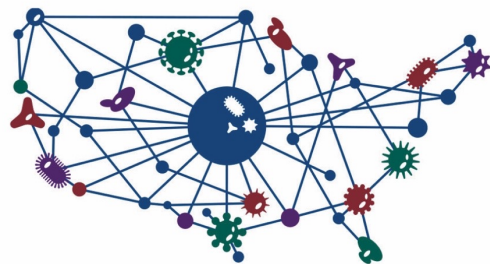




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UNITED
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CULTURE
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NETWORK



Workshop

Genome Sequencing and Microbial Resources

10-11 June 2024 | UC Davis, CA, USA

June 10, 2024

Welcome

Agenda

- Welcome & Participant Introductions
- USCCN overview
- 3 thought-provoking Session Topics
 - ❑ Challenges & Opportunities
 - ❑ The Power of Data
 - ❑ Unique Opportunities & Projects

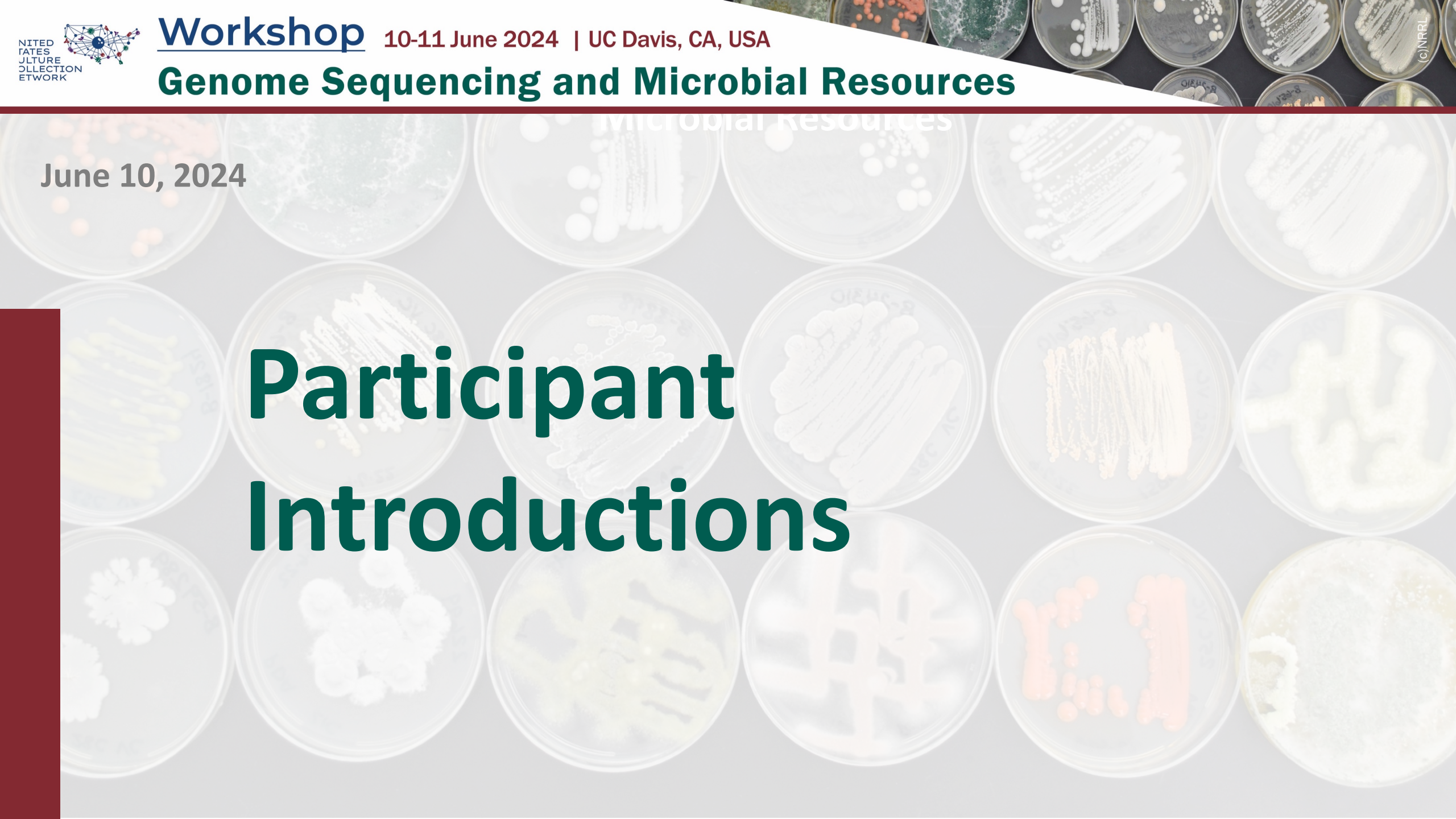
Workshop Reminders

- Please silence cell phones
- Give speakers our undivided attention
- Engage in session topics; ask questions
- Networking opportunities:
 - ❑ Coffee and lunch breaks
 - ❑ Tonight's evening reception



