2019 MPS Stories

Explore the Science and Art of Plants at Third Annual Fascination of Plants Day @ MSU: Arts Go Green

4/9/19

Igor Houwat

Michigan State University hosts the third annual Fascination of Plants Day @ MSU. This year, plant sciences meet the arts in a collaboration between MSU plant scientists, the Eli and Edythe Broad Art Museum at Michigan State University (MSU Broad), and the East Lansing Art Festival.

Date: Saturday, May 18th
Time: from 11a - 6p
Locations (*there are two*): MSU Broad Art Lab (565 E Grand River Ave, E. Lansing, MI 48823) and Children's Art Activity Area at the East Lansing Art Festival.

The public is invited to explore the amazing world of plants, enjoy family-friendly activities, and meet researchers and artists at one of the world's best plant science institutions. Attendees will:

- Experience hands-on science and art activities: extract DNA from strawberries, manipulate plant 3D images in Virtual Reality, create cyanotypes of beautiful microscopic structures
- Learn about the many benefits of plants: bioenergy crops station and plant-based industrial products
- Discover the plant scientist's lab toolkit: microscopes, measuring instruments, GMOs and plant DNA
- Meet MSU researchers: and learn about the exciting science that goes on at MSU.

Fascination of Plants Day is a worldwide event promoted by the European Plant Science Organization. It aims to get the public enthused about the importance of plant science on their day-to-day lives (agriculture, pharmaceuticals, etc.). Fascination of Plants Day @ MSU: Arts Go Green will take place alongside hundreds of others worldwide.

The MSU Broad Art Lab is an expression of the MSU Broad's commitment to creating engaging arts and cultural experiences for a diverse audience, connecting art to other disciplines, and positioning the museum as innovative and inclusive.

The 56th annual East Lansing Art Festival aims to enhance the sense of community and appreciation of art, culture and creativity in East Lansing and the greater Lansing region. The festival presents hundreds of artists and craftspeople and attracts tens of thousands of visitors annually.

For more information, visit the event website at https://mps.natsci.msu.edu/fopd/or the Facebook page.

Contacts:

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MPS doctoral student Emily Lanier awarded prestigious NSF fellowship

5/8/19

Igor Houwat

Emily Lanier, a Ph.D. student in the **Molecular Plant Sciences Program (MPS)** is a recipient of the 2019 National Science Foundation Graduate Research Fellowship.

The program, one of the country's most prestigious and competitive awards for graduate students, directly supports graduate students in various science, technology, engineering and mathematics fields.

NSF Graduate Research Fellows benefit from a three-year annual stipend of $34,000 along with a $12,000 cost of education allowance for tuition and fees, opportunities for international research and professional development and the freedom to conduct their own research at any accredited U.S. institution of graduate education they choose.

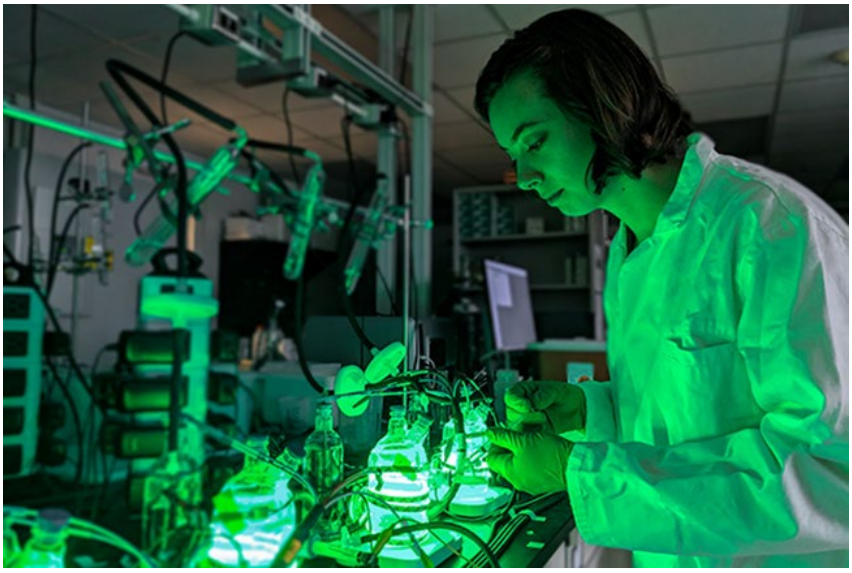

Figure 1 Emily in the lab

Lanier is a dual major in MPS and the **Department of Biochemistry and Molecular Biology**, where she works in the lab of scientist **Bjoern Hamberger**.

She is pursuing a collaborative project between the labs of Dr. Hamberger and **Dr. Michaela TerAvest**, working to find new methods of producing plant-derived chemicals for pharmaceutical and industrial uses. The project combines Dr. TerAvest's work in bioreactors that can "feed" microbes with electricity with Dr. Hamberger's expertise in plant terpene chemistry.

Emily says, “Receiving this award is really exciting because it validates my aspiration to be a scientist working on the forefront of green chemistry and biology. It also gives me the freedom to pursue interesting collaborations such as this without worrying about funding sources.”

