

# BUGSS



Winter 2018

A place for creative biology



Join BUGSS in 2018  
for a year of More Science!

In 2018, we'll have:

- **More classes** – on the microbiome, cell staining, hardware building, and environmental detection.
- **New school programs** for middle school students and an expanded **high school iGEM** team
- More **creative member science** projects and **biotech startup** incubation
- **New collaborations** with the MD Science Center and Girl Scouts, a new Bio-Art curator in residence, and diverse new talks and seminars!

Thanks to all who supported our end-of-year  
campaign to provide #ScienceForAll



# Recent Happenings

## Adventures in Big Data Analysis

With Dr. Carrie Wright, we learned the big picture of computer science, how to use R, and how to find accessible data-sets to analyze.



## Volunteer Orientation

Our amazing community is what makes BUGSS the diverse, creative, and vibrant community that it is. We were thrilled to welcome almost 20 new participants at our first ever volunteer orientation. These new members of our community will teach courses, deliver seminars, recruit speakers, and maintain our website.

Missed the session? Look for our next volunteer orientation in March!

## Thanks to all of our speakers!

“An Apeeling Solution to Panama Disease”, by the University of Maryland College Park iGEM team

“Can sharks help us cure human disease?”, by Dr. Helen Dooley

“Microplastics panel discussion” with Julie Lawson of Trash Free Maryland, Jason Rolfe and Carlie Herring of the NOAA Marine Debris Program, and Alterra Sanchez of the University of Maryland



## Baltimore Science Slam #4

Thanks to Red Emma’s Bookstore for hosting our Science SLAM and to our partners, Project Bridge. We had 6 amazing science talks on topics ranging from hair cell regeneration for hearing to NIH hackathons for bioinformatics.



## Molecular Biotechnology Boot Camp

We had a great time learning about all the biotechnology tools that allow us to perform the steps of molecular cloning. With these basic tools, participants are ready to start their own molecular and synthetic biology projects in the lab. We can’t wait to see the new projects that our participants dream up!

## Baltimore BioCrew at the iGEM Giant Jamboree

For the second year in a row, our Baltimore BioCrew team won a bronze medal at the international iGEM Jamboree - we’re so proud! Eight of our 14 team members traveled to Boston to present their research as oral and poster presentations on plastic-degrading bacteria. Our thanks to our dedicated mentors for their work with the team this year! See p. 4 for information on joining next year’s team.



# Upcoming Events

## Microscope Makers: Explore the micro-universe around you!

Saturday Jan 27th 10:00 AM

Join microbiologist Dr. Kate Gillespie for a workshop introducing **Foldscopes**! She will instruct on how to build these affordable microscopes, how to use them, and different ways you can use them to learn from the universe around you! This is a great introductory workshop to get busy in the lab. Anyone from middle-school age to adult will enjoy this hands-on session!



## Agar Art Workshops

Sat Feb 10th at 2PM,  
Sat March 17th at 2PM,  
Sat April 7th at 2 PM

BUGSS is extremely excited that we get to partner with American Society of Microbiology (ASM) to host Agar Art workshops in 2018! Come to the BUGSS lab to learn about some special microbes that produce an array of beautiful and striking colors. You will be able to use the tools and guidance provided by BUGSS to create your very own living work of art on agar plates!



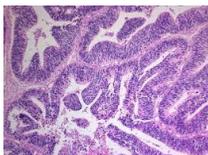
Perhaps your art work has what it takes to enter the national ASM contest and win!? Yes, of course it does! There are two contests this year AGAR ART MAKER (13 yrs and up), and AGAR ART KIDS (12 yrs and under). For full contest details: [www.asm.org/agarart](http://www.asm.org/agarart)

## Learn to stain and visualize cells and tissues with our 3-week series

### Backyard microscopy!

Invisible creatures you can find on your own and stains you can make in your kitchen  
Feb 3, 2018 10:00 AM

### Animal and human tissue microscopy!



Learn staining techniques to explore animal and human tissues safely in the lab

Feb 10, 2018 10:00 AM

### Microbe microscopy!

Learn how to make slides and stain bacteria and yeast for identification and characterization

Feb 17, 2018 10:00 AM

\$30 for full members/ \$45 community members/  
\$75 non-members per session



## Gut Check!

March/April 2018

An exciting course that allows you to isolate, sequence, and analyze the microbes that live **in your own body**. You'll be able to compare your microbiome with your diet, or with the microbiome of your pet or family member!



**SIGN UP FOR ALL COURSES ON  
EVENTBRITE**

<https://www.eventbrite.com/o/baltimore-under-ground-science-space>

-4318633291

# Upcoming Events

## Seminars

### “Open Mic” Night at BUGSS: Tell YOUR Science Story (or listen and learn!)

Friday January 19th at 7:00 PM

Practice communicating your research with a short talk. Try out your elevator pitch, flask talk, or 3 min thesis in a creative new way. Not a scientist? Join us in supporting our speakers and providing feedback for them while learning about new and awesome research.



### Open-source oceanography: Tools for community science & marine conservation.

Fri, February 9th at 7:00 PM

Dr. Andrew Thaler teaches us about Oceanography for Everyone’s low-cost, open-source oceanographic instruments. These allow researchers, educators, and explorers to pursue community-based ocean science.

### Popscope at BUGSS! An evening of community astronomy

Friday March 2nd at 7:00 PM

Ariel Hicks and Audrey Buckland from Popscope will share their knowledge and love for amateur astronomy! The moon will rise at 6:55 pm and the telescope will be out. Bring your family and friends to check out and learn about moon craters!



### What Google search data reveal about our interest in climate change.

Friday March 9th at 7:00 PM

Dr. Jeremy Purcell and Miles Hatfield explore what Google searches reveal about public awareness and understanding of climate change over time, including dependence on local weather and events.

## Lab Skills Nights

**Protein Isolation**

Thursday Jan 11th and 25th at 7 PM

**Protein Detection**

Thursday Feb 8th and 22nd at 7 PM

**Plasmid DNA Isolation**

Thursday March 8th and 22nd at 7 PM

\$12 members/\$30 non-members

## BUGSS High School iGEM Team

### Information Sessions

Sat, January 20, 2018 2:00 PM – 4:00 PM and Sat Feb 17th 2:00 PM– 4:00 PM

Are YOU a student interested in hands-on learning in the lab solving problems using biotechnology? Do YOU want to help mentor students while overseeing an incredible research project?

These sessions are for those interested in joining or learning more about our high school iGEM team. The International Genetically Engineered Machines (iGEM) competition is an annual event open to undergraduates, high school students, and community labs from around the world. Explore the iGEM website: <http://igem.org/About> . What an amazing opportunity for students!

