AGENDA FOR THE 65TH ANNUAL COCCIDIOIDOMYCOSIS STUDY GROUP MEETING
Host: University of Arizona- Zoom
Tucson, AZ
April 16th – 17th, 2021

FRIDAY, APRIL 16TH
8:00 — 10:00 AM
SESSION 1: ECOLOGY/GENOMICS
Moderator: Dr. Bridget Barker

8:00 AM — 8:10 AM
INTRODUCTION

8:10 AM
Invited Lecture: Dr. Matthew Fisher
FUNGAL GENOMICS AND COCCI – WHY BOTHER?

8:30 AM
COCCIWATCH: PRELIMINARY RESULTS OF AIR MONITORING FOR COCCIDIOIDES SPORES IN ARIZONA AND CALIFORNIA
Lalitha Gade¹, Rebecca Sunenshine², Shane Brady³, Kenneth Komatsu³, Kimberly Hernandez⁴, Duc Vugia⁵, Jolene Bowers⁶, Anastasia Litvintseva¹, David Engelthaler⁷
¹Centers for Disease Control and Prevention, Atlanta, USA. ²Maricopa County Department of Public Health, Phoenix, United States Minor Outlying Islands. ³Arizona Department of Health Services, Phoenix, USA. ⁴Kern County Public Health Services Department, Bakersfield, United States Minor Outlying Islands. ⁵California Department of Public Health, Richmond, USA. ⁶Translational Genomics Institute – North, Flagstaff, USA. ⁷Translational Genomics Institute – North, Flagstaff, United States Minor Outlying Islands

8:45 AM
THE AIR MYCOBIOME IS DECOUPLED FROM THE SOIL MYCOBIOME IN THE SAN JOAQUIN VALLEY COCCIDIOIDES IMMITIS ENDEMIC REGION
Robert Wagner¹, Liliam Montoya¹, Cheng Gao², John Taylor¹
¹University of California Berkeley, Berkeley, USA. ²Chinese Academy of Sciences, Beijing, China

9:00 AM
RECENT SOIL ANALYSIS CALLS FOR AN UPDATED REALIZED NICHE MAP OF COCCIDIOIDES SPP. IN THE WESTERN UNITED STATES
Daniel Kollath¹, Heather Mead¹, Karis Miller¹, Katy Parise¹, Bridget Barker¹
¹Pathogen and Microbiome Institute, Northern Arizona University, Flagstaff, USA

CSG 65 AGENDA: PAGE 1 OF 7
9:15 AM

LUNG TISSUES FROM WILD SOUTHWESTERN RODENTS HELP IN UNDERSTANDING THE GEOGRAPHIC DISTRIBUTION AND DISEASE ECOLOGY OF COCCIDIOIDES AND OTHER MEMBERS OF THE ONYGENALES

Paris Hamm, Kyana Montoya, John Taylor, Schuyler Liphardt, Joseph Cook, Donald Natvig

1University of New Mexico, Albuquerque, USA. 2Los Alamos National Laboratory, Los Alamos, USA. 3University of California Berkeley, Berkeley, USA. 4Museum of Southwestern Biology, Albuquerque, USA

9:30 AM

USING PRECIPITATION TO FORECAST COCCIDIOIDOMYCOSIS INCIDENCE IN THE SAN JOAQUIN VALLEY OF CALIFORNIA

Morgan E. Gorris, Patrick L. Kinney, James E. Neumann, Marcus C. Sarofim

1Los Alamos National Laboratory, Los Alamos, USA. 2Boston University, Boston, USA. 3Industrial Economics, Cambridge, USA. 4Environmental Protection Agency, Washington D.C., USA

BREAK: 9:45 AM — 10:00 AM

10:00 — 12:00 AM

SESSION 2: EPIDEMIOLOGY

Moderator: Dr Susan Hoover

10:00 AM

Invited Lecture: Dr. Brendan Jackson

10:20 AM

GENOMIC EPIDEMIOLOGY OF COCCIDIOIDES LINKS NON-ENDEMIC COCCIDIOIDOMYCOSIS TO TRAVEL

Juan Monroy-Nieto, Anastasia Litvintseva, Lalitha Gade, Jolene Bowers, David Engelthaler, Nancy Chow

