

**Course Syllabus**  
**Human Genetics Journal Club and Peer Review (HUGEN 2028)**  
**Spring Semester 2023**  
**Friday, 2:00-2:50 PM, Zoom, A215**

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Office hours: By appointment  
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 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.
- You are welcome to make the presentation interactive by asking questions from the audience.
- 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 (2:00pm).

Before class officially starts at 2:00pm, we MAY spend approximately 5-10 minutes discussing "Genetics in the News".

Next a student will present a research article.

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 17 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 17 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 7 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)	14
Participation and evaluation (1 pt each)	13
Document containing three "Genetics in the News" items (including a brief comment on each)	3
Curriculum Vitae	1
Individualized Development Plan	<u>1</u>
Total	32

<u>Grade</u>	<u>Total Points</u>
A+	32
A	29-31
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](http://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.

## **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)

## **Copyright Notice**

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## **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](http://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/](http://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](https://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 2023 (Date/Presenter, Paper)**

- January 13** Introduction + IDP/CV + Presentation Requirements
- January 20** Zsolt Urban  
Zhang et al. (2022) Cell Mol Life Sci 79:314  
Fibrillin-1 regulated miR-122 has a critical role in thoracic aortic aneurysm formation.
- January 27** Aditya Sriram  
Wang et al. (2022) Sci Rep 12:15425  
Network-based integration of multi-omics data for clinical outcome prediction in neuroblastoma.
- February 3** Megan Perez  
Løkhammer et al. (2022) Transl Psychiatry 12:177  
An epigenetic association analysis of childhood trauma in psychosis reveals possible overlap with methylation changes associated with PTSD.
- February 10** Tabitha Banks-Tibbs  
Alissafi et al. (2020) Cell Metab 32:591-604  
Mitochondrial oxidative damage underlies regulatory T cell defects in autoimmunity.
- February 17** Genet Assefa  
Nguyen et al. (2021) Viruses 13:1850  
Efficient inhibition of HIV using CRISPR/Cas13d nuclease system.
- February 24** Madison Thomas  
Richardson et al. (2022) Nat Commun 13:2337  
Childhood body size directly increases type 1 diabetes risk based on a lifecourse Mendelian randomization approach.
- March 3** Libby Childs, FNU Lavnish  
Zhuang et al. (2022) Int J Mol Sci 23:9582  
Histone deacetylases cooperate with NF- $\kappa$ B to support the immediate migratory response after zebrafish pronephros injury.
- March 10** Spring Break
- March 17** Rania Elbakri, Gayatri Dholakia  
Pillalamarri et al. (2023) HGG Adv 4:100147  
Whole exome sequencing in 415,422 individuals identifies rare variants associated with mitochondrial DNA copy number.

- March 24** Sandy Rubio, Souvik Ghosh  
Chang et al. (2022) Sci Rep 12:11697  
Implementation intentions to express gratitude increase daily time co-present with an intimate partner, and moderate effects of variation in CD38
- March 31** Niki Talebian, Urekha Karri  
Wang et al. (2023) Am J Hum Genet 110:1-13  
Enhancer variants on chromosome 2p14 regulating SPRED2 and ACTR2 act as a signal amplifier to protect against rheumatoid arthritis.
- April 7** Elise Jacobson  
Cehajic-Kapetanovic et al. (2022) Proc Natl Acad Sci USA 119: e2208707119  
Impaired glutamylation of RPGR<sup>ORF15</sup> underlies the cone-dominated phenotype associated with truncating distal ORF15 variants.
- April 14** Snehal Patil  
Arribas-Carreira et al. (2023) Hum Mol Genet 32:917-933  
Pathogenic variants in GCSH encoding the moonlighting H-protein cause combined nonketotic hyperglycinemia and lipoate deficiency.
- April 21** Jagruti Kosaraju  
Chen et al. (2022) J Clin Invest 132:e159806  
*GIGYF1* disruption associates with autism and impaired IGF-1R signaling.