EmpowerSci Detroit



Our mission statement

EmpowerSci Detroit is a graduate student organization that aims to enhance STEM engagement in Detroit Public High Schools by providing hands-on learning experiences and an after-school program. Our mission is to facilitate interactive lab sessions and lectures that complement the science curriculum. In our program, we strive to bridge the gap between in-school and out-of-school learning by providing students with the opportunity to build their scientific skills and knowledge with the support of scientific mentors.

Our goal is to provide graduate students with more teaching opportunities and to increase youth engagement in science. We achieve this by allowing students to participate in science in ways they may have never done previously. We strive for students to develop a better understanding of science and a greater appreciation for the types of questions science can answer. In doing so, students will be able to walk away from our program as better citizens, better voters, better caretakers, etc. by having a greater understanding of science and the impact it has on our lives.

How and why, we started this organization

- There are no formally recognized graduate student run and graduate student-oriented organizations within WSU SOM that get research scientists volunteering and out in the community.
- To foster trust in science, we as scientists must engage in the community and teach.
- To break stigmas, myths, and misconceptions it is critical we communicate our current understanding of science and medicine to the public.
- Provide graduate students with teaching opportunities.
- Increase exposure to...
 - STEM careers.
 - · How research is conducted.
 - How science impacts our daily lives.



Short term goals

- Develop relationships with high schools in the local area.
 - We will continue connecting with teachers in DPS.
- Increase graduate student engagement.
 - We will be recruiting graduate students the summer and fall semesters.
 - We will do this by actively participating and recruiting at new student orientation,
 have a table at FestiFall, and at introduction to student organization at WSU SOM.
- Field trip
 - · Show high school students what it is like as a research scientist for a day.



Long term goals

- Biomed Discovery Day
 - We would like to start a day similar to "future docs day" where students can come
 to Wayne State and participate in various experiments/activites within multiple
 disciplines of biomedical and STEM research.
- After school program
 - A long-term goal of EmpowerSci Detroit is to develop an after-school program at high schools to assist in homework, lessons, exam studying, etc.
 - We would also provide students with food and a relaxed working environment.
 - Recruit faculty to provide a talk to high school students. This will provide students with more in-depth knowledge on what a career in science is like.



Executive board members and faculty advisor



Executive board

Co-president Kailee Hartway Co-president Michael Flynn Vice president Jenna Thibodeau Treasurer Shane Kowaleski







Co-president Kailee Hartway



Kailee Hartway is a first year Ph.D. student in the Department of Pathology. She obtained her B.S. in Human Biology from Michigan State University in 2023. She is working in the Henry Ford Pancreatic Cancer Center with Dr. Nina Steele. Her research examines the role of rare T cells in pancreatic cancer liver metastasis with the goal to understand how and why certain patients experience disease recurrence and ultimately metastasis. When Kailee is not in the lab, she enjoys going to the gym and watching lions and red wings games!

Contact: Kailee.Hartway@med.wayne.edu

Co-president Michael Flynn



Michael Flynn is a first year PhD student in pharmacology. He obtained his B.S. in Biochemistry and Molecular Biology at Michigan State University in 2021. He currently conducts research in Dr. Karin List's Lab. His research focuses on how certain proteins work to repair tissue in the eye after injury. When Michael is not in the lab, he enjoys rock climbing and watching movies with his cat.

Contact: mflynn@wayne.edu

Vice president Jenna Thibodeau



Jenna Thibodeau is a first year PhD student in Cancer Biology. She obtained her B.S. in Biochemistry and Molecular Biology from Michigan State University in 2023. Her lab focuses primarily on leukemia and its associated risk factors. Her research is identifying how and why certain leukemias respond or don't respond to treatment. The goal is to develop new and more direct forms of treatment to improve patient outcomes. She aspires to one day work in academia and is excited to work with everyone!

