did the speaker explain what the data meant and how it addressed the hypotheses/goal of the paper? Did the speaker discuss whether the interpretations/conclusions were justified based on the data?

C B- B B+ A- A

Esthetics and Style:

Preparation & effort, length, quality of slides, flow, summaries, use of pointer, confidence, tone, volume, speed, etc

C B- B B+ A- A

Ability to answer questions:

C B- B B+ A- A

OVERALL RATING:

C B- B B+ A- A