

Arizona Biosecurity Workshop

December 13-14, 2018 | Arizona State University | Tempe, AZ

Memorial Union | Room 241, Ventana room



Who should attend?	This event is free and open to the public. Recommended attendees include: biosafety and biosecurity professionals, do-it-yourself practitioners, emergency responders, journalists, law enforcement personnel, members of the public, Native American Tribal Members, past attendees , policymakers, regulators, representatives of the religious community, researchers, students, and other interested parties.
What is the purpose?	Emerging biotechnologies present unique challenges for society. This two-day workshop focuses on community engagement with biosecurity concerns in an applied and practical manner. The goal of this workshop is to foster awareness and to stimulate a robust conversation about the ethical, moral, and social implications of novel biotechnologies. The event will include diverse perspectives on biosecurity, ethical consideration for novel biological applications, and the future impact of biosecurity governance on society.
What is biosecurity?	Biological security, biosecurity , is the risk- and threat-based control measures established to prevent the unauthorized access, misuse, loss, theft, diversion and intentional release of valuable biological materials, pathogens, toxins, information, expertise, equipment, technology and intellectual property that have the potential to cause harm to humans, animals, plants, the environment, public safety or national security.
Who is presenting?	<ul style="list-style-type: none"> • Biosecurity practitioners from academic, medical, pharmaceutical, and other industries. • Special Agents from the FBI Headquarters in Washington, D.C., and the FBI Phoenix Weapons of Mass Destruction unit assist in leading the workshop and also present on biosecurity topics. • Subject matter experts studying the ethical, legal, and social implications of emerging biotechnologies. • Honored guests discuss the importance of biosecurity and implications for Arizona and the world.
How do I register?	Register online asuevents.asu.edu/2018-Arizona-Biosecurity-Workshop
Are CE points available?	Yes. Attendees may earn 2.0 continuing education points for attending the entire workshop.
How much is it?	There is no cost to participants. However, to ensure there are enough light refreshments and snacks, all participants must register for the event by Dec. 6, 2018.
What is the capacity?	220 attendees

ASU partners

ASU Biodesign Institute
 ASU Environmental Health and Safety
 ASU Ira A. Fulton Schools of Engineering

ASU School for the Future of Innovation in Society
 ASU School of Biological and Health Systems Engineering
 ASU School of Life Sciences

Bronze sponsors



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Page 1
 Email biosafety@asu.edu or call 480-965-1823
 Updated: December 2018

Speakers, presentations and times are subject to change.

Arizona Biosecurity Workshop: day 1

Thursday, Dec. 13, 2018 | Arizona State University | Tempe, AZ

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Morning theme: Perspectives on biosecurity

- 8 a.m. **Introductions** | David Gillum, ASU and Phillip Bates, FBI
- 8:05 **Welcoming remarks** | Bertram Jacobs, ASU and Michael DeLeon, FBI
- 8:10 **Code of the Wild** | Samira Kiani, ASU and Cody Sheehy, Rhumblin Media
- 8:20 **A journalist's perspective on biosecurity** | Antonio Regalado, MIT Technology Review
- 8:45 **Biosecurity from a law enforcement perspective** | Phillip Bates, FBI
- 9:10 **Africa to Mexico: International biosecurity perspectives** | Luis Ochoa, Ministry of Health-Mexico
- 9:35 **Biosecurity perspectives** | Q and A – panel one
- 9:45 **Break**
- 10:00 **Biosecurity in a pharmaceutical company** | Barbara Owen, Merck
- 10:25 **Biosecurity in academia: balancing competing research interests** | Rebecca Moritz, UW-Madison
- 10:50 **A regulatory view of biosecurity** | Samuel Edwin, CDC
- 11:15 **Information hazards for practicing scientists** | Kevin Esvelt, MIT
- 11:40 **Biosecurity perspectives** | Q and A – panel two
- 11:50 **ABSA International biosecurity credentialing efforts** | Barbara Owen, Merck, David Gillum, ASU, and Rebecca Moritz, UW-Madison
- Noon **Sponsor recognition and lunch break—**
Acknowledgement of Silver Sponsors: ABSA International, Dell, HDR, LiveSafe, ProEm
- 12:30 p.m. **Option 1:** Networking with peers | **Option 2:** Group tour of the ASU Biodesign Institute

Afternoon theme: Applications of interest to biosecurity

- 1:30 p.m. **Gene drive technologies for the control of invasive rodents** | Dimitri V. Blondel, NC State University
- 1:55 **SynBio case studies for evaluating biosecurity relevance** | Kevin Esvelt, MIT
- 2:20 **Biodefense in the age of synthetic biology** | Joseph Kanabrocki, University of Chicago
- 2:45 **Applications of interest to biosecurity** | Q and A – panel three
- 2:55 **Break**
- 3:10 **Managing biosafety and biosecurity risks in the do-it-yourself, DIY, community** | Angela Armendariz, Genspace
- 3:35 **Grassroots Biotech: Ethics, biosafety and community building at the Global Community BioSummit** | Maria Chavez, Biocurious and Patrik D'haeseleer, Counter Culture Labs
- 4:00 **Global test beds for biosafety and biosecurity policies** | Megan Palmer, Stanford
- 4:25 **Applications of interest to biosecurity** | Q and A – panel four
- 4:35 **Code of the Wild** | Samira Kiani, ASU and Cody Sheehy, Rhumblin Media
- 5-7:30 **Evening Reception** | Mission Palms, 60 East 5th Street, Tempe, AZ 85281

