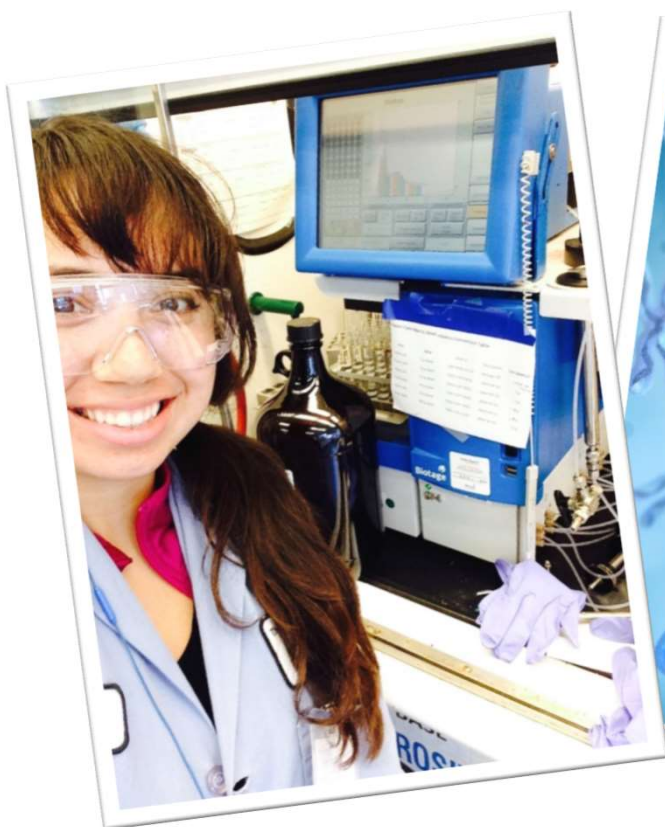


Strategies to Enhance Belonging, Equity, & Inclusion in Your Lab



Diana Lizarraga

Director Cal NERDS

Director STEM Equity & Success

Division of Equity & Inclusion

Berkeley
UNIVERSITY OF CALIFORNIA

My Role

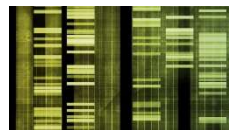
My STEM Journey

UG Researcher

- UC Davis Medical Center, Dept. of Pathology
 - Laboratory Information Services
- UC Davis CA National Primate Research Center
 - Reproductive Biology (Rhesus Macaques)
- UC Davis Department of Animal Science
 - Geographic Info Systems Genetic Mapping

Technology & STEM Education

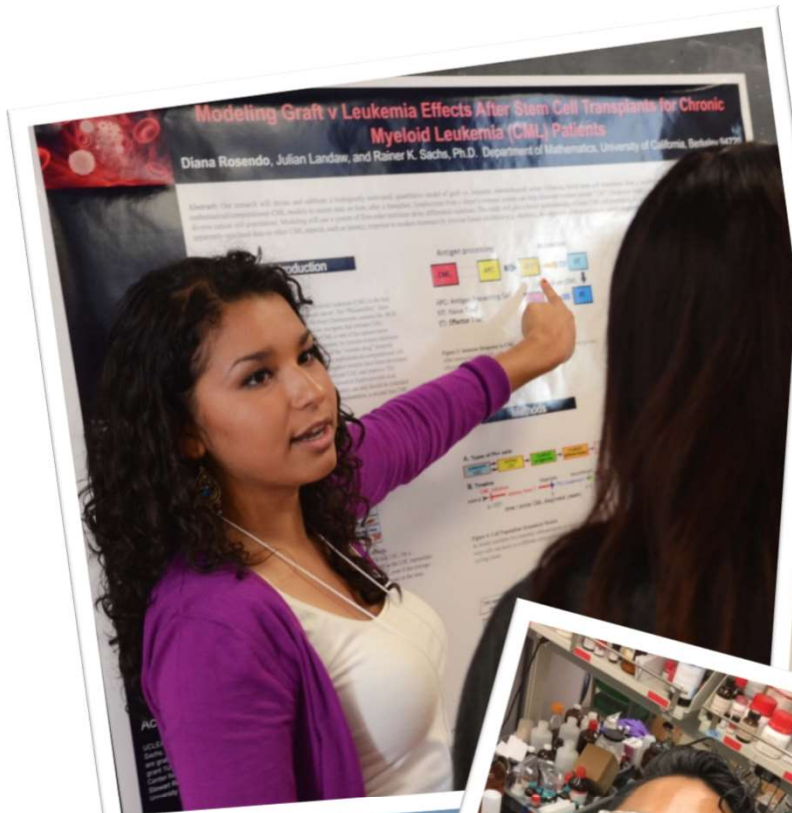
- UC Davis Website Designer
- Davis DNA Sequencing Facility Website Designer
- HP, Customer Intelligence Services
- Div. of Equity & Inclusion, UC Berkeley (16 yrs)
 - NSF STEM diversity research grants
 - Python & Data Science coding boot camps
 - Development of STEM campus web tool
 - Doctoral degree – focus STEM Education