1Translational Genomics Research Institute, Pathogen and Microbiome Div, Flagstaff, USA. 2Centers for Disease Control and Prevention, Mycotics Disease Branch, Atlanta, USA

10:35 AM

TESTING FOR COCCIDIOIDOMYCOSIS AND SARS-COV-2 BY INFECTIOUS DISEASE SPECIALISTS, UNITED STATES

Kaitlin Benedict, Samantha Williams, Susan E. Beekmann, Philip M. Polgreen, Brendan R. Jackson, Mitsuru Toda

1CDC, Atlanta, USA. 2University of Iowa, Iowa City, USA
10:50 AM
EPIDEMIOLOGY OF COCCIDIOIDOMYCOSIS-ASSOCIATED HOSPITALIZATIONS AND IN-HOSPITAL DEATHS, CALIFORNIA, 2000–2017
Gail Sondermeyer Cooksey, Amanda Kamali, Duc Vugia, Seema Jain
Infectious Diseases Branch, California Department of Public Health, Richmond, CA, USA

11:05 AM
DISEASE TRIANGLE DYNAMICS OF COCCIDIOIDOMYCOSIS IN NORTHERN ARIZONA
Heather Mead¹, Dan Kollath¹, Marcus Teixeira², Chandler Roe¹, Paul Keim¹, Carmel Plude³, Joel Terriquez³, Nivedita Nandurkar³, Chelsea Donohoo⁴, Brettania L.W. O'Connor¹, Bridget Barker¹
¹Northern Arizona University, Flagstaff, USA. ²University of Brasilia, Brasilia, Brazil. ³Northern Arizona Health Care, Flagstaff, USA. ⁴Coconino County Health Department, Flagstaff, USA

11:20 AM
CHILDREN ARE OUR FUTURE: EDUCATING YOUTH TO REACH ADULTS ABOUT RISKS, PREVENTION, AND TREATMENT OF VALLEY FEVER
Alicia Pucci, Merle Baron, Lindsey Pandes, Stacy Hartmann, Kelsey OYong, Zachary Rubin, Dawn Terashita
Los Angeles County Department of Public Health, Los Angeles, USA

11:35 — 12:00 PM
BUSINESS MEETING
Moderator: Neil Ampel
Acknowledgement: Demosthenes Pappagianis
Remembrance: Peter Kelly
Setting the date and site for the 66th CSG Annual Meeting

12:00 — 12:30 PM
UPDATES FROM THE CDC AND NIH

SATURDAY, APRIL 17TH
8:00 — 8:10 AM
INTRODUCTION

8:10 — 10:00 AM
SESSION 3: BASIC SCIENCE
Moderator: Dr. Fariba Donovan
8:10 AM
Invited Lecture: Amy Hsu
COCCIDIOIDOMYCOSIS – THE FIRST STEP TO SOLVING ANY PROBLEM IS RECOGNIZING THERE IS ONE

8:30 AM

**ACPS1 LIVE AVIRULENT VACCINE PROTECTS DOGS AGAINST EXPERIMENTALLY INDUCED PULMONARY COCCIDIOIDOMYCOSIS**

Lisa Shubitz¹, Edward Robb², Daniel Powell¹,³, Richard Bowen⁴, Angela Bosco-Lauth⁴, Airn Hartwig⁴, Stephanie Porter⁴, Hien Trinh¹, Hilary Moale¹, Helle Bielefeldt-Ohmann⁵, James Hoskinson⁶, Marc Orbach⁷, Jeffrey Frelinger¹, John Galgiani¹,⁸

¹Valley Fever Center for Excellence, The University of Arizona, Tucson, USA. ²Anivive Lifesciences, Long Beach, USA. ³Department of Immunobiology, The University of Arizona, Tucson, USA. ⁴College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Ft. Collins, USA. ⁵Chemistry and Molecular Biosciences, University of Queensland, Queensland, Australia. ⁶Hoskinson, DACVR, Berthoud, USA. ⁷School of Plant Sciences, The University of Arizona, Tucson, USA. ⁸Department of Medicine, The University of Arizona, Tucson, USA

8:45 AM

**COMPARISON OF GENE EXPRESSION IN THE LUNGS OF RESISTANT AND SUSCEPTIBLE INBRED MICE INFECTED WITH COCCIDIOIDES IMMITIS**

