Course Syllabus - TRBIO 460

Course Number:	TRBIO 460
Course Name:	Molecular Medicine
Quarter:	SP
Year:	2018
Start Date:	03/27/2018
End Date:	06/14/2018
Credits:	3.0
Last Date To Add This Course:	04/10/2018
Last Date To Drop This Course:	04/10/2018
Last Date To Change Grading Option:	04/10/2018
Minimum Class Size:	5

Meeting Days and Times

Day	Start	End	Location	Description
T	1:30 pm	3:00 pm	CA Campus	Seminar Room
T	4:30 pm	6:00 pm	FL Campus	B214
TH	1:30 pm	3:00 pm	CA Campus	Seminar Room
TH	4:30 pm	6:00 pm	FL Campus	B214

Course Managers

Role	Last Name	First Name	Department	Mail Code	Phone	Email	Organization Name (non-TSRI personnel)
Course Director	Modena	Brian	Department of Molecular and Experimental Medicine	MEM-241	(858) 784-8078	bmodena@scripps.edu	
Admin	Berba	Miriam		MM-TOPOL	(858) 784-2048	miriamb@scripps.edu	
TA	Bailey	Tracey	TSRI Graduate Program	3B2	(561) 228-2385	tbailey@scripps.edu	
TA	Onuchic	Paulo	TSRI Graduate Program	TRY-10	(858) 784-8469	ponuchic@scripps.edu	

Course Description

This is an introduction to clinical disease coupled with basic and/or translational research.
The course starts on Tuesday each week with a lecture by a practicing clinician on the pathophysiology and clinical elements of a major human disease affecting society, including therapy and unmet needs. This lecture is matched on Thursday with a lecture by a scientist doing research, both basic laboratory and translational, that is relevant to the disease. The overarching premise of this experience is that all basic laboratory research is ultimately translational if the nature of clinical disease and the challenges to health are understood in the correct context. Thus, essentially everything we do at the bench can contribute advances to the future of medicine, which can in turn further bench research in a reiterative cycle: bedside to bench and bench to bedside.

Background Preparation (Prerequisites)

This course has no special background requirements and can be taken by any graduate student or post-doctoral fellow. It is required to be taken by the NIH KL2 scholars and should be taken by the TL1 students.

Texts and Journal References

Type	Title	Author	Date	ISBN/ISSN
Required	Weekly readings will be assigned by the lecturer.			

Course Learning Outcomes

By the end of this course, students will be able to:
1. Describe the basic aspects of the clinical diseases and therapies for heart, stem cell transplantation, diabetes, kidney, cancer, HIV/AIDS, depression/schizophrenia and Alzheimer's disease.
2. Describe at least three major challenges to clinicians for each of these disease entities that constitute immediate objectives for new basic scientific research and/or translational work.
3. Understand the basic requisites for choosing a translational research project and how these principles relate to the specific clinical disease and its impact on health.
4. Critically read a clinical translational article and evaluate its contribution to the clinical challenges of the disease under study.

Course Requirements and Assignments

Other Information

Expectations and Logistics

Attendance and active participation in the discussions during class is required and considered in the grading.
Presentation of one clinical or basic science/translational paper for Journal Club.

Do matched readings for each disease category, week by week per the lecture schedule, in Harrison's Principles of Internal Medicine.

Attendance Statement

Students are expected to attend all classes. Students who are unable to attend class must seek permission in writing for an excused absence from the course director or teaching assistant. Unapproved absences or late attendance for three or more classes may result in a lower grade or an "incomplete" for the course. If a student has to miss a class, he or she should arrange to get notes from a fellow student and is strongly encouraged to meet with the teaching assistant to obtain the missed material. A final exam will be required for every student and will involve choosing a disease process, identifying the clinical and basic scientific challenges of the chosen disease entity and proposing a translational project to address and/or solve these challenges.

Scientific and Professional Ethics

The work you do in this course must be your own. Feel free to build on, react to, criticize, and analyze the ideas of others but, when you do, make it known whose ideas you are working with. You must explicitly acknowledge when your work builds on someone else's ideas, including ideas of classmates, professors, and authors you read. If you ever have questions about drawing the line between others' work and your own, ask the course professor who will give you clear guidance. Exams must be completed independently. Any collaboration on answers to exams, unless expressly permitted, may result in an automatic failing grade and possible expulsion from the Graduate Program.

Course Grading Statement

The final grade will be determined by the average of the weekly quizzes (50%) and the Final (50%).