June 10, 2024

Participant Introductions



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THE U.S. CULTURE COLLECTION NETWORK – AN OVERVIEW

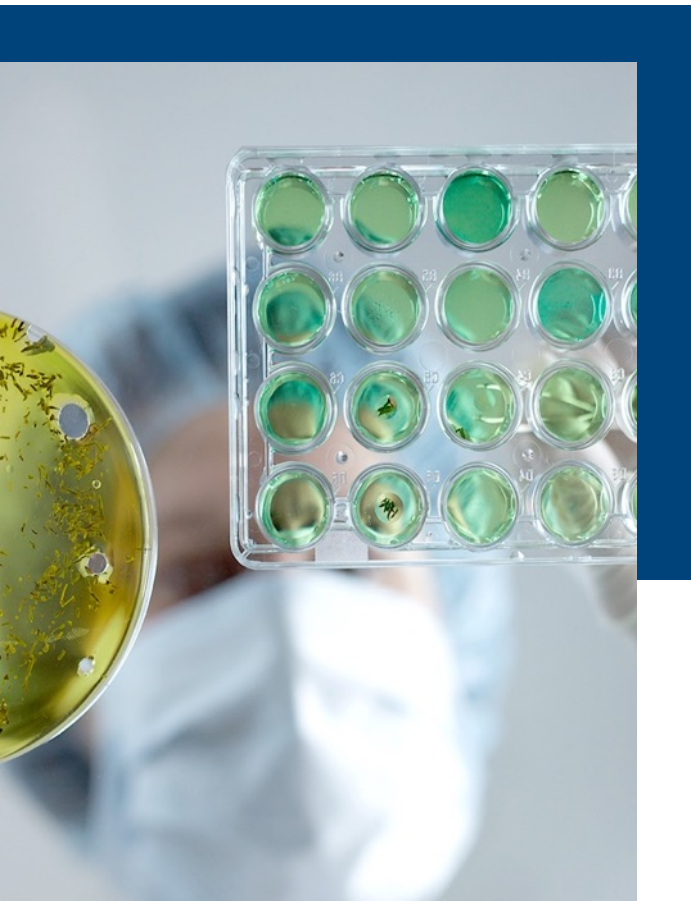
Dusti Gallagher
Project Manager



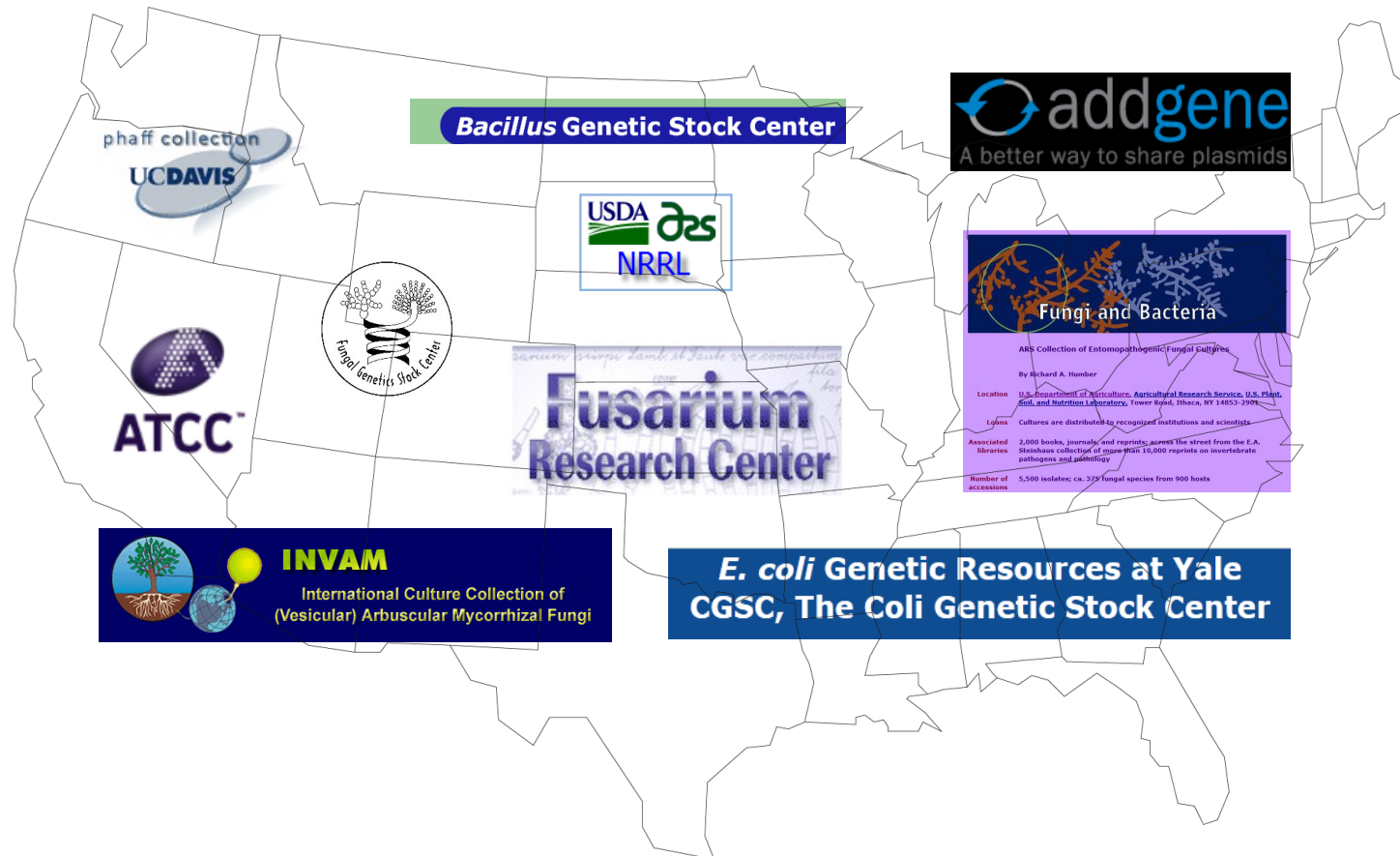
A NSF-funded Research Coordination Network

Bringing together scientists working with living microbe collections

A partnership with the International Phytobiomes Alliance for Research.



Culture Collections in the U.S.



While the U.S. has numerous collections, there is no uniform system for supporting microbial germplasm repositories

Pre USCCN

- **2007** – Initial workshop to develop an action plan, supported by USDA.
- **2009** – Draft of initial proposal based on workshop outcomes to develop a National Plant Microbial Germplasm System.
- **2010** – USDA-ARS provides financial input and physical infrastructure for microbial national system
- **2011** – APS annual meeting workshop on collections management and best practices

2012

NSF announces support for a Community of ex-situ microbial germplasm repository (USCCN)

2022

NSF renews funding for expansion of activities



Mission

Facilitate the safe and responsible utilization of microbial resources for research, education, industry, medicine, and agriculture for the betterment of humankind by providing opportunities for U.S. culture collection workers to engage with each other and with the broader culture collection community.

Vision

USCCN seeks to optimize the quality and availability of microbial resources and become a central resource for U.S. microbe culture collections and their users



Structure

Steering Committee

Identifies priorities for achieving vision and mission of the network and oversees the day-to-day activities.

Operating Committees

Lead and coordinate specific activities.

Steering Committee

Collections Registry

Standards & Procedures

Communications, Outreach & Education

Networking

Strategic & Long-term Planning

Membership

Current Activities – Major Focus

Create and Maintain a Public Registry & Database of U.S. Collections to Maximize Synergy and Minimize Duplication

- Crucial to document the location, size, and holdings of collections
- Registry is curated & updated
- Ensure collections of all types are well represented
- Includes small research collections at universities, governmental agencies and private for-profit and non-profit organizations

