



AR-BIC 2022  
8<sup>th</sup> Annual Conference  
*Virtual Meeting*

**Open and Reproducible Science**

March 10 –11, 2022

Registration is free but required,  
Please register using the link below

<https://aralliance.org/ar-bic/>

**Contact:**

Scientific Program:

[Weida.Tong@fda.hhs.gov](mailto:Weida.Tong@fda.hhs.gov);

[Tanmay.Bera@fda.hhs.gov](mailto:Tanmay.Bera@fda.hhs.gov)

Logistics:

[ilarue@aralliance.org](mailto:ilarue@aralliance.org)

[bbarnhouse@aralliance.org](mailto:bbarnhouse@aralliance.org)

## **CONFERENCE PROGRAM**

**All times are in CST (please adjust to your local time zone)**

<b>Day 1 (Thursday, March 10)</b>	
<b>8:00 – 8:10 AM</b>	<b>Opening Remarks</b> <ul style="list-style-type: none"> <li>• Bryan Barnhouse, President &amp; CEO, Arkansas Research Alliance (ARA)</li> <li>• Meeting Introduction from Asa Hutchinson, Governor of Arkansas</li> </ul>
<b>8:10 – 8:55 AM</b>	<b>LIVE Keynote Presentation 1:</b> Susanna-Assunta Sansone, Professor, Oxford e-Research Centre: (Oxford University, UK) FAIRification is a Team Sport
<b>8:55 – 10:10 AM</b>	<b>Session 1: Preregistered, Open, Reproducible, and FAIR Science</b> Chair: Keith Bush (UAMS)
8:55 – 9:00 AM	<ul style="list-style-type: none"> <li>• Introduction by the Session Chair</li> </ul>
9:00 – 9:15 AM	<ul style="list-style-type: none"> <li>• Keith Bush (UAMS): Lessons Learned: A Neuroimaging Research Center’s Transition to Open and Reproducible Science</li> </ul>
9:15 – 9:30 AM	<ul style="list-style-type: none"> <li>• Nickolas Zaller (UAMS): Preregistering Non-NIH Funded Research: Why Bother?</li> </ul>
9:30 – 9:45 AM	<ul style="list-style-type: none"> <li>• Aaron Kemp (UAMS): ReprONIM as a Model for Implementing Reproducible Research Pipelines and Policies</li> </ul>
9:45 – 10:00 AM	<ul style="list-style-type: none"> <li>• Maegan Calvert (UAMS): Defining and Applying FAIR Data Practice in Behavioral Neuroscience</li> </ul>
10:00 – 10:10 AM	<ul style="list-style-type: none"> <li>• <b>Live Q&amp;A Session</b></li> </ul>
<b>10:10 – 10:20 AM</b>	<b>Break</b>
<b>10:20 – 10:30 AM</b>	<b>ARA Core Facilities Exchange</b> Amy Hopper (ARA)
<b>10:30 – 12:10 PM</b>	<b>Session 2: Microbiome and Microbial Genomics</b> Co-chairs: Steven Foley (NCTR/FDA) and Douglas Rhoads (UA)
10:30 – 10:35 AM	<ul style="list-style-type: none"> <li>• Introduction by the Session Co-Chairs</li> </ul>
10:35 – 10:50 AM	<ul style="list-style-type: none"> <li>• Sangeeta Khare (NCTR/FDA): A Framework for the Risk Assessment at the Gastrointestinal Tract</li> </ul>
10:50 – 11:05 AM	<ul style="list-style-type: none"> <li>• Mike Robeson (UAMS): Repairing the Cracked Pavement on the Road to Reproducible Microbiome Research</li> </ul>
11:05 – 11:20 AM	<ul style="list-style-type: none"> <li>• Douglas Rhoads (UA): Mobile Genetic Elements and Pathogenicity Islands Associated with Host-Specificity in Staphylococci</li> </ul>