Sinem Beyhan¹,², Suganya Viriyakosol², Sharon Okamoto², Theo Kirkland², Joshua Fierer²

¹J. Craig Venter Institute, La Jolla, USA. ²University of California San Diego, La Jolla, USA

9:00 AM

**CHARACTERIZING IN VITRO AND IN VIVO BIOMARKERS FOR A VALLEY FEVER BREATH TEST**

Emily A. Higgins Keppler¹,², Heather Mead³,⁴, Marley C. Van Dyke³,⁴, Bridget M. Barker¹,³,⁴, Heather D. Bean¹,²

¹School of Life Sciences, Arizona State University, Tempe, AZ, USA. ²Center for Fundamental and Applied Microbiomics, The Biodesign Institute, Tempe, AZ, USA. ³Department of Biological Sciences, Northern Arizona University, Flagstaff, AZ, USA. ⁴The Pathogen and Microbiome Institute, Flagstaff, AZ, USA

9:15 AM

**RECOMBINANT (GCP-RCPA1) VACCINE INDUCED IMMUNITY AGAINST COCCIDIOIDOMYCOSIS IN HUMANS**

Althea Campuzano¹, Hao Zhang¹, Chrissy M. Leopold-Wager¹, Heidi Erickson², Josh Malo², Ken Knox², Neil Ampel², Gary Ostroff³, Ching-Yu Hung¹

¹The University of Texas at San Antonio, San Antonio, USA. ²The University of Arizona, Tuscon, USA. ³The University of Massachusetts Medical School, Worcester, USA

9:30 AM

**MOUSE MODEL OF A HUMAN STAT4 POINT MUTATION THAT PREDISPOSES TO DISSEMINATED COCCIDIOIDOMYCOSIS**

Daniel Powell¹, Lisa Shubitz¹, Christine Butkiewicz¹, Hien Trinh¹, Hilary Moale¹, Thomas Doetschman², Amy Hsu², Marc Orbach³, Steven Holland³, John Galgiani¹, Jeffrey Frelinger¹
9:45 AM

EFFICACY OF NIKKOMYCIN Z IN MURINE CENTRAL NERVOUS SYSTEM COCCIDIOIDOMYCOSIS, MODELING SUSTAINED RELEASE DOsing

Gabriele Sass1, David J. Larwood1,2, Marife Martinez1, Pallabi Shrestha1, David A. Stevens1,3

1California Institute for Medical Research, San Jose, USA. 2Valley Fever Solutions, Tucson, USA. 3Div. of Infectious Diseases and Geographic Medicine, Stanford Univ. Medical School, Stanford, USA

10:00 — 10:15 am

BREAK

10:15 — 12:15 pm

SESSION 4: VETERINARY AND CLINICAL SCIENCE

Moderator: Dr. Lisa Shubitz

10:15 AM — 10:35 AM

Invited Lecture: Dr. John Galgiani

MANAGEMENT STRATEGIES FOR UNCOMPLICATED COCCIDIOIDOMYCOSIS IN ADDITION TO OR INSTEAD OF ANTIFUNGAL DRUGS

10:35 AM

COCCIDIOIDOMYCOSIS IN HORSES: A CASE SERIES AND REVIEW OF THE LITERATURE

Matthew Sheley1, Melissa Macías-Rioseco2, Francisco Uzal3

1EasternVetPath, Knoxville, USA. 2UD Davis, California Animal Health and Food Safety Laboratory, Tulare, USA. 3UC Davis, California Animal Health and Food Safety Laboratory, San Bernardino, USA

10:50 AM

A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED CLINICAL TRIAL OF FLUCONAZOLE AS EARLY EMPIRIC TREATMENT OF COCCIDIOIDOMYCOSIS PNEUMONIA (VALLEY FEVER) IN ADULTS PRESENTING WITH COMMUNITY-ACQUIRED PNEUMONIA IN ENDEMIC AREAS (FLEET-VALLEY FEVER)

Susanna Naggie, MD, MHS1,2, Julia A. Messina, MD, MHS, MSc1, Eileen K. Maziarz, MD1, John Galgiani, MD3, Jonathan T. Truong, MD3, Aung K. Htoo, MD3, Aneesh T. Narang, MD6, Fariba M. Donovan, MD, PhD7, Marion Ewell, ScD8, Antonino Catanzaro, MD9, George R. Thompson III, MD10, Neil M. Ampel, MD3, John R. Perfect, MD1, Emmanuel B. Walter, MD, MPH11,12,11

