**DePaul University**
**Institutional Biosafety Committee**
**Draft Meeting minutes**
**December 9, 2025**
**Location:**
**https://depaul.zoom.us/j/91376016810?pwd=xhCuNfs1vLAzJmO3qJ6s3acsNBtydM.1**

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|---|---|---|---|
| **Members Present** | Justin Maresh (Chair) | David George (Vice-Chair) | Janine Kirin |
| | Katie Abma | Nicolette Zielinski-Mozny | Jingjing Kipp |
| | Rima Barkauskas | | |
| | | | |
| **Members Absent** | Brian Henson (alternate to Kathleen Abma) | Jeremie Fant | |
| | | | |
| **Ex-Officio Advisors** | Daniela Stan Raicu* | Lauren Miller* | Melodie Fox |
| | Anna Bernadska | | |
| | | | |
| **Visitors** | | | |

*Indicates not present

The December 9, 2025 meeting of the DePaul IBC for the 2025-2026 academic year began at 1:14 p.m. with a quorum present.

## I. Announcements

a. Upcoming Educational Opportunities: none
b. Upcoming IBC Meetings:
    i. Doodle polls have been sent out for January, February and March 2026. The January doodle will be revised to accommodate an early January meeting.
c. General Announcements:
    i. 3 members noted that they needed to leave the meeting by 2pm.

## II. Review of Draft Meeting Minutes

a. The committee members received a copy of the draft November 4, 2025 minutes prior to the meeting. No revisions were noted. The minutes will be sent to the Chair for signature, which will indicate final approval and then posted on the DePaul University website.

**III. List of Meeting Minutes Approved by Chair Signature**

a. October 7, 2025 minutes were signed by Chair on November 24, 2025

**IV. New Business, Policy Discussion, and Other Discussion Items**

a. IBC Policy Review - Research and Teaching Activities Involving Biohazardous Agents and Requiring Institutional Biosafety Committee (IBC) Review

**V. Continuing Education Materials and Discussion**

a. Continuing review of the IBC Policy and Procedure Manual

**VI. Current Protocol Submissions for Review**

a. Renewals: none

*b.* Amendments: none

*c.* New Protocols that the IBC requested modifications to be brought to the full board: none

*d.* New Protocols for Initial Review:

i. Research Protocols

a. Protocol #:2025-1796
Title: Functional Analysis of Plant Developmental Timing Genes in Arabidopsis
PI Name: Zhao, Jainfei
Biohazardous Agent(s): Disarmed *Agrobacterium tumefaciens*, Plasmids (CRISPR/Cas9, pNapin-GFP), *Escherichia coli K-12 (lab strain) E.coli*, *Arabidopsis thaliana*
Proposed NIH category: III-D-5, III-D-2
Proposed Risk Group: 1
Proposed BSL: 1
Primary Reviewers: Justin Maresh and Jingjing Kipp

**Protocol Summary:** The plant, Arabidopsis thaliana, goes through different life stages, starting as a juvenile and then becoming an adult. This is called the vegetative phase change, and it is important because it affects how the plant grows and responds to its environment.
This transition is mainly controlled by a group of molecules called microRNAs (miR156 and miR157) and a set of genes called SPL genes. The microRNAs controls plant growth, keeping the plant in the juvenile stage by blocking SPL genes. When the control is relaxed, SPL genes turn on, and the plant moves to the adult stage.
In this study, researchers want to look at what each SPL gene actually does. They will use CRISPR/Cas9, a gene-editing tool, to tweak or remove specific SPL genes. By doing this, they hope to understand how these genes and microRNAs work together to control the plant's

development and how this system helps plants adapt to their environment.

**Discussion:**

At the December 9, 2025 meeting, the IBC discussed the following issues:

- The committee discussed the inconsistencies in the room listings between the table and descriptions. Clarification is needed.
- The biohazardous agents table was correctly categorized as NIH Categories III-D-2 and III-D-5; BSL 1; RG1
- There was some confusion about where the plants would be grown - in incubators or in a shared space in the Green House. This needs to be clarified. If the work is being done in a shared space, then the recommended signage for BSL 1-P needs to be addressed. Incubators should also include signage.
- The room numbers for the Green House in McGowan North need to be added.
- The PI indicated that a Biological Safety Cabinet will be used in McGowan North 234, but this room is not listed in the table.
- The Principal Investigator has the recommended Biosafety CITI training.
- The Principal Investigator has completed the CITI Shipping and Transporting Training.
- The IBC has received the signed Training and Guidance for Receipt of Biohazardous Materials.