Arizona Biosecurity Workshop: day 2

Friday, Dec. 14, 2018 | Arizona State University | Tempe, AZ

Memorial Union | Room 241, Ventana room



Morning theme: Bioethical and humanistic considerations of biosecurity

- 8 a.m. **Brief recap of day one** | David Gillum, ASU and Phillip Bates, FBI
- 8:05 **ASU welcoming remarks** | Clark Miller, ASU
- 8:20 **Ethical issues in genome editing** | Robert Cook-Deegan, ASU
- 8:45 **Going Rogue? Responsible science and its outlaws** | Ben Hurlbut, ASU
- 9:10 **Transhumanism and biosecurity** | Gaymon Bennett, ASU
- 9:35 **Bioethics and biosecurity** | Q and A – Panel five
- 9:45 **Break**
- 10 **Code of the Wild: Community engagement forum** | Moderated by Samira Kiani and David Gillum, ASU
- 10:25 **Advancements in synthetic biology and Genome Project Write** | Andrew Hessel, Humane Genomics, Inc.
- 10:50 **A pragmatic approach to biosecurity** | Michael Hopmeier and Janet Marroquin, Unconventional Concepts, Inc.
- 11:15 **Human factors in biosecurity: Identifying and assessing behavior to manage biosecurity threats** | Joshua Kurjan, Contract support to U.S. Department of State
- 11:40 **Bioethics and biosecurity** | Q and A – panel six
- 11:50 **K-8 posters** | Irene Mendoza and Darren Bowens, ASU
- Noon **Sponsor recognition and lunch break**
- 12-1 **Tour: 91st Civil Support Team - Mobile Biological Safety Level Three, BSL-3, Laboratory**

Afternoon theme: Biosecurity in the future

- 1 p.m. **Agricultural biosecurity and bioterrorism** | Stephen Goldsmith, FBI
- 1:25 **Monkeypox—A case study for dual use research** | Bertram Jacobs, ASU
- 1:50 **A perspective on the future of global biosecurity** | Bradley Dickerson, Sandia
- 2:15 **Biosecurity challenges in the future** | Q and A – panel seven
- 2:25 **Break**
- 2:40 **Biosecurity and economic espionage** | Ed You, FBI
- 3:05 **Platforms for screening DNA purchases** | Evan Appleton, Harvard University
- 3:30 **Cyberbiosecurity challenges in the future** | Q & A – panel eight
- 3:40 **Cyberbiosecurity: Protecting the research enterprise** | Sarah Buszka, UW-Madison
- 4:05 **The secret world of InfoSec failure** | Zach Jetson, Cybersecurity Consultant
- 4:30 **Cyberbiosecurity challenges in the future** | Q & A – panel nine
- 4:40 **Code of the Wild: Collaborative video screening** | Samira Kiani, ASU and Cody Sheehy, Rhumbline Media
- 5 **Acknowledgements and thank yous** | David Gillum, ASU and Phillip Bates, FBI