SCHOOL OF
EDUCATION



Division of Equity & Inclusion | STEM



- Advocate through programs, services, and access to information
- Non-dominant groups (often marginalized and minoritized)

Developing A STEM Workforce

- Technologically Amplified Students
- Hyperconnected
- Extreme Learners
 - Triple Majors
- Data Science Oriented
- College Debt Concerns
- Basics Needs – Food Insecurities
- Health, Wellness, & Mental Health



Students Need Role Models & Mentoring



**Mentor Dr. Shiva Malek
& Mentee Silver**



Concepts

Valuable Concepts | Pair & Share

Sense of Belonging

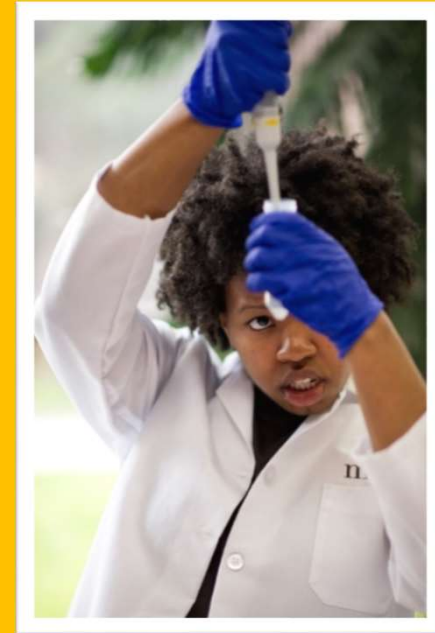
- Helps us build informal and formal relationships among people and environments that we are in
 - Maslow - Basic human need
 - Psychological development

Equity¹

- The guarantee of fair treatment, access, opportunity and advancement for all
- Striving to identify and eliminate barriers that have prevented the full participation of marginalized groups

Inclusion¹

- The act of creating environments in which any individual or group can feel welcomed, respected, supported, and valued
- An inclusive climate embraces differences and offers respect in words and actions so that all people can full participate in your company's opportunities



Share 1-2 work practices that you have experienced at your work (or former job) that are connected to any of these 3 concepts

