

Introduction to Regenerative Medicine

Course Syllabus

Honors Course for Undergraduates
IDH3931; 1-2 Credits; 3:00 PM – 4:55 PM
1CRE class #27013 Thursday 8th period
2CRE class #27014 Thursday 8-9th period
Fine Arts Building B Room 103
Fall 2023

Instructors

Katelyn Bruno, Ph.D., FHFSA (katelyn.bruno@medicine.ufl.edu)
Keith March, M.D., Ph.D. (kmarch@ufl.edu)
Dmitry Traktuev, Ph.D. (dtraktuev@ufl.edu)

Office Hours: Please email Dr. Traktuev to schedule a meeting as needed

Course Description

Regenerative medicine creates an opportunity to repair diseased, injured, or congenitally defective tissues and/or organs for patients with conditions that are currently beyond repair. Regenerative medicine uses three approaches: repair, replacement, and rejuvenation. In each class, a faculty member from the UF or an invited speaker from another university will give a lecture on the current state of science and medicine. The presentations will focus on the effect of regenerative medicine on pathology as well as on research conducted by the faculty member (where applicable). Students are to review provided peer-reviewed literature beforehand. Students will have a required weekly written assignment addressing pathological conditions (diseases) using the therapeutic approaches discussed during the lecture to assess their understanding of the material presented.

Course Objectives

Students will gain an initial understanding of a new era of medical innovations represented by stem/progenitor cell-based therapies, gene therapies, and tissue engineering that will be illustrated with fundamental, translational, and clinical studies.

Target Audience

This course is designed to meet the needs of individuals wanting to pursue a career in medicine or biomedical research. This course will provide a foundation for students who wish to enhance their applications for MD or PhD programs in the medical sciences.

Prerequisite Courses

BSC2010 – Integrated Principles of Biology I
BSC2011 – Integrated Principles of Biology II

Learning Resources

Course website is found through University of Florida e-Learning Canvas (<http://elearning.ufl.edu/>). In-person lectures (45-55 minutes) with PowerPoint presentations will be given during the first hour of the class. The calendar of all course events is attached. Research papers for each lecture will be provided and are available throughout the entire time the course is open, from the first day through the end of the course (the day the grades are reported to the Registrar).

Required Materials

There are no required materials for this course.

Course Schedule

CLASS#	TOPIC	SPEAKER
Class#1 08/24/23	Introduction to the course	Keith March Dmitry Traktuev
Class#2 08/31/23	Wounds	Greg Schultz
Class#3 09/07/23	TBD	TDB
Class#4 09/14/23	Scar-Free Regeneration in the Phenomenal African Spiny Mouse	Malcolm Maden
Class#5 09/21/23	TBD	TDB
Class#6 09/28/23	Burns	Joshua Carson
Class#7 10/05/23	Hematopoietic Stem and Progenitor Cells	Ed Scott
Class#8 10/12/23	Intro to CAR T-cells and Adoptive Cellular Therapy for Cancer	John Ligon
Class#9 10/19/23	Cells of the Most Plastic Variety: ESC and iPSC	Ed Scott
Class#10 10/26/23	Adipose Stem Cells and their Secrets	Keith March
Class#11 11/02/23	Exosomes	Mai He
Class#12 11/09/23	Extracellular matrices for regenerative medicine	TDB
Class#13 11/16/23	Vasculogenesis and the Tale of Two Cell Types	Dmitry Traktuev
Class#14 11/30/23	Designing Cells by Gene Therapy	TBD

Evaluation of Grades

Assignment	Total Points	Percent of Grade
Attendance	42 (3 pts/class)*	30.0%
Online Discussions	98 (7 pts/class) *	70.0%
TOTAL	140	100%

* No assignment will be given after the first class

Online Discussion Criteria

The discussion will open at 5:00 PM on the day of the scheduled lecture and close at 11:59 PM the following Tuesday. **Late posts/replies will not be accepted.**

	Point Value
Answer the question posted each week with supporting evidence	3
At least 350 words	1
At least 2 references cited APA style (http://www.citationmachine.net/apa)	1
2 replies that will add (agree or disagree and why) to the initial statement of another student. Minimum 100 words each.	2
TOTAL	7

Grading Policy

A minimum grade of B is required to earn Academic points towards your Honors Completion Requirements. Once you have earned your final grade in this course, please upload the course information and final grade from your Unofficial Transcript into your Honors Canvas Cohort: Honors Completion module to earn Honors Completion credit.

A numerical grade will be given at the end of the course and will be scored as follows:

Percent	Grade	Grade Points
≥ 93.4	A	4.00
≥ 90.0	A-	3.67
≥ 86.7	B+	3.33
≥ 83.4	B	3.00
≥ 80.0	B-	2.67
≥ 76.7	C+	2.33
≥ 73.4	C	2.00
≥ 70.0	C-	1.67
≥ 66.7	D+	1.33
≥ 63.4	D	1.00
≥ 60.0	D-	0.67
< 59.99	E	0.00

Class Attendance and Make-Up Policy

Class attendance is required. Signing for another student is considered cheating. Each unexcused absence will result in a 3-point reduction in the final grade.

Excused absences are consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation 24 hours in advance.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Honors Program contact information:

- Honors Program, 201 Walker Hall, 352-392-1519
- Quick questions for an Honors advisor? Email advisor@honors.ufl.edu
- Need an Honors advising appointment? Schedule via Microsoft Bookings: <https://bit.ly/ufhonorsadvising>

Counseling and Wellness Center

Counseling and Wellness Center

<http://www.counseling.ufl.edu/cwc/Default.aspx>

352-392-1575

University Police Department

352-392-1111

9-1-1 for emergencies.