**IBC Determinations:**

- The agent(s) meets the criteria for Risk Group (RG) 1.
- This protocol requires biosafety containment level 1 procedures under the *NIH Guidelines* or the *BMBL* for the biohazardous agent being utilized.
- This protocol continues to fall under NIH Category(ies) III-D-2 and III-D-5
- Modifications requested to be reviewed by the Full Committee.

A motion was made and seconded to request modifications for protocol #2025-1796. The vote was as follows:

| Motion: Modifications to be required to be reviewed by the full board | For: 5 | Against: 0 | Abstain: 0 | Recused: 0 | Total: 5 |
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ii. Teaching Protocols

a. Protocol #: 2025-1788
Title: Bio 202 Human Physiology Teaching Activities
PI Name: Rima Barkauskas
Proposed Biohazardous Agent: Sheep Red Blood Cells
Proposed NIH Category: n/a
Proposed Risk Group: 1
Proposed BSL: 1
Primary Reviewers: Jingjing Kipp and Katie Abma

**Protocol Summary:** The labs in Bio 202 will use sheep red blood cells to teach students how to properly view microscopic samples, make detailed observations of red blood cell counts and hematocrits from non-biohazardous sheep red blood cell samples ordered from a vendor (e.g., Colorado Serum Company) as well as pre-made red blood cell slides bought from a vendor (e.g., Carolina).

**Discussion:**

At the December 9, 2025 meeting, the IBC discussed the following issues:

- The committee discussed that the protocol involves ordering sheep blood from Colorado Serum Company for students to perform centrifugation, measure hematocrit, and examine blood cells.
- It was noted that the company is reliable and has been used for a long time.
- There were inconsistencies in how the blood is described and handled. The SDS states it's non-hazardous but spill and clean up procedures treat it as a biohazard (e.g. bleaching, biohazard disposal). The committee wasn't sure if the PI was being overly cautious or if there were undisclosed microorganisms.
- It was also noted that noted that the protocol incorrectly states no human blood will be used when pre-made human blood slides are used.
- The PI was contacted to clarify the above inconsistencies. They confirmed that the blood is non-hazardous but would keep the spill and clean up procedures due to an abundance of caution.
- The PI also confirmed that there were no additional microorganisms being used and the total amount of blood to be discarded was <5mL.
- The PI has CITI Biosafety training on file.

**IBC Determinations:**

- The agent(s) meets the criteria for Risk Group (RG) 1.
- This protocol requires biosafety containment level 1 procedures under the *NIH Guidelines* or the *BMBL* for the biohazardous agent being utilized.

- Modifications requested to be reviewed by the primary reviewers.

  A motion was made and seconded to request modifications for the protocol. The vote was as follows:

| Motion: Modifications to be required to be reviewed by the primary reviewers | For: 6 | Against: 0 | Abstain: 0 | Recused: 1 | Total: 7 |
|---|---|---|---|---|---|

a. Protocol #: 2025-1795
   Title: Bio 220 – Biotechnology Labs
   PI Name: Zhao, Jainfei
   Proposed Biohazardous Agents: *E. coli,* DNA, RNA
   Proposed NIH category: III-F-1, III-F-8
   Proposed Risk Group: 1
   Proposed BSL: 1
   Primary Reviewers: David George and Justin Maresh

   **Protocol Summary:** The labs in Bio 220 will address the following:
   - The goal of the first lab is to introduce students to DNA fingerprinting and restriction enzyme analysis. Students will perform gel electrophoresis and the restriction enzyme digestion of DNA, followed by visualization through non-toxic dye staining and UV illumination.
   - The goal of the second lab is to introduce students to bacterial genetic transformation using the pGLO plasmid containing the green fluorescent protein (GFP) gene. Students will ligate the pGLO plasmid into Escherichia coli (HB101 K-12 strain, nonpathogenic) cells through the calcium-chloride heat shock transformation method. After transformation, students will visualize the results through blue-white screening of E. coli colonies and observe GFP expression.
   - The third lab teaches students how to use the polymerase chain reaction (PCR) and gel electrophoresis to amplify and detect specific DNA fragments in the context of simulated crime scene investigation. Students will perform PCR amplification of DNA samples and use gel electrophoresis to identify DNA matches