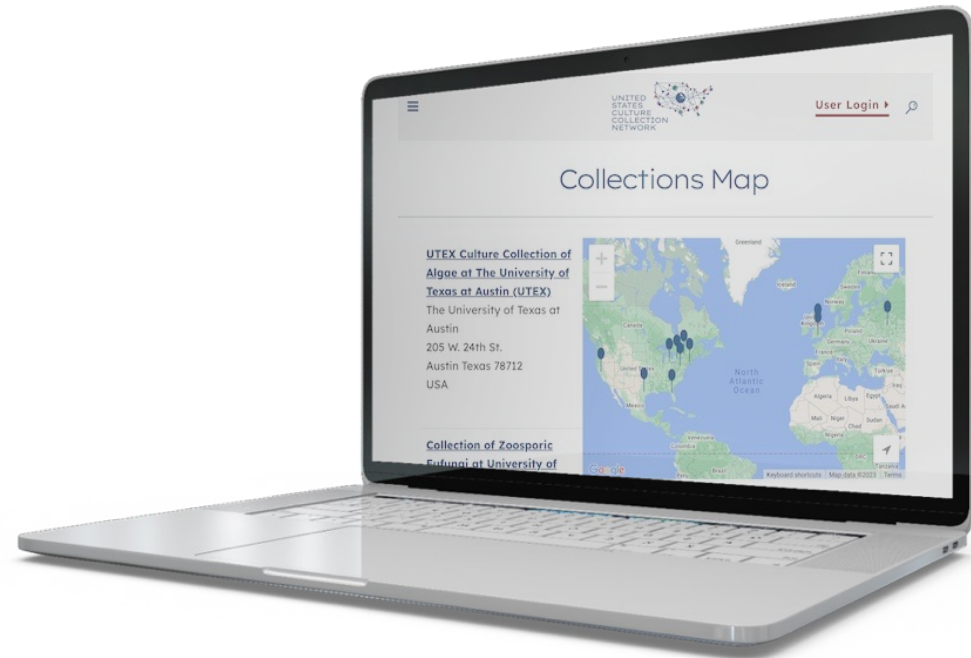


**Voluntary information in an open registry stored at usccn.org
Publicly available via an online searchable database**

The USCCN registry

A searchable database of plant associated, microbial culture collections from universities, industry and government agencies.

- A Census of Microbes
- All types of collections: research collections, federal collections, etc.
- What is available & where?
- Do they have genome sequences?
- Who to contact?



Who can register their collections?



Researchers & scientists who maintain a collection they use for their research



Curators of university or federal collections

UNITED STATES CULTURE COLLECTION NETWORK

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Potnis lab microbe collection

December 6, 2023

ORGANIZATIONAL STRUCTURE Academia	COLLECTION CONTACT Neha Potnis
COLLECTION INSTITUTION/ENTITY Auburn University	POSITION OF COLLECTION CONTACT Associate Professor
	COLLECTION EMAIL nzp0024@auburn.edu
	COLLECTION PHONE 334-844-2524
	COLLECTION CAN BE CONTACTED Yes

- ✓ Has continued institutional support
- ✓ Interested in Culture Collections Exchange
- ✓ Interested in working with samples from different repositories
- ✓ Interested in Collaborative Programs
- ✓ Collection contains reference strains
- ✓ Collection contains sequencing data

✗ Ability to accept orphan collections

COLLECTION CATEGORY Research collection (industry or research collection; does not include a plan to distribute strains)	AVAILABILITY AND DISTRIBUTION MECHANISMS No charge for distribution (shipping may be charged), Peer to peer for collaborations
COLLECTION FOLLOWS BEST MANAGEMENT PRACTICE GUIDELINE World Federation for Culture Collections Guidelines (http://www.wfcc.info/guidelines/)	SERVICES PROVIDED BY COLLECTION Not applicable
	CONSULTATIONS PROVIDED BY COLLECTION

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USDA-ARS Culture Collection (NRRL)

January 31, 2022

COLLECTION WEBSITE https://nrri.nrcour.usda.gov/	COLLECTION CONTACT Kirk Broders
ORGANIZATIONAL STRUCTURE Government Agency	POSITION OF COLLECTION CONTACT Curator
COLLECTION INSTITUTION/ENTITY USDA-ARS	COLLECTION EMAIL kirk.broders@usda.gov
STAFF WORKING WITH THE COLLECTION 5	COLLECTION PHONE 309-681-6597
	COLLECTION CAN BE CONTACTED Yes

- ✓ Has continued institutional support
- ✓ Interested in Culture Collections Exchange
- ✓ Interested in working with samples from different repositories
- ✓ Interested in Collaborative Programs
- ✓ Collection contains reference strains
- ✓ Ability to accept orphan collections

COLLECTION CATEGORY Publicly available (qualified curator, collection management policies, microbial specimens, a database of collection information, an online strain catalog, and distributes strains to the scientific community)	AVAILABILITY AND DISTRIBUTION MECHANISMS No charge for distribution (shipping may be charged)
CAPACITY TO ACCEPT ORPHAN COLLECTIONS We have the capacity to accession 300 orphaned strains per year. This	SERVICES PROVIDED BY COLLECTION Patent deposits
	CONSULTATIONS PROVIDED BY COLLECTION Patent deposits, Preservation, Propagation, Shipment regulations

➤ All types of collections are important

usccn.org/culture-collections

How to register your collection?