Takeaway #1

- **Gain more exposure to Belonging, Equity, & Inclusion practices**

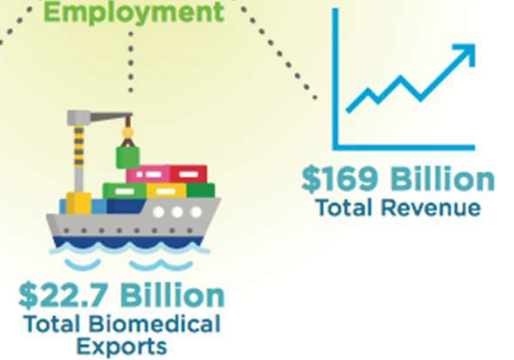


Work Landscapes

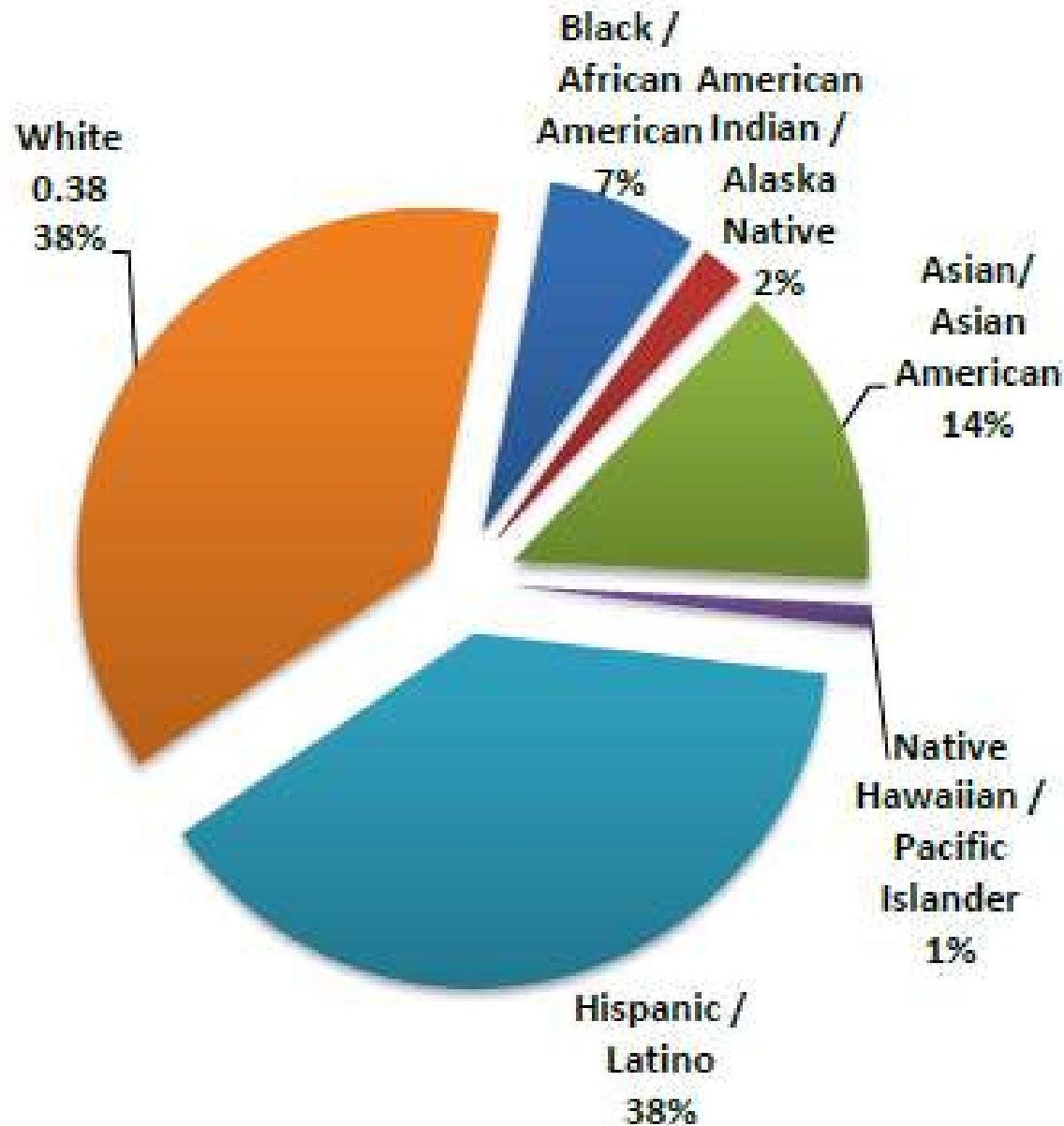
California's Life Sciences Ecosystem

“The Golden State leads the world in life sciences innovation, educating thousands of new scientists, attracting billions in public and private investment, employing thousands and producing hundreds of new therapies and technologies to improve patient care.”