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11:20 – 11:35 AM	<ul style="list-style-type: none"> <li>• Steven Foley (NCTR/FDA): Development of <i>Salmonella</i> Virulence and Plasmid Databases for Whole Genome Sequence Analyses</li> <li>• Rob Shields (A-State): Using the <i>Streptococcus mutans</i> CRISPR Spacerome as a Memory of Inter- and Intraspecies Interactions</li> <li>• Jeff Lewis (UA): Comparative Approaches to Understand the Molecular Basis of High Stress Resistance in Wild <i>Saccharomyces Cerevisiae</i> Strains</li> <li>• <b>Live Q&amp;A Session</b></li> </ul>
11:35 – 11:50 AM	
11:50 – 12:05 PM	
12:05 – 12:15 PM	
12:15 PM	<b>Close Day 1</b>

<b>Day 2 (Friday, March 11)</b>	
<b>8:00 – 8:45 AM</b>	<p><b>LIVE Keynote Presentation 2:</b> Igor Tetko, Group Leader, German Research Center for Environmental Health (GmbH), Institute of Structural Biology (ISB), (Neuherberg, Germany) Open OCHEM a Sustainable Platform for Reproducible Toxicity and Structure-Property Studies</p>
<b>8:45 – 10:00 AM</b>	<p><b>Session 3: AI and ML</b> Co-Chairs: Huixiao Hong (NCTR/FDA) and Zhichao Liu (NCTR/FDA)</p>
8:45 – 8:50 AM	<ul style="list-style-type: none"> <li>• Introduction by Session Co-Chairs</li> </ul>
8:50 – 9:05 AM	<ul style="list-style-type: none"> <li>• Fred Prior (UAMS): Distributed Machine Learning to Create Imaging Phenotypes of Cancer</li> </ul>
9:05 – 9:20 AM	<ul style="list-style-type: none"> <li>• Joe Zhang (U of Southern Mississippi): Deep Learning-Based Structure-Activity Relationship Modeling for Multi-Category Toxicity Classification</li> </ul>
9:20 – 9:35 AM	<ul style="list-style-type: none"> <li>• Wenjing Guo (NCTR/FDA): Deep Learning for Accurately Predicting of Gas Adsorption Capacities of Nanomaterials</li> </ul>
9:35 – 9:50 AM	<ul style="list-style-type: none"> <li>• Jie Liu (NCTR/FDA): Machine Learning Models for Predicting Multi-Generation Reproductive Toxicity of Chemicals</li> </ul>
9:50 – 10:05 AM	<ul style="list-style-type: none"> <li>• Xi Chen (NCTR/FDA): Tox-GAN: An Artificial Intelligence Approach Alternative to Animal Studies</li> </ul>
10:05 – 10:20 AM	<ul style="list-style-type: none"> <li>• Ting Li (NCTR/FDA): A Deep Learning-Powered Toxicity Prediction Framework using Model-Level Representation</li> </ul>
10:20 – 10:30 AM	<ul style="list-style-type: none"> <li>• <b>LIVE Q&amp;A</b></li> </ul>
<b>10:30 – 10:40 AM</b>	<b>Break</b>

<p><b>10:40 – 11:40 AM</b></p> <p>10:40 – 10:45 AM</p> <p>10:45 – 11:00 AM</p> <p>11:00 – 11:15 AM</p> <p>11:15 – 11:30 AM</p> <p>11:30 – 11:45 AM</p>	<p><b>Session 4: Bioinformatics Problem Defining and Solving with No-Boundary Thinking</b></p> <p>Chairs: Jennifer Fowler (AEDC) and Jason Causey (A-State)</p> <ul style="list-style-type: none"> <li>• Introduction by the Session Co-Chairs</li> <li>• Jason Moore (Cedars Senai): Automating Bioinformatics Analysis</li> <li>• Scott Williams (Case Western): Evolution: The Ultimate No Boundary Thinker</li> <li>• Yuanfang Guan (U. of Michigan): NeuroODE Models for PK/PD Prediction</li> <li>• <b>Live Q&amp;A</b></li> </ul>
<p><b>11:45 – 12:45 PM</b></p> <p>12:35 – 12:45 PM</p>	<p><b>Lightning Session:</b></p> <p>Co-chairs: Samantha Robinson (UA) and Tanmay Bera (NCTR/FDA)</p> <p><b>Live Q&amp;A Session</b></p>
<p><b>12:45 – 1:00 PM</b></p>	<p><b>Closing Remarks: Weida Tong (NCTR/FDA)</b></p>