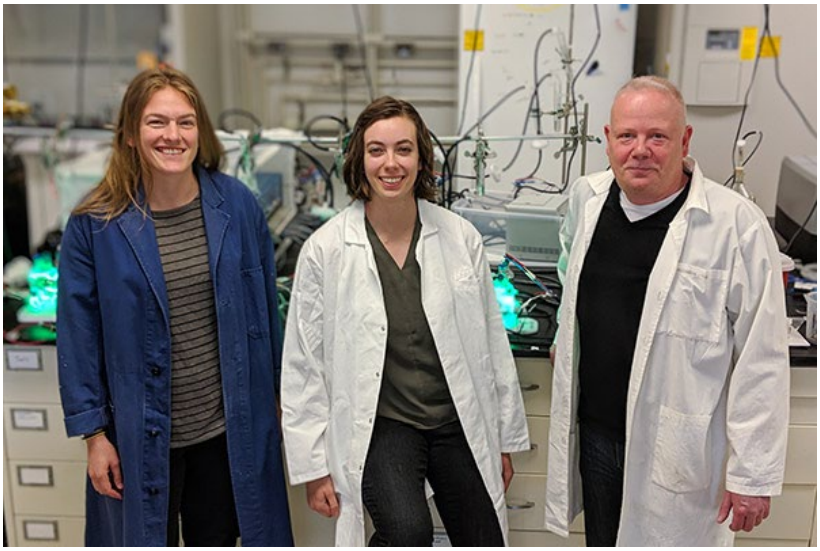

Figure 2 Emily with her mentors, Bjoern Hamberger, left, and Michaela TerAvest, right

Bjoern Hamberger adds, “Michaela TerAvest and our team have been brainstorming how we could raise a project integrating both our very different technologies. This is when Emily bravely stepped in to effectively bridge between our labs. We are really excited about this project, which has the potential to open the door to a new area of research in Synthetic Biology, ‘Electro-terpenes’.”

“As a Ph.D. student in the inaugural class of the new Molecular Plant Sciences Graduate Program, this award to Emily is not only well-deserved, but illustrates the breadth of collaboration, the impact of her project, and her determination to advance our discipline. The MPS community applauds her early success and are excited to see the many great things she will achieve through support from the NSF.”

Third Fascination of Plants Day @ MSU: Arts Go Green increases community reach

5/31/19

Igor Houwat

Michigan State University plant biologists hosted the third **Fascination of Plants Day @ MSU** on Saturday, May 18th at the **MSU Broad Art Lab** and the **East Lansing Art Festival**.

This year, plant science met the arts in a first collaboration involving MSU plant scientists, the MSU Broad Museum, and the East Lansing Art Festival. It turned out really well.

Over 500 participants—more than double the attendees last year—came to experience the world of plants and algae through family-friendly **science and art activities** where they **learned about plant medicinal benefits and industrial applications** and **interacted with MSU scientists**.

Highlights included a virtual reality display where viewers could dissect crops to see their insides (sunflowers, lime, etc.); extracting DNA from bananas and strawberries; a display of moss evolution and how it could help feed astronauts colonizing Mars; and multiple hands-on activities, such as painting leaves using pigments extracted from plants, identifying seeds and plant smells, making DNA out of gummy bears, or drawing fungi and other crops.

Anne-Sophie Bohrer-Cognon, a post-doc for the **Great Lakes Bioenergy Research Center (GLBRC)** at MSU and lead event coordinator says, “The event this year was the best yet! Our partnership with the MSU Broad Art Lab and the East Lansing Arts Festival allowed us to reach a broader audience and attract more visitors. It is a great feeling to see whole families discover all the amazing, interesting aspects of plant sciences, and interact directly with scientists.”

Figure 1 Seeing how scientists measure plant photosynthesis activity

Well over 50 volunteers from the **College of Natural Sciences**, **College of Agriculture and Natural Resources**, and from the Broad Museum led the demonstrations.

Bohrer-Cognon adds, "The volunteers did a fantastic job engaging children and parents all day long, which is a great reward for the organizing team after months of planning!"

Björn Hamberger, co-event coordinator and Assistant Professor at MSU, says, "This year's event attracted a very diverse crowd of parents with kids, excited adults and people generally interested in our programs and how they connect with the art festival. It is noteworthy that the volunteers at the kid's tent at our Art Festival site felt overwhelmed by the public's interest. We will certainly need more presence there next time. Way to go, curious kids!"

"Much of what we do at the MSU Broad Art Lab is born from a belief that we all have something valuable to share," says **Michelle Word, Director of Education at the MSU Broad Art Musuem**. "When we bring our knowledge together, well that's the space great ideas are born! Facination of Plants day was just such a moment. It was collaborative and interdisciplinary, bring together campus and the community in celebration of creative and scientific inquiry in all its forms."

Bohrer-Cognon concludes, "Bridging science and art in the context of Fascination of Plants Day was a really interesting addition this year, as science is a creative process on its own. I am eager to see how we will make Fascination of Plants Day even better and bigger in 2020!"

Fascination of Plants Day is a world-wide event taking place under the umbrella of the **European Plant Science Organisation**. The goal is to get the general public enthused about the role of plant sciences in agriculture, forestry, industry (paper, timber, medicine, and energy), and environmental conservation.

The MSU organizing committee was: Anne-Sophie Bohrer-Cognon (lead event coordinator); Dr. Björn Hamberger, **Research Technician, Britta Hamberger**, and Sunil Kenchanmane Raju (event coordinators);

Igor Houwat (communications) - Broad Museum committee: Michelle Word (lead coordinator); Britany Benson (event coordinator); Morgan Butts (communications); Stephanie Kribs (operations coordinator)