source:



2015 California Demographics



Evolving Terms Example

- Hispanic
- Latino/Latina
- Chicano/Chicana
- Xicano/Xicana
- Chicanx/Latinx

Source: UC Davis ' Josephine Moreno's Graduate Diversity Orientation. Data based on US Census Bureau Quick Facts, www.census.gov/quickfacts (accessed February 2015)

Your Work Environment

- **Organization culture**
 - Understanding your lab's currency
 - Conversations with your leaders
- **Self-assessment – gather information**
 - Expand the capability of your team/organization
 - Provide pathways to access and promote success of your workforce
 - Prepare for embracing change

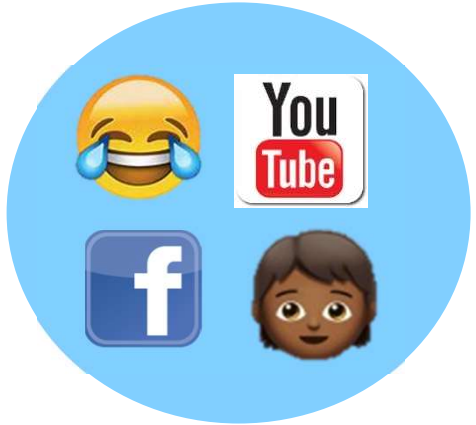
GOALS



Potential Questions

- Does your company or department have a strategic plan for equity and inclusion?
 - Mission
 - Vision (goals, strategies, & metrics)
 - Core Values
 - Leadership
- Has your company or department implemented an employee climate survey?
 - If so, what were the results?