1Duke University School of Medicine, Durham, USA. 2Duke Clinical Research Institute, Durham, USA. 3Valley Fever Center for Excellence, Tucson, USA. 4Southern California Kaiser Permanente, Antelope Valley, USA. 5Southern California Kaiser Permanente, Kern County, USA. 6Banner University Medical Center Phoenix, Phoenix,
11:05 AM
CONTRIBUTION OF BIOLOGIC RESPONSE MODIFIERS TO THE RISK OF COCCIDIOIDOMYCOSIS SEVERITY
Fariba Donovan1,2, Ferris Ramadan3, Julia Buchf, James Lim2, Rebia Khan4, Natalie DeQuillfeldt2, Natalie Davis2, Ashwini Kaveti2, Melanie De Shadarevian5, Edward Bedrick3, John Galgiani1,2
1The Valley Fever Center for Excellence, University of Arizona, Tucson, USA. 2University of Arizona College of Medicine-Tucson, Tucson, USA. 3Department of Epidemiology and Biostatistics, University of Arizona College of Public Health, Tucson, USA. 4University of Arizona College of Medicine-Phoenix, Phoenix, USA. 5A.T. Still University School of Osteopathic Medicine, Mesa, USA

11:20 AM
COCCIDIOIDOMYCOSIS AND COVID-19: A SINGLE CENTER CASE SERIES
Daniel Huff, Neil Ampel, Holenarasipur Vikram, Robert Orenstein, Maria T. Seville, Juan Gea Banacloche, Amy Kole, Mark Burns, Janis Blair
Mayo Clinic Arizona, Phoenix, USA

11:35 AM
METABOLIC REPROGRAMMING AND IMMUNE RESPONSE REFLECTING DISEASE SPECTRUM IN PATIENTS WITH COCCIDIOIDES INFECTION AND WITH SARS-COV-2 CO-INFECTION
Clarissa Santos Rocha, Pedro Negri Bernardino, Kelly Crucillo, Elise Buser, Neil Capulong, Ian McHardy, Stuart Cohen, George Thompson, Sumathi Sankaran-Walters, Satya Dandekar
Department of Medical Microbiology and Immunology, Division of Infectious Diseases/IM, School of Medicine, University of California Davis.

11:50 AM
DEVELOPMENT OF A COCCIDIOIDOMYCOSIS DIAGNOSTIC ALGORITHM FOR PRIMARY CARE PROVIDERS IN THE UNITED STATES
Rebecca Free, Mitsuru Toda, Brendan Jackson
Centers for Disease Control and Prevention, Atlanta, USA

12:05-12:20 BREAK
12:20 — 2:00 PM
BREAKOUTS AND POSTER VIEWING
Assign to Breakout Rooms For Poster Viewing – See next page.