Contact: gw4062@wayne.edu

Treasurer Shane Kowaleski



Shane Kowaleski is a first year Ph.D. student in the Department of Pharmacology. He obtained is B.S. in Biology at the University of Detroit Mercy in 2023. He is a member of the Bembenek lab, which has primarily been focused on the trafficking of vesicles necessary for permeability barrier formation in the C. elegans embryo. His research involves investigating the role of cell cycle regulatory proteins in modulating membrane traffic during meiosis, with the goal of gaining better understanding on the potential causes of female infertility. When not in the lab, he enjoys watching Tigers games and perfecting his golf swing (long road ahead here).

Contact: gx9828@wayne.edu

Faculty Advisor Dr. Howard Crawford



- Dr. Howard Crawford is the scientific director of the Henry Ford Pancreatic Cancer Center.
- Faculty member of the pharmacology and oncology departments at Wayne State University School of Medicine.
- Throughout Dr. Crawford's career, he has been committed to outreach and community engagement.
- He has advised student organizations during his time at University of Texas Southwestern Medical Center, Vanderbilt, University of Michigan.

Contact: hcrawfo1@HFHS.org

Membership and roles



Membership

- Any person officially matriculated at WSUSOM/WSUGS who is in good academic standing as defined by the graduate school is entitled to membership.
- All members are interviewed by two executive board members before they are allowed to volunteer with EmpowerSci Detroit.
- A school leader is chosen by the executive board. To qualify for this position, one must be in good academic standing as defined by the Graduate School.
 - If there will be a vacancy in the next academic semester, current volunteer members will have the opportunity to request to be a school leader. The executive board will appoint a volunteer interested to fill the vacancy. If no volunteers are willing, the executive board will appoint 1 or 2 volunteers to serve as interim school leaders until a permanent option is found.
- **Executive board:** The executive board will be elected by all members of the organization.
 - With exception of the first year.



President

- Meet yearly with GSS.
- Serve as volunteer or leader of at least one school.
- Liaison to administration.
- Represent EmpowerSci at official functions.
- Coordinate duties and plan experiments.
- Obtain funding with treasurer.
- Faculty agreements.



Vice president

- Overtake roles of president or treasurer in case of absence.
- Facilitate meetings and check-ins with school leaders.
- Distribute lesson plans/ make sure school leaders are prepared before going into school.
- Attend meetings with president(s).
- Work with school leaders to assign volunteers.



Treasurer

- Maintain funding and purchase proper supplies.
- Maintain signing authority on all related accounts.
- Filing of financial reports on behalf of EmpowerSci Detroit.
- Maintain record-keeping of protocols for experiments and inventory of supplies.



School Leaders

- Obtaining volunteers for planned activities.
- Smoothly running in-person lesson and activity.
- Report and present updates to executive board 3x per year.
- Work cosely with VP.
- Distribution of lesson plans to volunteers as well as teachers.
- Organize a "practice" run through of activity with selected volunteers.



Volunteers

- Aid in running the experiments in the classroom.
- Report to school leaders.
- Aid in after-school programs.
- Aid in events planned by EmpowerSci Detroit.

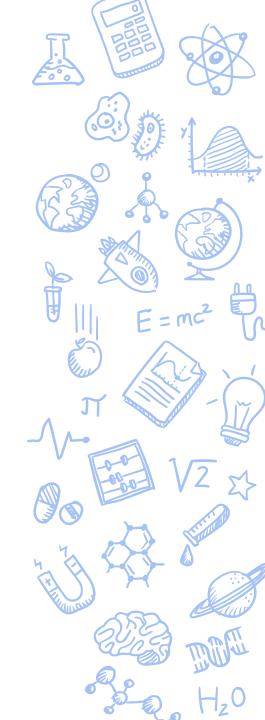


General rules in which EmpowerSci operates



In-school procedures

- Dress Code for days in the school: jeans with no holes and a Wayne State shirt.
- Plan to arrive at the school 15–30 minutes before to check-in with the school/teacher and to set up.
- Leaders will distribute lesson plans to the volunteers. They should plan to meet (either via zoom or in person) at a minimum 24 hours before going into the schools.
 - Lesson plans will include a copy of the PowerPoint, step-by-step instructions on the experiment/activity, and a copy of the student assignment/exit ticket questions.
 - Equally divide and distribute the lecture portions.