TechnoInclusion™



DIGITAL SPACES

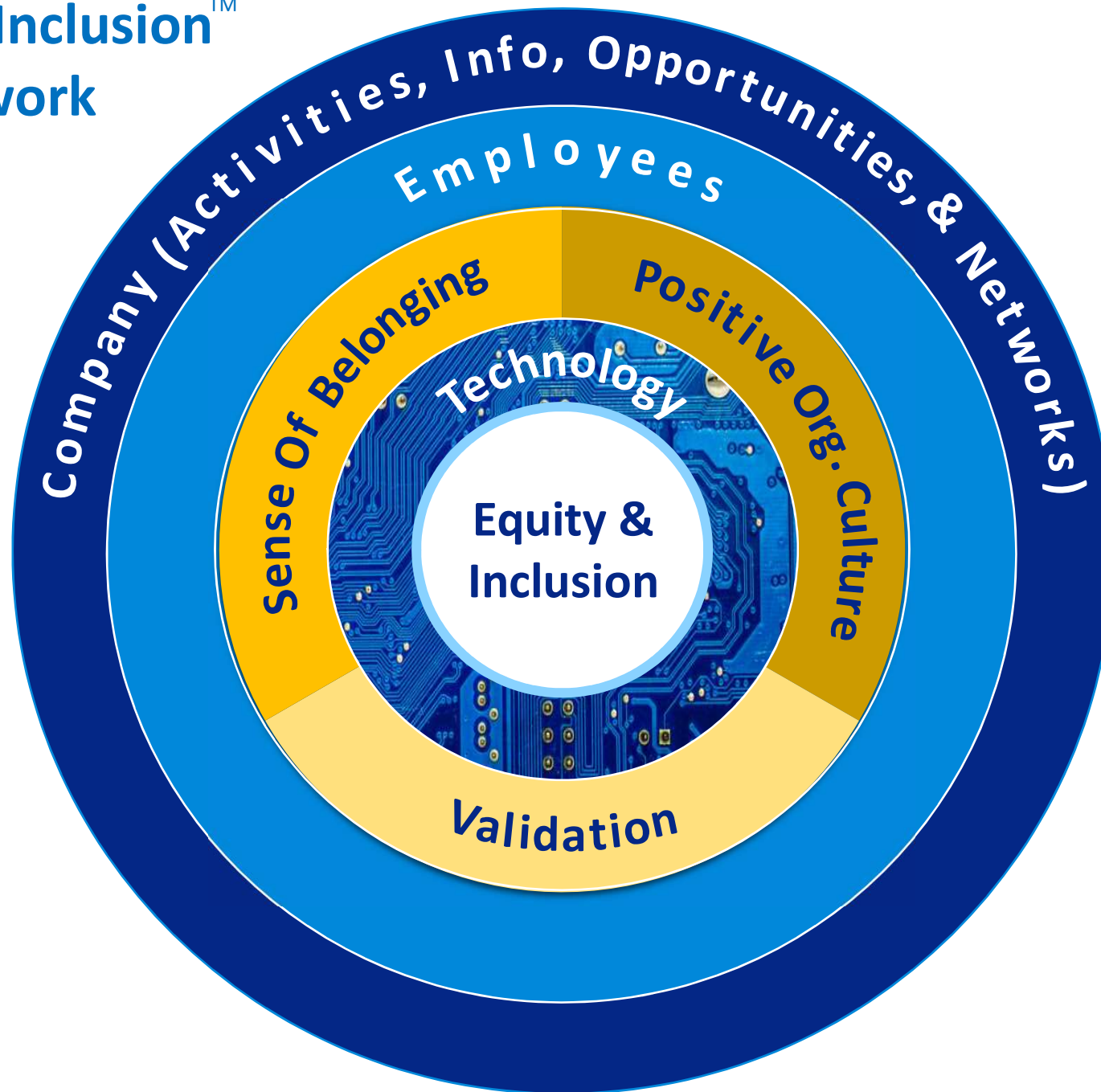


EQUITY & INCLUSION



HUMAN BEHAVIOR

TechnoInclusion™ Framework



Takeaway #2

- **Do a work mini-self assessment of Belonging, Equity, & Inclusion**
 - Including digital spaces
 - Understand your geography & work landscapes



Workforce Opportunity

Community Colleges (CC) Pathways to You

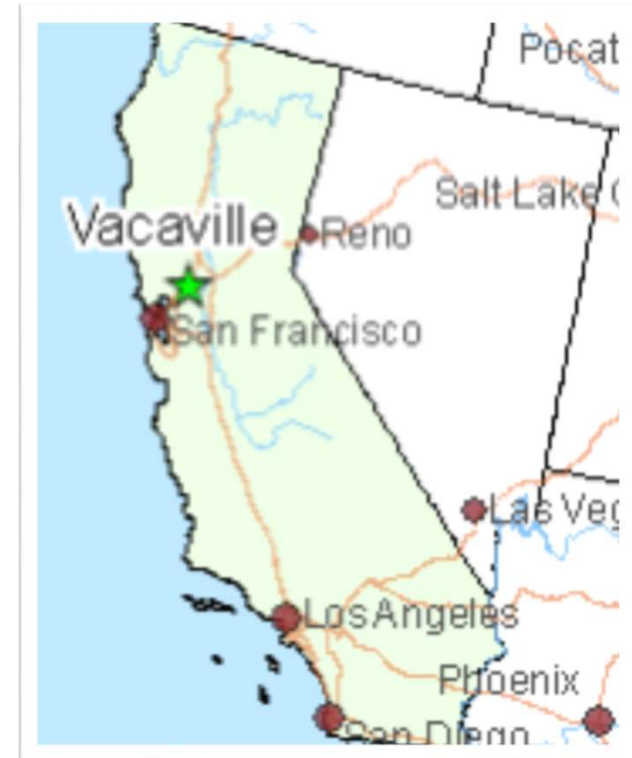


- Many CC Biotech Programs are former Career Technical Education Programs
 - Often well funded and well equipped
 - Example: \$250 million per year to CC CTE & additional city bond funds
- NSF Grant connects these CC Biotech Programs
 - Administered by Austin CC in Texas
- All CC Biotech programs have industry advisory committees – consider joining one near you

Solano CC Vacaville's
new 32,088 square feet
Biotechnology & Science
building

Source: James DeKloe
Image Source: solano.edu/vacaville/

Solano CC Biotech Highlight



- CC is an important educational avenue for many first-generation, underrepresented minority, and non-dominant students
- The California Promise CC Act = 1st year of CC is free
- One of 115 California CC in our state
 - California is the biggest college system in the U.S.