2:00 PM
MEETING ADJOURNMENT
**POSTER VIEWING: BREAKOUT ROOM ASSIGNMENTS**

### BREAKOUT ROOM 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter first name</th>
<th>Presenter last name</th>
<th>Title</th>
<th>Category</th>
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<tbody>
<tr>
<td>12:20</td>
<td>Daniel</td>
<td>Powell</td>
<td>EFFECTS OF TNF-ALPHA INHIBITION ON A MOUSE MODEL OF CONTROLLED COCCIDIOIDES INFECTION</td>
<td>3 Basic Science</td>
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<tr>
<td>12:30</td>
<td>Heather</td>
<td>Mead</td>
<td>Differential Thermotolerance Adaptation between Species of Coccidioides</td>
<td>3 Basic Science</td>
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<tr>
<td>12:40</td>
<td>Anh</td>
<td>Diep</td>
<td>Monocyte and Dendritic Cell Responses to Coccidioides</td>
<td>3 Basic Science</td>
</tr>
<tr>
<td>12:50</td>
<td>Laela Maree</td>
<td>Booshehri</td>
<td>Inflammosome dependent and independent pathways in Coccidioidomycosis</td>
<td>3 Basic Science</td>
</tr>
<tr>
<td>13:00</td>
<td>Klaire</td>
<td>Laux</td>
<td>Deadly Recombination: Elucidating the Secret Sex Life of Coccidioides</td>
<td>3 Basic Science</td>
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<tr>
<td>13:10</td>
<td>Valerie</td>
<td>Arboleda</td>
<td>Incorporating Genetic Ancestry as a Biomarker for Disseminated Coccidioidomycosis (DCM)</td>
<td>3 Basic Science</td>
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<td>13:20</td>
<td>Francisca</td>
<td>Grill</td>
<td>Development of a quantitative antigen assay to detect coccidioidal chitinase-1 (CTS1) in human serum</td>
<td>3 Basic Science</td>
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<td>13:30</td>
<td>Marc</td>
<td>Orbach</td>
<td>TRANSCRIPTOMICS OF THE COCCIDIOIDOMYCOSIS VACCINE STRAIN Δcps1 REVEALS INSIGHTS INTO CPS1 FUNCTION</td>
<td>3 Basic Science</td>
</tr>
<tr>
<td>13:40</td>
<td>Nikita</td>
<td>Ashcherkin</td>
<td>Impact of COVID-19 Pandemic on Diagnosis of Acute Primary Pulmonary Coccidioidomycosis</td>
<td>5 Clinical</td>
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### BREAKOUT ROOM 2

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<th>Title</th>
<th>Category</th>
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<tr>
<td>12:20</td>
<td>Alexis</td>
<td>Stephens</td>
<td>A Phase IIa Trial Study to Assess Safety and Efficacy of Interferon Gamma in the Treatment of Severe Pulmonary or Nonmeningeal Disseminated Coccidioidomycosis</td>
<td>5 Clinical</td>
</tr>
<tr>
<td>12:30</td>
<td>Terrie</td>
<td>Ahn</td>
<td>T helper cell phenotypic differences between Disseminated Coccidioidomycosis and Uncomplicated Valley fever</td>
<td>5 Clinical</td>
</tr>
<tr>
<td>12:40</td>
<td>Esa</td>
<td>Rayyan</td>
<td>Co3: CoVID, Cocci, and Co-infection.</td>
<td>5 Clinical</td>
</tr>
<tr>
<td>12:50</td>
<td>Vishal</td>
<td>Narang</td>
<td>CAVITARY COCCIDIOIDOMYCOSIS IN PATIENTS WITH DIABETES MELLITUS</td>
<td>6 Case Presentation</td>
</tr>
<tr>
<td>13:00</td>
<td>Yulia</td>
<td>Levkiavska</td>
<td>REACTIVATED COCCIDIOIDOMYCOSIS FOLLOWING GLUCOCORTICOID THERAPY: 2 PATIENTS</td>
<td>6 Case Presentation</td>
</tr>
<tr>
<td>13:10</td>
<td>Valerie</td>
<td>Civelli</td>
<td>A CASE REPORT OF COCCIDIOIDOMYCOSIS IN THE RENAL PARENCHYMA OF UNUSUAL SEVERITY</td>
<td>6 Case Presentation</td>
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<td>13:20</td>
<td>Rupam</td>
<td>Sharma</td>
<td>COCCIDIOIDAL PERITONITIS: A REVIEW OF 13 CASES</td>
<td>6 Case Presentation</td>
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<td>13:30</td>
<td>Barbara</td>
<td>Braz</td>
<td>Peritoneal coccidioidomycosis in a pediatric patient</td>
<td>6 Case Presentation</td>
</tr>
<tr>
<td>13:40</td>
<td>Nadia</td>
<td>Raza</td>
<td>HEPATIC ABSCESS IN A PATIENT WITH DISSEMINATED COCCIDIOIDOMYCOSIS: A CASE REPORT</td>
<td>6 Case Presentation</td>
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<tr>
<td>13:50</td>
<td>Maria del Mar</td>
<td>Lucio</td>
<td>RAPIDLY PROGRESSIVE COCCIDIOIDES MENINGITIS IN A PATIENT WITH RHEUMATOID ARTHRITIS ON HUMAN INTERLEUKIN-6 (IL-6) RECEPTOR ANTAGONIST (SARILUMAB)</td>
<td>6 Case Presentation</td>
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