Letter Grade Descriptions

Letter Grade	Grade Point	Description	Learning Outcome
A	4.00	Outstanding achievement. Student performance demonstrates full command of the course subject matter and evinces a high level of originality and/or creativity that far surpasses course expectations.	
A-	3.67	Excellent achievement. Student performance demonstrates thorough knowledge of the course subject matter and exceeds course expectations by completing all requirements in a superior manner.	
B+	3.33	Very good work. Student performance demonstrates above-average comprehension of the course subject matter and exceeds course expectations on all tasks as defined in the course syllabus. There is notable insight and originality.	
B	3.00	Satisfactory work. Student performance meets designated course expectations and demonstrates understanding of the course subject matter at an acceptable level.	
B-	2.67	Marginal work. Student performance demonstrates incomplete understanding of course subject matter. There is limited perception and originality.	
C+	2.33	Unsatisfactory work. Student performance demonstrates incomplete and inadequate understanding of course subject matter. There is severely limited or no perception or originality. Course will not count toward degree.	
C	2.00	Unsatisfactory work. Student performance demonstrates incomplete and inadequate understanding of course subject matter. There is severely limited or no perception or originality. Course will not count toward degree.	
P	0.00	Satisfactory work. Student performance demonstrated complete and adequate understanding of course subject matter. Course will count toward degree.	
F	0.00	Unacceptable work/Failure. Student performance is unacceptably low level of knowledge and understanding of course subject matter. Course will not count toward degree. Student may continue in program only with permission of the Dean.	
I	0.00	Incomplete is assigned when work is of passing quality but is incomplete for a pre-approved reason. Once an incomplete grade is assigned, it remains on student's permanent record until a grade is awarded.	
W	0.00	Withdrew from the course with Dean's permission beyond the second week of the term.	

- All courses will be recorded and maintained in the student's permanent academic record; only courses that apply towards the degree will appear on the academic transcript. Non-credit or audited courses will not appear on the transcript.
- 4 core courses taken for a letter grade (pass = A or B for a core course)
- 2 elective courses taken pass/fail (pass = A, B, C for an elective)
- Because students are encouraged to take electives outside their area of expertise, a "C" letter grade is passing.
- Grading will be based on general attendance/participation, student presentations of the classic and contemporary publications, and

Course Schedule

Date	Type	Topic or Lecture Title	Presenter Last Name	Presenter First Name	Presenter Department	Presenter Mail	Presenter Phone	Presenter Email	Organization Name (non-TSRI personnel)
03/27/2018	Case Studies	The challenges to do translational research	Modena	Brian	Department of Molecular and Experimental Medicine	MEM-241	(858) 784-8078	bmodena@scripps.edu	
			Teyton	Luc	Department of Immunology and Microbiology	IMM-23	(858) 784-2728	lteyton@scripps.edu	
03/29/2018	Lecture	Alzheimer's Disease	Aisen	Paul				paisen@usc.edu	
04/03/2018	Lecture	Allergy and asthma	Modena	Brian	Department of Molecular and Experimental Medicine	MEM-241	(858) 784-8078	bmodena@scripps.edu	
04/05/2018	Lecture	Autism Spectrum Disorders Guest Lecturer Alysson Muotri							
04/10/2018	Lecture	Cardiac disease and translational opportunities	Muse	Evan	Department of Molecular Medicine	SGM-300	(858) 784-2162	emuse@scripps.edu	
04/12/2018	Lecture	Metabolism and aging in C. elegans model	Petrascheck	Michael				pscheck@scripps.edu	TSRI
04/17/2018	Journal Club								
04/19/2018	Journal Club								
04/24/2018	Lecture	A contemporary overview of cancer	Vogt	Peter	Department of Molecular Medicine	BCC-239	(858) 784-9728	pkvogt@scripps.edu	
04/26/2018	Case Studies	Vascular Thrombosis and Diseases: Protein C Pathways	Griffin	John	Department of Molecular Medicine	IMM-316	(858) 784-8220	jgriffin@scripps.edu	
05/01/2018	Lecture	Kidney disease and translational opportunities	King	Andrew (Andy)				King.Andrew@scrippshealth.org	Scripps Health
05/03/2018	Lecture	Inflammatory Bowel Disease	Konijeti	Gauree				konijeti.gauree@scrippshealth.org	Scripps Health
05/08/2018	Lecture	Kidney transplantation: transforming clinical practice with molecular biomarkers Guest Lecturer: Sunil Kurian (UCSD)	Kurian	Sunil	Department of Chemistry	MEM-241	(858) 784-7130	smkurian@scripps.edu	
05/10/2018	Journal Club								
05/15/2018	Journal Club	Epigenetics	Gorkin	David				dgorkin@ucsd.edu	UCSD
05/17/2018	Lecture	Insights into retroviral latency through comparative epigenomics	Lamere	Sarah				salamere@ucsd.edu	UCSD
05/22/2018	Lecture	HIV: Is resistance futile?	Torbett	Bruce	Department of Immunology and Microbiology	IMM-115	(858) 784-9123	betorbet@scripps.edu	

05/24/2018	Lecture	The clinical challenges for HIV	Gianella	Sara				gianella@ucsd.edu	UCSD
05/29/2018	No Class								
05/31/2018	Journal Club								
06/05/2018	Lecture	Cancelled	Lazzerini Denchi	Eros	Department of Molecular Medicine	MB-205	(858) 784-7659	edenchi@scripps.edu	
06/07/2018	Journal Club	Cancelled							
06/12/2018	Lecture	Roadmap to cure for chronic hepatitis B and C infections worldwide	Pockros	Paul				pockros.paul@scrippshealth.org	Scripps Translational Science Institute La Jolla
06/14/2018	Lecture	Final Thoughts, Questions and Discussions of Exam	Modena	Brian	Department of Molecular and Experimental Medicine	MEM-241	(858) 784-8078	bmodena@scripps.edu	
06/15/2018	Exam	Final Exam Due							