**Arizona Biosecurity Workshop: Day 1**  
**Thursday, Dec. 5, 2019 | Arizona State University | Tempe, AZ**  
Carson Ballroom | Old Main  

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<th>Who should attend?</th>
<th>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.</th>
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<td>What is the purpose?</td>
<td>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 the emergence of synthetic viruses, the global impact of do-it-yourself (DIY) biology, ethical quandaries in biotechnology, and the future of biological information security and disaster preparedness.</td>
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<td>What is biosecurity?</td>
<td>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.</td>
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| Who is presenting? | • 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 will 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 will discuss the importance of biosecurity and implications for Arizona and the world. |
| How do I register? | Register online |
| 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 November 22, 2019. |
| What is the capacity? | 200 attendees |

**ASU partners**  
ASU Biodesign Institute  
ASU Environmental Health and Safety  
ASU Global Security Initiative  
ASU Ira A. Fulton Schools of Engineering  
ASU School for the Future of Innovation in Society  
ASU School of Life Sciences  
ASU Watts College of Public Service and Community Solutions  

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Email biosafety@asu.edu or call 480-965-1823  
December 2019  
Speakers, presentations and times are subject to change.
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Morning theme: Emergence of synthetic viruses
8 a.m. **Introductions** | David Gillum, ASU and Phillip Bates, FBI
8:05 **ASU welcoming remarks** | Cynthia Lietz, ASU
8:10 **FBI Special Agent in Charge welcome** | Sean L. Kaul, FBI
8:15 **Gene editing, synthetic biology and biosecurity in the media** | Ted Simons, Arizona Horizon
8:35 **Synthetically recreating extinct horsepox virus** | David Evans, University of Alberta, Canada
9 **Creating the first synthetic polio virus** | Eckard Wimmer, Stonybrook University
9:20 **Monkeypox pathogenesis and dual use research** | Bertram Jacobs, ASU
9:40 **Panel Discussion** | Ted Simons, David Evans, Eckard Wimmer and Bertram Jacobs
9:50 **Break**
10 **FBI partnerships with higher education** | Mario Calbone, FBI
10:20 **Innovative ways of thinking about risk in emerging technologies** | Andrew Maynard, ASU
10:40 **Synthetic viruses: viral evolution and dynamics** | Arvind Varsani, ASU
11 **Deployment of poxviruses for oncolytic virotherapy** | Grant McFadden, ASU
11:20 **Panel discussion** | Mario Calbone, Arvind Varsani, Andrew Maynard and Grant McFadden
11:30 **Sponsors recognition** | Irene Mendoza, ASU and Phillip Bates, FBI
11:40 **Lunch on your own**

Afternoon theme: Global Collaborations and Impact of Do-It-Yourself (DIY) Biology
1 p.m. **Contributions of biotechnology to society** | Rachel Levinson, ASU
1:20 **Empowering DIY students, parents and educators** | Irene Mendoza, ASU
1:40 **International collaborations** | Aparupa Sengupta, University of California Merced
2 **Panel discussion** | Rachel Levinson, Irene Mendoza and Aparupa Sengupta
2:20 **The global DIYbio community** | Todd Kuiken, North Carolina State University
2:40 **Integrating the commercial sector into DIY bio labs** | Maria Chavez, BioCurious
3 **ASU and AMEXBIO collaborations** | Lissete Valenzuela Fabris, President of AMEXBIO
3:10 **Panel discussion** | Todd Kuiken, Maria Chavez and Lissete Valenzuela Fabris
3:20 **Break**
3:30 **Distribution and screening of iGEM kits** | Traci Haddock-Angelli, iGEM
3:50 **FBI and DIY collaborations** | William So, FBI
4:10 **Panel discussion** | Traci Haddock-Angelli and William So
4:20 **Biosecurity breakout session**
5 **Closing remarks day one** | Irene Mendoza, ASU and Phillip Bates, FBI
Arizona Biosecurity Workshop: Day 2

Friday, Dec. 6, 2019 | Arizona State University | Tempe, AZ
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Morning theme: Ethical quandaries in biotechnology
8 a.m. Brief recap of day one | David Gillum, ASU and Phillip Bates, FBI
8:05 ASU welcoming remarks | Jamie Winterton, ASU
8:10 Ethical implications of self-regulation in life sciences | Ben Hurlbut, ASU
8:30 Biopiracy and the global use of biological data | Diana Bowman, Sandra Day O'Connor College of Law
8:50 Artificial intelligence and biotechnology | Tobias Reese, Berggruen Institute
9:10 Biotechnology and religious community perspectives | Gaymon Bennett, ASU
9:30 Panel Discussion | Ben Hurlbut, Dianna Bowman, Tobias Reese and Gaymon Bennett
9:40 Break
9:50 Democratization of biotechnology | Eleonore Pauwels, Wilson Center
10:10 Legal and ethical perspectives of emerging technologies | Yvonne Stevens, ASU
10:30 Ethical concerns of gene drive technology | Samira Kiani, ASU
10:50 Panel discussion | Eleonore Pauwels, Yvonne Stevens and Samira Kiani
11 National Security Implications of Biological Data in the Bioeconomy | Kavita Berger, Gryphon Scientific
11:20 Governance of emerging technologies | Gary Marchant, ASU
11:40 Panel discussion | Kavita Berger and Gary Marchant
11:50 Lunch on your own

Afternoon theme: Biological information security and disaster preparedness
1 p.m. Range of threats, misuse and illicit acquisition of WMD materials | William So, FBI
1:20 Biothreat disaster preparedness | Brian Gerber, ASU
1:40 Healthcare special pathogens preparation | Saskia Popescu, HonorHealth Services Prevention
2 Panel discussion | William So, Brian Gerber, and Saskia Popescu
2:10 Controlled unclassified information in biological research | Vel Murugan, ASU
2:30 Enhancing biosecurity in defense applications | Panel from Battelle
3:20 Break
3:30 Cybersecurity, digital threats and bio-inspired solutions | Stephanie Forrest, ASU
3:50 Hacking of medical devices | Katina Michael, ASU
4:10 Data breeches and implications for biosecurity | Jamie Winterton, ASU
4:30 Panel discussion | Stephanie Forrest, Katina Michael, and Jamie Winterton
4:40 Closing remarks day two | Irene Mendoza, ASU and Phillip Bates, ASU
Directions to the ASU Old Main Building

https://tours.asu.edu/tempe/old-main

The Old Main building 400 E. Tyler Mall on the Tempe Campus. The meeting will be held in the Carson ballroom on the second floor.

Old Main parking

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

Visitor parking is available at the Fulton Center parking garage directly across from Old Main.

Additional parking on-campus can be found here. Reserving parking on the Tempe campus ahead of your visit through Parking and Transit Services is recommended.

Alternative transportation methods

bike.asu.edu
cfo.asu.edu/transit
cfo.asu.edu/shuttles
Photography and multimedia recording

This event may include photography, video and audio recordings. A photo and filming subject release form will be provided to each attendee at the event. A no-photography zone will be available upon request.

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. Ask for government or state school rates, if available.