Attendance and meetings

- Volunteers and school leaders may miss a maximum of 4 sessions in the classroom per academic year.
- We will hold three group meetings per academic year. One during the fall semester, one
 during the spring semester, and one randomly throughout the year. These meetings will
 serve as a way for the executive board to update EmpowerSci Detroit and as a way for
 EmpowerSci Detroit to provide the executive board with feedback.
- Reasons for special meetings are impeachment, voting, and emergency situations.
 - Emergency situations are defined as an emergency is an urgent, unexpected, and usually dangerous situation that poses an immediate risk to health, life, property, or environment and requires immediate action.



Termination of membership

- Excessive absences and failure to attend meetings.
- Lack of professionalism in classrooms.
- Any displacements based on race, age, gender will lead to immediate termination.
- Any non-professional remarks on students and/or teachers will lead to termination.
- Any misconduct according to Wayne State University Student Code of Conduct (see code of conduct section). Based on President's and board discretion.
- You are notified of termination by the vice president.
- You can be reinstated by appealing termination with the executive board.



Section 7: Reporting of Inappropriate Behavior

Purpose: EmpowerSci Detroit is committed to providing a safe and respectful environment for all participants, including students, volunteers, and staff. In line with this commitment, this section outlines the procedures for reporting inappropriate behavior observed or experienced during activities organized or facilitated by EmpowerSci Detroit.

Inappropriate behavior includes, but is not limited to harassment, discrimination, bullying, intimidation, verbal or physical abuse, misconduct, or any actions that compromise the safety or well-being of students or other participants.

Reporting Procedures:

- a. Any member who witnesses or experiences inappropriate behavior as described in this section during EmpowerSci Detroit activities is encouraged to report it promptly to the executive board. If the accused individual is an executive board member, the person reporting
- shall report this behavior to the faculty advisor.
- b. The executive board shall be responsible for receiving and documenting reports of inappropriate behavior.
- c. Reports should include detailed information regarding the incident, including date, time, location, individuals involved, and any witnesses present.
- d. Reports can be submitted in person, in writing, or electronically, and will be treated with confidentiality and sensitivity.

Investigation and Resolution:

- a. Upon receipt of a report, the executive board shall initiate an investigation promptly and impartially.
- b. The investigation shall involve gathering relevant information from all parties involved and any witnesses.
- c. Based on the findings of the investigation, appropriate disciplinary actions will be taken, which may include but are not limited to counseling, suspension, termination of membership, or referral to law enforcement authorities.
- d. Members involved in the investigation process shall be afforded due process rights, including the opportunity to present their side of the story and appeal decisions made.
- E. if a member has repeated offenses, the member will be removed/impeached as described in section 5.4.

Reporting Child Abuse/Neglect/Sexual Assault:

- a. If a child discloses abuse, neglect, or sexual assault to any member of the organization, that member is obligated to report the disclosure to the school teacher and Child Protective Services (CPS) immediately so that the appropriate child protection authorities are contacted as mandated by law.
- As a volunteer you are required to report any perceived, disclosed, or observed harm to a child, as defined by Michigan law to WSU Police and Public Safety at 313-577-2222. This reporting is required whether the harm is committed by a parent or teacher or someone else. This is a requirement, not just for WSU volunteers, but also for WSU faculty, staff, and student employees.

If you suspect abuse or neglect, report it any time day or night by calling Child Protective Services at 855-444-3911 or online at Michigan Online Reporting System.