Solano CC's Biotech Offerings

Certificate Programs

- Laboratory Assistant Industrial Biology
 - (Including Bootcamps)
- Cell and Gene Therapy (includes a synthetic biology component)

2 & 4 Year Degrees

- Associates of Science in Industrial Biotechnology
- Bachelors of Science in Biomanufacturing



'Fertile soil for biotech': Solano County's Vacaville preps global pitch for firms to plant roots there



Image source: James DeKloe

Skills & Professional Exam Prep

- Advanced knowledge of bioprocess control and monitoring
 - Advanced experience with equipment
 - Engineering principles
 - Advanced knowledge of regulations
 - Additional Biomanufacturing business knowledge
 - Technical Writing
 - Project Management
 - Bioethics
- BIOT 407 – Aligned with the **American Society for Quality (ASQ) Certified Quality Improvement Associate**
 - BIOT 406 - ***Association for Supply Chain Management (ASCM) Certified in Production and Inventory Management (CPIM) certification***
 - BIOT 408 – **American Society for Quality (ASQ) Yellow Belt in Six Sigma**
 - BUS 400 – **Project Management Institute (PMI) Certified Associate in Project Management**

Takeaway #3

- **Connect to STEM Workforce Hubs**

Solano Community College's Biotech Program

Dr. James DeKloe, james.dekloe@solano.edu



Other Community College Biotech Connections: Contra Costa, Skyline, Ohlone – Newark, MiraCosta (BS degree in Biomanufacturing)

Image sources: James DeKloe

Summary

1

Gain more exposure to Belonging, Equity, & Inclusion practices

2

Do a work mini-self assessment of Belonging, Equity, & Inclusion

3

Connect to STEM Workforce Hubs

Thank You

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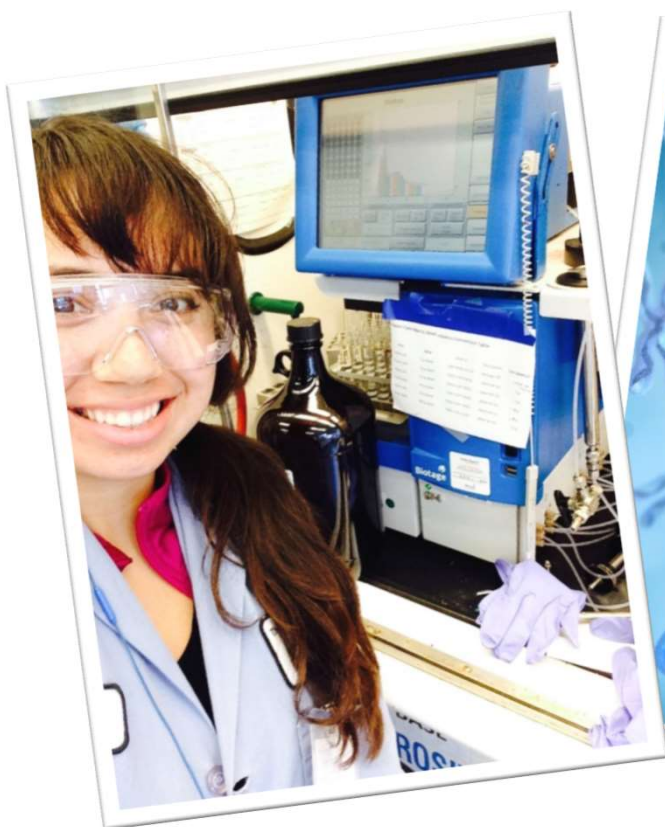


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WACD Conference Planning Committee



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