COURSE DESCRIPTION:

Radiobiology Short Course is a series of lectures plus a series of seminars given every other year following the year the Full Radiobiology Course is given. The course begins in mid September with one lecture per month given on 3rd Friday, 7:00 - 8:00 AM in the department’s conference room. Lectures are designed to keep the physician residents, physics residents and medical students engaged in learning the principles and concepts of Radiobiology during the year the Radiation Physics Course is given.

There are no assigned homework problems or review sessions.

Orientation:

Day 1
Meet with the course instructor who will provide an overview of the proposed project and who will provide insight on how the work entailed fits in with both the laboratory goals and the clinical question or topic that it addresses

Mid-way
Meet with Course Instructor to discuss rotation

End of rotation (4 weeks)
A summary will be prepared by the student and presented to the department research focused staff and faculty.

Important phone numbers:

Andrew Vaughan, PhD, Professor (IOR)  734-8726
Jian Jian Li, MD, PhD, Professor       703-5174
Matthew Coleman, PhD, Associate Professor 703-5022
Course Coordinator: Tiffany Fairbanks  734-8252

Locations:

Cancer Center Building
4501 X Street, Ste 0140
Sacramento, CA 95817
OBJECTIVES

- To present aspects of modern Radiation Biology that represents the development of next generation ideas and understanding.
- To present the information in a manner and format that continuously reflects issues relevant to the clinical treatment of disease or complications thereof.
- To provide the framework of possible laboratory based research projects in the laboratories of presenting faculty.

EXPECTATIONS

- Individuals taking the course are expected to be on time and prepared to discuss the presentation during delivery.
- These presentations are not simple didactic treatments of the subject but a time for an engagement and further understanding of processes and basic mechanisms.

Radiobiology Short Course Lecture Schedule

WHEN: Friday once a month, 7:00 - 8:00 AM
PLACE: Radiation Oncology Conference Room

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Topic</th>
<th>Lecturer</th>
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<tbody>
<tr>
<td>1</td>
<td>September 17</td>
<td>Next generation sequencing to capture radiation induced DNA damage</td>
<td>Vaughan</td>
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<tr>
<td>2</td>
<td>October 15</td>
<td>Radiation-induced Signaling Networks-Who Calls First?</td>
<td>Li</td>
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<td>3</td>
<td>November 19</td>
<td>Genomic molecular markers of response to ionizing radiation for biodosimetry</td>
<td>Coleman</td>
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<td>4</td>
<td>December 17</td>
<td>The role of fusion genes in cancer: Not just leukemia anymore</td>
<td>Vaughan</td>
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<td>5</td>
<td>January 21</td>
<td>Cancer Stem Cells in Radiation-mediated Cell Repopulation and Tumor Response</td>
<td>Li</td>
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<td>6</td>
<td>February 18</td>
<td>Using the normal tissue response to understand molecular pathways associated with head and neck cancer</td>
<td>Coleman</td>
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<td>7</td>
<td>March 18</td>
<td>The basis for radiation-induced cancer being a stochastic process revisited</td>
<td>Vaughan</td>
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<td>8</td>
<td>April 15</td>
<td>Mitochondria-Nuclear Cross-Talk in DNA Damage Response</td>
<td>Li</td>
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<td>9</td>
<td>May 20</td>
<td>Is the adaptive response relevant to clinical radiotherapy</td>
<td>Coleman</td>
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PREFERRED TEXT:

METHOD OF INSTRUCTION:
Lecture and classroom discussion.

COURSE POLICIES:
All residents will be expected to attend class and participate in discussions. Punctuality and attendance are required in all components of the course.

Telecommunications Information
Phones: To call within the Medical Center, dial 4+XXXX or 3+XXXX (4-digit extension). To call the Davis Campus, dial 9+1+530+752+XXXX (4-digit extension). To call outside the Medical Center within the Sacramento area, dial 9+the seven-digit number.

Pager: How to page: To call while inside the Medical Center, dial 9+762-XXXX. You will then be asked to enter your numeric message after the tone (your telephone number). To page from outside the Medical Center, dial 762-XXXX.