If the situation is an emergency or someone is in immediate danger, there are four steps you will need to complete:

- Step 1: Call 313-577-2222, local authorities 911,
- Step 2: In cases of domestic violence, sexual misconduct, or stalking, complete a Public Incident Report. In this report you will make mention that you filed the Police Report.
- Step 4: Whenever a volunteer has a concern, it is best practice to inform local authorities of the concern.

This allows local staff to make adjustments that might need to be made immediately. If the situation is a non-emergency, there are three steps you will need to complete:

- Step 1: Contact WSU Police and Public Safety at 313-577-2222. Step 2: In cases of domestic violence, sexual misconduct, or stalking, complete a Public Incident Report.
- Step 3: Whenever a volunteer has a concern, it is best practice to inform local authorities of the concern.

This allows local staff to make adjustments that might need to be made immediately. Failure to report by mandated personnel is a misdemeanor crime punishable by law.

Schools, collaborators, and sponsors



Detroit Central High School

Contact: Hans Sowder

- Mr. Sowder is 1 of 2 science teachers at Central High School.
- He has a passion for providing his students with the best opportunities for them to succeed.

Previous visits:

3/18 - cancer activity.

Upcoming:

5/3 - Strawberry DNA extraction activity (Hours 2, 3, and 7).

5/20 - What is growing on your phone?! Bacteria growth activity day 1 (AP bio Hour 6).

5/23 - Henry Ford Pancreatic Cancer Center field trip (All day specific times TBD).

5/28 - What is growing on your phone?! Bacteria growth activity day 2 (AP bio Hour 6).



Detroit Central High School

Interim? School Leader(s):

Ja'Lea Echols

Shaheen Bhat

Previous Volunteers:

Kailee Hartway

Michael Flynn

Thank you both so much for your help!

Teacher: Hans Sowder



Hamtramck High School (Fall 2024)

School Leader(s):

Volunteers:

Jenna Thibodeau

....help!

Contact: Shelley Harrington



Collaborations!

Elizabeth Triden

- Executive Director, Science and Social Sciences
- Detroit Public Schools community District

Joe Weertz

• SOM K-20 Educational Outreach Coordinator

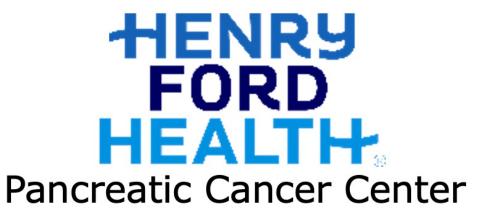
Michael McLeod

Chair for Masters of Public Health Pipeline Project



Sponsors and Endorsements







School of Medicine Alumni Association



EmpowerSci... The proof is in the pudding!

"I learned what cancer cells look like under a microscope."

"learned that cancer is developed by a mutation of DNA and rapid cell division."

"You can't get cancer from other people."

"I learned that cancer is from mutated cells that multiply fast causing the disease."

"Cancer is uncontrolled cell growth of abnormal cells."

"I learned how dangerous it [cancer] is."

"I learned there are different types [of cancer]."

"I learned that cancer is cells that multiply rapidly due to a mutation and since its so much it forms a tumor."

"I learn the difference between non-cancer cells and cancer cells and how they look."

"I learned that not all cases of cancer end in death."

"There are different kinds of cancers. Some can be removed by surgery because they don't spread but some you need chemo since the cancer spreads."

"I seen cancer for the first time!!"

The students also provided great feedback on how to improve such as wanting to learn more about treatment options and detection methods. They are a group of critical thinkers...and hopefully future scientists!



Upcoming events we need your help with!

5/3 - Strawberry DNA extraction activity (Hours 2, 3, and 7).

5/20 - What is growing on your phone?! Bacteria growth activity day 1 (AP bio Hour 6).

5/28 - What is growing on your phone?! Bacteria growth activity day 2 (AP bio Hour 6).



Questions, comments, concerns, cries of anguish? Speak now or forever hold your peace.