Go to the website
usscn.org



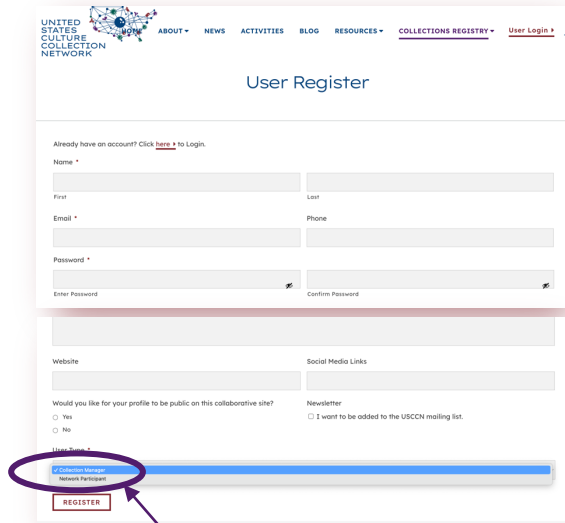
Create a profile



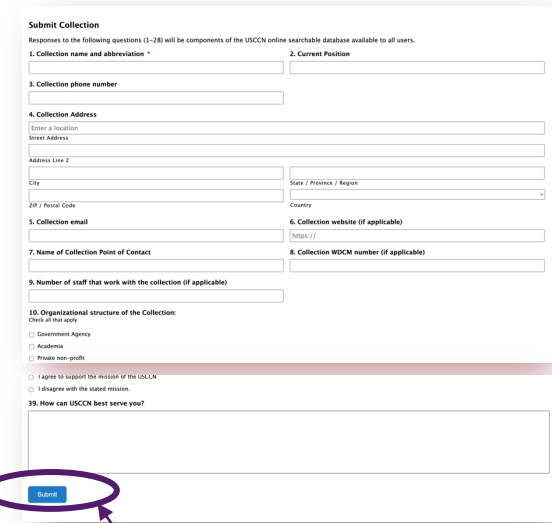
Describe & submit collection



Choose: "I have a collection I wish to register"



User type: Choose "Collection Manager"

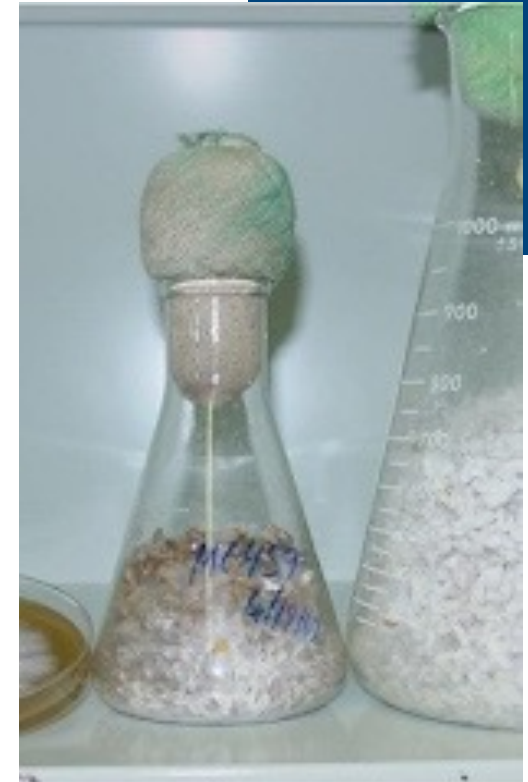


Click "Submit"

Current Activities – Major Focus

Develop Processes and Methods for Preserving Orphaned or Endangered Collections

- Online registry will provide information to identify collections at risk due to lack of funding or lack of transition planning.
- Under certain conditions, microbes assembled by individual researchers may warrant preservation.
- Retirements, existential threats such as natural and human-caused disasters, lapses of funding, loss of key personnel, changes in priorities and administrative changes may occur.