between suspects and crime scene evidence (note: no human DNA will be involved).
- The goal of the fourth lab is to teach students how to isolate genomic DNA from foodstuffs (such as corn chips), perform PCR amplification to detect genetically modified (GM) sequences, and use gel electrophoresis to determine whether the food product contains genetically modified organisms. Students will use a nontoxic DNA dye to stain the DNA for visualization after gel electrophoresis.
- The fifth lab will introduce students to CRISPR-Cas9 gene editing technology by having them disrupt the lacZ gene in E. coli HB101-pBRKan (nonpathogenic, genetically modified strain). Students will transform bacteria with plasmids expressing the Cas9 nuclease, single guide RNA (sgRNA), and donor template DNA. Students will perform gene editing and visualize results through blue-white screening, where successfully edited colonies remain white instead of blue. Students will extract genomic DNA from bacterial colonies, perform multiplex PCR to detect wild-type or edited lacZ genes, and visualize PCR products through gel electrophoresis.
- The goal of the sixth lab is to introduce students to immunology and antigen-antibody interactions through ELISA. Students detect antigens in simulated samples using chicken gamma-globulin as a model antigen or detect antibodies in simulated patient serum. The assay employs HRP-conjugated secondary antibodies and TMB substrate, producing a blue color change for positive results.
- The goal of the seventh lab is to introduce students to genomics, bioinformatics, and microbial identification through analysis of human microbiome DNA sequences.
- The goal of the eighth lab is to introduce students to proteomics, protein purification, and protein structure analysis. Students will learn techniques for protein separation and identification, including methods such as protein extraction from biological samples, separation by chromatography or electrophoresis techniques, and analysis of protein composition.

**Discussion:**

At the December 9, 2025 meeting, the IBC discussed the following issues:

- The committee found the biohazardous agents table too vague. Items were simply listed as "DNA" and "RNA" without specifying which kit they came from.

- The attached lab manuals were very long and there were no references to which parts of the manual would apply to the various labs.
- The Lab 4 description mentions a food stuff lab, but the attached Lab 4 manual is called "Secrets of the Rainforest."
- The Locations of Teaching Activities requests a new line for each location, but the protocol has all the rooms listed together.
- Additionally, one of the rooms listed is an office.
- The protocol seemed hastily put together to get it reviewed by the December IBC meeting as the lab starts in Winter Quarter.
- The committee agreed that the protocol was very generic and since the PI is new faculty, it would be a good idea that the Chair have a meeting with the PI to go over the expectations of the committee and the issues with their submission.
- An email will be sent to the PI, copying them into the Chair requesting a meeting to review the protocol.
- The PI has CITI Biosafety training on file.

**IBC Determinations:**

- The committee determined that the protocol was too vague for review and requested that the Chair and PI meet to discuss the expectations and recommendations of the IBC.
- An early January IBC meeting would be scheduled so as not to delay the lab. The PI may have to rearrange the labs to delay the ones that fall under IBC purview.
- Protocol deferral was requested to be reviewed by the full board at the January meeting.

A motion was made and seconded to request deferral for the protocol. The vote was as follows:

| Motion: Protocol deferral | For: 7 | Against: 0 | Abstain: 0 | Recused: 0 | Total: 7 |
|---|---|---|---|---|---|

**David George and Jingjing Kipp left the meeting at 2:09 p.m.**

**VII. Notification of Approval Actions for Protocols Submissions in which the IBC Requested Modifications:**

1. Protocol #: 2025-1743
   Title: "Isolation of Plasmid DNA from E. coli for CHE 341"

PI Name: Justin Maresh
Agent(s) Used: Plasmid pBR322, *Escherichia coli* strain JM109 (E. coli K-12 derivative, non-enterotoxin producing strain), Ethidium bromide
NIH category: III-F-8
Risk Group: 1
BSL: 2
Approval Date: November 18, 2025
Type of Submission: Initial Teaching
Summary of Submission: The goal of this two-week lab is for students to learn how to isolate and purify plasmid DNA from E. coli, use restriction enzymes to digest the DNA, and visualize DNA fragments on an agarose gel.

2. Protocol #: 2025- 1756
Title: "Bio 192: General Biology II for Majors Winter and Spring Quarter and HON 225 Urban Ecology"
PI Name: Rick Hudson
Agent(s) Used: Norway (*Acer platanoides*) and silver *(acer saccharinum*) maple leaves, Chicago River water, *Sordaria fimicola*, *Rhizopus stolonifer*, *Agaricus*
NIH Category: n/a
Risk Group: 1 / 2
BSL: 1
Approval Date: December 1, 2025
Type of Submission: Initial Teaching
Summary of Submission: Students will investigate the impact of microbial colonization on the consumption of leaves by aquatic invertebrates. Fallen maple leaves will be collected from the DePaul quadrangle and Oz Park or residential areas in North Chicago in the autumn. These leaves will be stored in a freezer until 3 weeks prior to the lab. At this time, water from the Chicago River at the Clark Park boat launch will be collected and a sample of the maple leaves will be soaked in this water. A second set of leaves will be soaked in distilled water. Small squares will be cut from the leaves and exposed to live amphipods obtained from Carolina Biological Supply Company. The leaves and amphipods will be incubated for 2 days, after which time the leaves will be sealed in plastic bags for students to examine at the next lab session. Later, students will prepare wet mount slides of live fungal samples.

