

Course Syllabus
Human Genetics Journal Club and Peer Review (HUGEN 2028)
Spring Semester 2022
Friday, 1:30-2:25 PM, Zoom, A215

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Course website: Canvas

Course Description

Human genetics journal club provides students and faculty with an opportunity to present and discuss exciting research in an informal format. The purpose of the course is to hone students' oral and written critical evaluation skills.

Goals of the Course

The goal of the one-credit course, Journal Club and Peer Review, is twofold: (1) to practice critiquing papers and information from the media and (2) learn to develop a Curriculum Vitae (CV) and an Individual Development Plan (IDP).

Rationale

The purpose of this course is to provide an environment in which to hone your written and oral critical evaluation skills, practice for the M.S. and Ph.D. qualifying exams in Human Genetics, and prepare documents to help assess your graduate and future careers.

Objectives

- Upon completion, students will be able to
- critique papers from the literature and the media
 - improve presentation skills
 - develop an individualized development plan for their graduate career
 - write and update a curriculum vitae

Teaching Philosophy

This course emphasizes active participation, critical thinking, and continued learning. Because we all know different things and have experienced different events, all questions and viewpoints are encouraged and respected in the classroom and in groups. Everybody should participate - let Zsolt Urban be your role model: ask stupid questions, float crazy ideas, and don't be embarrassed. [Note: There really are no stupid questions, and crazy ideas are the basis of scientific innovation]. You will need critical thinking skills to be successful in your career in science.

Responsibilities and Expectations of Students in the Classroom

- Focus on the presentation and minimize distractions.
- **For the student presentations**, read the abstract, have a copy of the paper at hand, and have thought about it a little. Identify some questions ahead of time.
- Ask questions. If you don't understand what's interesting or important about the paper, ask. If you don't understand the terminology being used in the presentation, ask. **(If you don't ask, Zsolt may ask you to explain.)**
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Responsibilities and expectations for presenters

- Students are encouraged to get advice from a faculty member when choosing a paper to present. The ideal journal club article is something that is of both scientific importance and general interest and uses a variety of human genetic techniques.
- Let the instructor know what your choice is at least a week before your presentation so that the link can be posted on the web site.
- Presentations should begin with an introduction to the general topic area and what is interesting or important about the work being presented. Try to explain key concepts and definitions. Do not assume everyone in the audience is an expert or that everyone in the audience has read the paper.
- Limit your presentation to 30-45 minutes, so that there is sufficient time for questions and discussion. Count about 1 slide/minute.

Course website

All readings and course material will be found on Canvas and/or on the HUGEN Student Journal Club Website (<https://canvas.pitt.edu/courses/137899>).

Textbooks

There is no required textbook for this course.

Class Structure

All classes will start on time (1:30pm).

Before class officially starts at 1:30pm, we MAY spend approximately 5-10 minutes discussing "Genetics in the News".

Next a student will present a research article.

The presentation should be 35-40 minutes to allow 10 minutes for questions by the instructor, faculty, and students throughout the presentation. Count about 1 slide/minute.

The class will assess the presentation(s) and turn in the assessment at the end of class.

Student Performance Evaluation

Curriculum Vitae (CV) – Due March 18 11:59pm

For suggestions about how to build a CV, see the following web site.

<https://publichealth.pitt.edu/careers/job-search-tool-kit/resumes-and-curriculum-vitae/cv>

Individual Development Plan (IDP) – Due March 18 11:59pm

Please use the following website to develop your IDP.

<http://myidp.sciencecareers.org/>

Do NOT upload your IDP (it is a large document). Instead, please tell me what were the top careers that the IDP recommended for you. You should be able to type this information in a box on the assignment site, or upload a docx .

Genetics in the News - Due April 8 at 11:59pm

We will TALK about "Genetics in the News" each week before the presentation. However, the following document containing THREE media items should be submitted.

Please submit a document that contains three "Genetics in the News" items from the media. The dates on each item must be at least one week apart.

For each media item, please include:

1. Title, source, date, synopsis. If you copy the entire (brief) item from the media, please put everything in quotes.
2. Why you chose this item?
3. Who was the audience for this media item (that is, lay public, policy makers, scientists, geneticists, other?) Do you think this media note gives an accurately reflects the underlying science, especially to the target audience? Why or why not? If the target audience was NOT the lay public, is this media item understandable by the lay public?

Grading

Class attendance (1 pt each)	13
Participation and evaluation (1 pt each) + first day class	13
Document containing three "Genetics in the News" items (including a brief comment on each)	3
Curriculum Vita	1
Individualized Development Plan	<u>1</u>
Total	31

<u>Grade</u>	<u>Total Points</u>
A+	31
A	29-30
A-	28
B+	27
B	25-26
B-	24
C+	23
C	21-22
C-	20
F	≤ 19

Accommodation for Students with Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term.

Academic Integrity

All students are expected to adhere to the school's standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health's policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook www.publichealth.pitt.edu/home/academics/academic-requirements. The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

(See <https://www.publichealth.pitt.edu/home/academics/academic-requirements/academic-integrity-and-plagiarism> for specific information on academic integrity.)