Register at usccn.org to identify collections which might be orphaned

USCCN Participation Benefits

- Links to Broader Scientific Community
- Engage Research Collections
- Expand Communication
- Foster Alliances and Collaborations
- Provides Infrastructure for Orphaned and Endangered Collections
- Develop Best Practice Guidelines, Protocols, and Procedures
- Improve Diversity, Equity and Inclusion Practices



Register to the mailing list at usccn.org to be informed of upcoming activities

Participate in USCCN

Help advance the quality and availability of microbial resources



Researchers & collections managers: Make your collection visible to the community

usccn.org/culture-collections

Collections users: Easily find what is available & where

usccn.org/user-register

Thank You



usccn.com



gallagher@eversoleassociates.com



us-culture-collection-network



@USCCN3



A project supported by the U.S. National Science Foundation
under Grant No. 2124633



Session 1: Challenges and Opportunities with Microbial Collections

Moderator



Dusti Gallagher
USCCN Project
Manager

Panelists



Kyria Boundy-Mills
Phaff Yeast Culture
Collection, UC-Davis



**Sayeh
Homayounpour**
Ginkgo Bioworks



Michael Lomas
Bigelow Laboratory
for Ocean Sciences



**Catalina Salgado-
Salazar**
USDA-ARS

June 10, 2024



June 10, 2024

Networking Break

➤ **Next Session starts at 10:30am**

Session 2: The Power of Data – Leveraging Collections to Answer Scientific Questions



Edward Dudley
Penn State
University



Caitilyn Allen
University of
Wisconsin-Madison



**Tiffany
Lowe-Power**
UC Davis



Titus Brown
UC Davis



Adam Newman
Ginkgo Bioworks

June 10, 2024



June 10, 2024

Lunch Break

- **Next Session starts at 2:15pm**
- **Today at 5:30pm**
 - Networking Reception**
 - @ UC Davis Winery Classroom**



Session 3: Unique Opportunities and/or Projects Within the Collections and Scientific Communities



Tanja Woyke
JGI



Rekha Seshadri
JGI



Lutz Froenicke
UC Davis



Marco Riojas
ATTC



Maher Al Rwahnih
UC Davis

June 10, 2024



Workshop 10-11 June 2024 | UC Davis, CA, USA

Genome Sequencing and Microbial Resources

June 10, 2024

Day 1: Open Discussion and Q&A



June 10, 2024

Special Recognition

➤ Presented by Kyria Boundy-Mills

June 10, 2024

Wrap-Up

Day 1 Outcomes

- Welcome & Participant Introductions
- USCCN overview
- 3 thought-provoking Sessions
 - Challenges & Opportunities
 - The Power of Data
 - Unique Opportunities & Projects

Workshop Announcements

- Networking Reception today
 - 5:30pm
 - UC Davis Winery Classroom
- Day 2: **7:55am start**
 - Morning presentations
 - Afternoon tours



June 10, 2024

Networking Reception

- **5:30 – 7:00 pm**
- **At the UC-Davis Winery Classroom**

June 11, 2024

Welcome

Agenda

- Session Topic
 - The Nagoya Protocol
- Tours
 - Teaching Brewery
 - Teaching Winery
 - Bohart Museum of Entomology
(Wildlife and Insect Collections)

Workshop Reminders

- Please silence cell phones
- Give speakers our undivided attention
- Engage in session topics; ask questions
- Networking opportunities:
 - Coffee and lunch breaks



Session 4: The Nagoya Protocol: Potential Impacts on Data, Information, Licensing & Agreements



Amber Hartman-Scholz
DSMZ



Matthew Ryan
CABI



Dianna Francis
UC Davis

June 11, 2024



June 11, 2024

Q&A and Discussion

June 11, 2024

Wrap-Up

Day 2 Outcomes

- Session
 - Nagoya Protocol

Survey

- Send us your feedback
 - <https://forms.gle/U2R1hYz6BXJ67XJEA>

Workshop Announcements

- Collection Tours
 - 11:15am: departure morning tours
 - 12:45pm: Lunch at Alumni Center
 - 1:30pm: departure afternoon tours

**Thank you for your
Participation!**



usccn.com



gallagher@eversoleassociates.com



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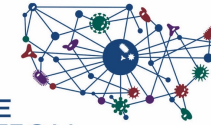


Next USCCN Workshop



Pre-conference Workshop

UNITED
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NETWORK



Exploring the Value of Microbial Germplasm for Research and Industry

18 November 2024 | 12:30-5:30pm | St.Louis, MO, USA

www.phytobiomesconference.org