3. Protocol #: IBC-2025-1726
Title: PFAS Analysis from animal tissue samples and fluids
PI Name: Justin Maresh
Type of Biohazardous Agent: ): Perfluorooctanesulfonic acid (PFOS), Tissue Samples from Rats
NIH category: n/a
Risk Group: 1/2
BSL:1
Approval Date: December 2, 2025
Type of Submission: Initial
Summary of Submission: Concentrations of perfluorooctanesulfonic acid (PFOS) will be assessed in samples of rat tissues and fluids received from the lab of Dr. Margaret Bell of the DePaul University Department of Biology in support of that lab's research. The central hypothesis under investigation proposes that early life exposure to per- and polyfluoroalkyl substances (PFAS) alters brain and metabolic processes in adolescence, which may be revealed in the context of a 'Western' high -sugar and -fat diet. The results of this study will shed light on how converging environmental challenges may predispose our modern societies to metabolic syndrome, a constellation of symptoms related to dysregulation of sugars, lipids, and inflammation throughout the body.

## VIII. Notification of Approval Actions Conducted Under Designated Member Review

a. Renewals

a. Protocol #: 2024-1439
Title: BIO 220 Principles of Biotechnology Labs
PI Name: Joanna Brooke
Type of Biohazardous Agent: *Escherichia coli (E.coli), Pseudomonas fluorescens (P.fluorescens), Bacillus subtilis,* Plasmid DNA, *Staphylococcus epidermidis (S. epidermidis), Bacillus megaterium (B. megaterium), Escherichia coli B (E. coli B),* Phage T4r, Phage phiX174, Phage T4, *Escherichia coli DH5alpha (pQE70), E. coli (pQE70), Escherichia coli C (E. coli C), Escherichia coli K-12 (E. coli K12),* Coliphage T4 (phage T4), Coliphage T2R+, *Escherichia coli (pQE60) (E. coli (pQE60)), Escherichia coli (pGEX-4T-2) (E. coli (pGEX-4T-2)), Escherichia coli (pET30a) (E. coli (pET30a)), Saccharomyces cerevisiae (S. cerevisiae),* Soil samples

NIH category: III-F-8
Risk Group: 1/2
BSL: 1
Approval Date: December 2, 2025
Type of Submission: Renewal
Summary of Submission: The goal of the first lab is to introduce the students to biosafety in the laboratory. Students will also observe the E. coli, its morphology and motility, be introduced to proper use of the microcentrifuge and correct handling of pipettors. Students will also set up a multiweek experiment to study the ability of lactic acid bacteria to ferment cabbage during the production of sauerkraut. In the subsequent labs, students will use a commercial kit to isolate plasmid DNA, use restriction enzymes to digest the plasmid DNA and observe the products using gel electrophoresis. Students will use PCR to clone a portion of their isolated plasmid and observe the product using gel electrophoresis and use column chromatography to separate proteins in a mixture. In another multiple week lab activity, students will use test the antimicrobial activity of spices, attempt to isolate a lipase-producing bacteria from soil samples, test known bacterial strains for their ability to degrade oil samples, use PCR to analyze a mock crime scene, test whether phage-antibiotic combinations are effective against test bacteria, and use the ELISA method to trace the spread of a disease.

b. Amendments

Protocol #: 2023-1172
Title: Characterization of K14TRT (mouse mammary) cell line deficient in Claudin-7 as a model for EMT transitions
PI Name: Stephanie Dance-Barnes
Type of Biohazardous Agent: K14TRT mouse mammary cell line, MDA-MB-231 human breast cancer cells
NIH category: n/a
Risk Group: 1 / 2
BSL: 1 / 2
Approval Date: December 1, 2025
Summary of Submission: The amendment includes the addition of room McGowan North 107 to take pictures of cells on the phase contrast microscope.

**IX. Notification of Approval Actions Conducted Under Administrative Review: none**

**X. Notification of Protocols Confirmed at Exempt via Chair Confirmation: none**

**XI. Notification of Protocols that Have Been Terminated or Suspended: none**

**XII. Notification of Protocols that Have Been Administratively Closed: none**

a. The meeting ended at 2:15 p.m. Three IBC members needed to leave early, and quorum was lost before all items could be discussed. The Research and Teaching Activities Involving Biohazardous Agents and Requiring Institutional Biosafety Committee (IBC) Review and review of the IBC Policy and Procedure Manual were tabled for the next meeting

Submitted respectfully by,

Anna Bernadska
Director of Research Compliance
Office of Research Services

Approved by IBC Chair Signature:

Justin J Maresh

Digitally signed by Justin J Maresh
Date: 2026.01.14 15:37:26 -06'00'

Justin Maresh, Ph.D. Date: 1/9/2026
IBC Chair