Sexual Misconduct, Required Reporting, and Title IX Statement

The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University's Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware:

A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here:

<https://www.diversity.pitt.edu/civil-rights-title-ix/make-report/report-form>

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University's Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:

Title IX Office: 412-648-7860

SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.

Other reporting information is available here: <https://www.diversity.pitt.edu/civil-rights-title-ix-compliance/make-report>

Diversity Statement

Pitt Public Health Diversity Statement | Effective Academic Year 2021-22

The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity and promote social justice. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following: the course director or course instructor;

- the Pitt Public Health Associate Dean responsible for diversity and inclusion;
- the University's Office of Diversity and Inclusion at 412-648-7860 or <https://www.diversity.pitt.edu/civil-rights-title-ix/make-report/report-form> (anonymous reporting form)

Accessibility

Canvas is ADA Compliant and has fully implemented the final accessibility standards for electronic and information technology covered by Section 508 of the Rehabilitation Act Amendments of 1998. Please note that, due to the flexibility provided in this product, it is possible for some material to inadvertently fall outside of these guidelines.

Copyright Notice

Course material may be protected by copyright. United States copyright law, 14 USC section 101, et sec., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See [Library of Congress Copyright Office](#) and the [University Copyright Policy](#).

Statement on Classroom Recording

To ensure the free and open discussion of ideas, students may not independently record breakout room discussions and/or activities without the permission of all participants, and any such recording properly approved in advance can be used solely for the student's own private use.

Library and Writing Center Services

As a University of Pittsburgh student, a wealth of resources for researching your project is available through the Health Sciences Library (www.hsls.pitt.edu) and the school's dedicated librarian (Helena VonVille - <https://www.hsls.pitt.edu/staff/helena-vonville>). In addition, writing assistance is available through the University Writing Center (www.writingcenter.pitt.edu/).

Health and Safety Statement

During this pandemic, it is extremely important that you abide by the [public health regulations](#), the University of Pittsburgh's [health standards and guidelines](#), and [Pitt's Health Rules](#). These rules have been developed to protect the health and safety of all of us. Universal [face covering](#) is required in all classrooms and in every building on campus, without exceptions, regardless of vaccination status. This means you must wear a face covering that properly covers your nose and mouth when you are in the classroom. If you do not comply, you will be asked to leave class. It is your responsibility have the required face covering when entering a university building or classroom. For the most up-to-date information and guidance, please visit coronavirus.pitt.edu and check your Pitt email for updates before each class.

If you are required to isolate or quarantine, become sick, or are unable to come to class, contact me as soon as possible to discuss arrangements.

Agenda- Spring 2022 (Date/Presenter or Topic)

- 14 January •** Introduction + IDP/CV + Presentation Requirements
- 21 January** Anokhi Kashiparekh
Hu et al. (2021) Nat Commun 12: 2186
Atlas of breast cancer infiltrated B-lymphocytes revealed by paired single-cell RNA-sequencing and antigen receptor profiling
- 28 January** Shuwei Liu
Eijsbouts et al. (2021) Nat Genet 53: 1543-1552
Genome-wide analysis of 53,400 people with irritable bowel syndrome highlights shared genetic pathways with mood and anxiety disorders
- 04 February •** Ruyu Shi
Dumitrescu et al. (2020) et al. Brain 143: 2561-2575
Genetic variants and functional pathways associated with resilience to Alzheimer's disease
- 11 February •** No presentation
- 18 February •** Keaton Solo
Najumudeen et al. (2021) Nat Genet 53:16-26
The amino acid transporter SLC7A5 is required for efficient growth of KRAS-mutant colorectal cancer
- 25 February •** Anushe Munir
Neuner et al. (2019) Neuron 101:399-411
Harnessing the genetic complexity to enhance translatability of Alzheimer's disease mouse models: a path toward precision medicine
- 04 March •** Jie Sun
Davar et al. (2021) Science 371:595-602
Fecal microbiota transplant overcomes resistance to anti-PD1 therapy in melanoma patients
- 11 March •** Spring Break
- 18 March •** Jie Sun, Chris Zammerilla, Alyssa Powers
Gualtieri et al. (2021) Nat Commun 12:2028
Activating mutations in BRAF disrupt the hypothalamo-pituitary axis leading to hypopituitarism in mice and humans
- 25 March •** Amanda Koloskee, Jaime Wehr, Asier Bracho
Broly et al. (2022) Am J Hum Genet 109:1-14
THUMP1 bi-allelic variants cause loss of tRNA acetylation and a syndromic neurodevelopmental disorder
- 01 April •** Sandra Deslouches, Jake Kastroll

Moore et al. (2019) Mol Metabol 21:51-67

The impact of exercise on mitochondrial dynamics and the role of Drp1 in exercise performance and training adaptations in skeletal muscle

08 April •

Kimia Golestaneh, Riley Arbuckle, Varbi Mridha

David et al. (2022) Curr Res Transl Med 70:103333

A common TMPRSS2 variant has a protective effect against severe COVID-19

15 April •

Nan Sheng, Priyamvada Guha

van Rheenen et al. (2021) Nat Genet 53:1636-1648

Common and rare variant association analyses in amyotrophic lateral sclerosis identify 15 risk loci with distinct genetic architectures and neuron-specific biology

23 April •

Caroline Ward, Charlie Nelson

TBA