Directions to the ASU Memorial Union

eoss.asu.edu/mu/about/directions

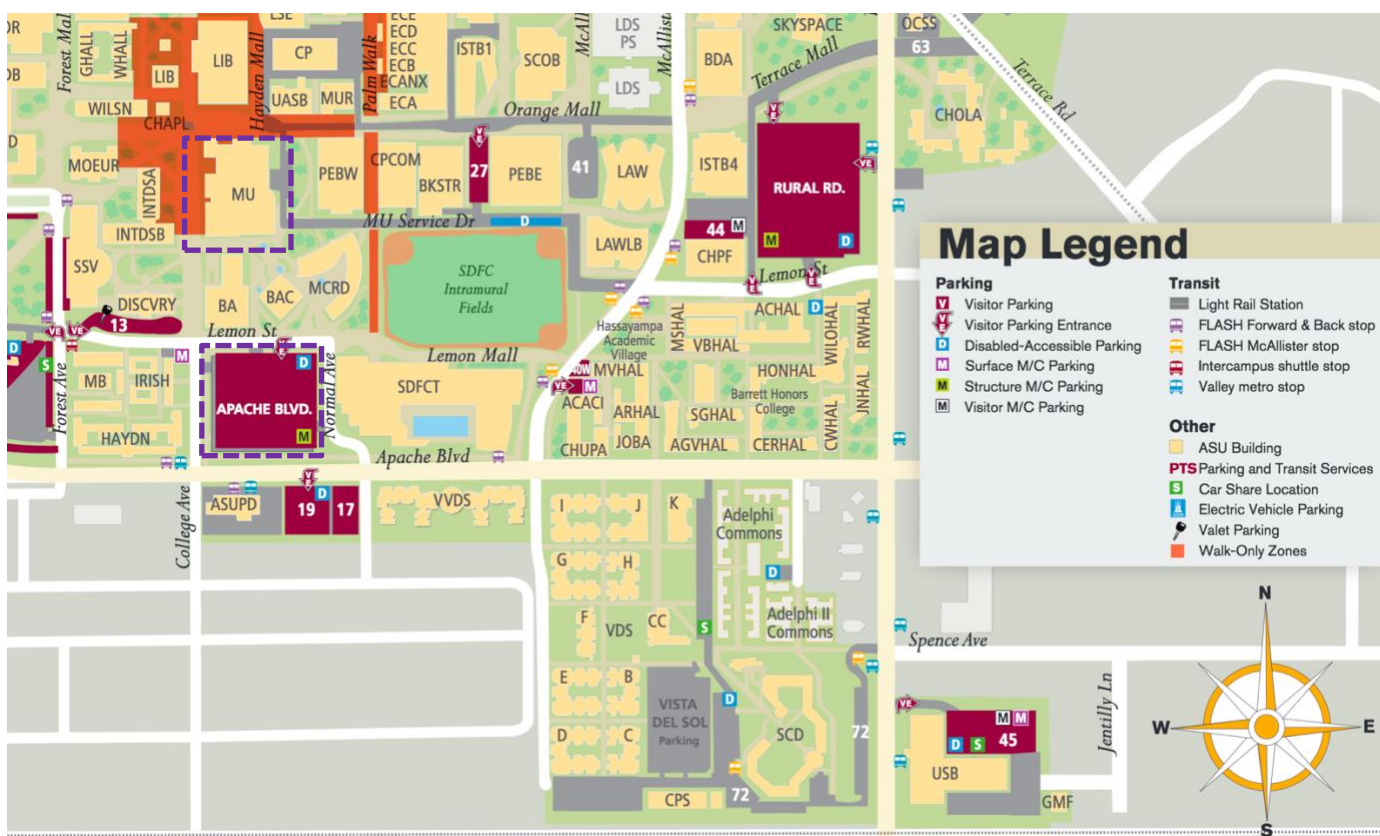
The **Memorial Union** is located at 301 E. Orange St., on the Tempe Campus. The meeting will be held in Memorial Union, room 241, Ventana room.

Memorial Union parking

asu.edu/parking/maps/tempe-current.pdf

Visitor parking is available at the **Apache Blvd. Parking Structure**.

Additional parking on-campus can be found [here](#). We recommend reserving parking on the Tempe campus ahead of your visit through **Parking and Transit Services**.



Alternative transportation methods

bike.asu.edu

cfo.asu.edu/transit

cfo.asu.edu/shuttles

K-12 biosecurity art and poster competition

Arizona students in grades K-12 will be invited to participate in a biosecurity art and poster competition. The purpose of this competition is to increase the interest of K-12 students in the Science, Technology, Engineering, and Math fields and to increase awareness on the topics of biosafety and biosecurity. Students in grades K-5 will be invited to use their imaginations to create and submit posters illustrating the theme, "How would you stop germs?" Students in grades 6-8 will submit a poster illustrating the theme, "Biosafety: Defending the Earth from germs." High school students will participate in a science themed poster presentation that addresses at least one aspect of biosafety or biosecurity. A panel of judges who are experts in STEM fields will select first, second and third place winners for each of the grades. Winners will be recognized at an awards luncheon on December 14, 2018 during the Arizona Biosecurity Workshop. All contest winners will receive a certificate and a commemorative medal. First place winners will also receive STEM supplies for their schools.

Code of the Wild



Human stories shape the future. Through integration of art and science this initiative explores genetics research and its influence on the future of humanity. Code of the Wild will foster creative and engaging dialogue through personal stories shared via an interactive platform. It will also provide insight into how different cultures and communities view novel genetic technologies. As a 2018 Arizona Biosecurity Workshop attendee, we invite you to be part of this project and share your perspective as the event progresses. Code of the Wild team members will be available to assist in capturing clips and answering questions. During the workshop, selected clips will be featured in a film and shared with attendees. This project is a joint venture between Arizona State University and Rhumblin Media.

Photography and audio recording

This event may include photography, video, and audio recordings. A [photo and filming subject release form](#) will be provided at the event.

Nearby hotels*

Moxy Tempe – moxy-hotels.marriott.com/hotels/tempe

The Graduate – graduatehotels.com/tempe/

Tempe Mission Palms – destinationhotels.com/tempe-mission-palms

Other nearby hotels – bit.ly/2gZalyp

* Availability and pricing subject to change. If you work for a government institution, or a state school, please ask for the ASU or government rate, if available.