



# SATURDAY DAY

7:30AM–8:30AM

## NABT BioClub Breakfast

**Grand Ballroom IX & X (3rd Floor) • Special Event (Tickets Required) • GA**

The BioClub continues to support students at K-12 schools, community colleges, and informal learning organizations all over North America. Join us to share what your club is doing or learn how to start a BioClub Chapter of your own!

Sponsored by **CAROLINA**

8:15AM–10:15AM

## NABT Biology Education Poster Session & Coffee Break

**Harborside Ballroom C (4th Floor) • General Biology • Special Symposium (120 min) • 2Y, 4Y, GA**

The NABT Poster Session features practices, programs, and research in three distinct categories: general strategies for teaching biology, the scholarship of teaching, and mentored student research. Posters presented by students are eligible for two competitions and winners will be announced before the closing general session.

See full listing on page 42-44

9:00AM–11:00AM

## 2023 NABT AP Symposium: Understanding Visual Representations in AP Biology

**Laurel A & B (4th Floor) • AP Biology • Symposium (120 min) • HS**

In this session, we'll introduce a variety of instructional strategies that can be integrated into lessons on how to interpret, analyze, describe, and explain the different visual representations of biological concepts students encounter in AP Biology. Students will learn the importance of data analysis and model evaluation to facilitate their decision-making in and out of the classroom..

Lee Ferguson & Maureen Jimenez,  
AP Biology Section Professional  
Development Committee Co-chairs

9:00AM–10:15AM

SCOTT WILLIAMSON SPEAKER SERIES

## Ryan Gutenkunst

See biography on page 9

### Insights from Population Genetics into Recent Human Evolution

**Dover B & C (3rd Floor) • Evolution • Special Speaker • GA**

The distribution of genetic mutations within and between human populations is determined by history and natural selection. Studying today's genetic variation can thus inform our understanding of the past. This motivates the study of population genetics, and Dr. Ryan Gutenkunst will first introduce key concepts from this scientific field. He will then discuss findings from his research group and others that shed light on our relationships with each other and with other extinct hominids. Disturbingly, genetic research is increasingly being weaponized by racists, and Dr. Gutenkunst will close with ideas of how educators can counter this trend.

## SPECIAL PROGRAMMING PRESENTED BY PIVOT INTERACTIVES

### 1536-98003 Infuse Active Learning into Biology

**Dover A (3rd Floor) • Technology in the Classroom • Demonstration (75 min) • HS, 2Y, GA**

Active learning is the most effective form of instruction, but it's difficult to implement. Learn how Pivot Interactives can help infuse phenomena and the science practices into your instruction.

Eric Friberg, Pivot Interactives,  
Mendota Heights, MN

## SPECIAL SESSION PRESENTED BY LAB-AIDS

### 1536-94173 Sustaining the Commons

**Essex A (4th Floor) • General Biology • Hands-on Workshop (75 min) • HS**

In this interactive workshop, participants will engage with a model of how human choices affect the sustainability of a fish population and the potential effects of different human actions.

Lisa Kelp, Lab-Aids, Ronkonkoma, NY

## 1536-94520 Should We? Teaching Bioethics Through Mock Senate Hearings

**Essex B & C (4th Floor) • Biotechnology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Explore modern dilemmas in genetics and biotechnology in a new way! Learn to incorporate bioethics into your curriculum using mock senate hearings and debates.

Rebecca Obniski and Jason Ader, Mount  
Saint Joseph High School, Baltimore, MD

## 1536-94329 Anchored Inquiry Learning: Designing Meaningful Instruction to Make Sense of Authentic Phenomena

**Grand Ballroom I (3rd Floor) • Instructional Strategies • Hands-on Workshop (75 min) • HS, GA**

Experience how the BSCS Anchored Inquiry Learning instructional model builds on the 5Es to design learning experiences that motivate students to engage with real-world phenomena and problems in biology!

Cindy Gay, BSCS Science Learning,  
Colorado Springs, CO



**BIOLOGY EDUCATION RESEARCH COMPETITION (GRADUATE STUDENTS)**

- 1. A Comparison of Biology Students and Biology Faculty Perceptions and Uses of ChatGPT**  
Shifath Bin Syed & Joshua Reid, Texas Tech University, Lubbock, TX
- 2. An Investigation of College-Level Students' Interpretation of Phylogenetic Trees by Eye Movement**  
Mallika Saha, Daniel Ferguson, & Kristy Daniel, Texas State University, San Marcos, TX
- 3. Examining Introductory Undergraduate Biology Students' Engagement in Metacognition Using the BioMet Learning Modules**  
Elizabeth Schriener, Anjanique Gray, & Jaime Sabel, University of Memphis, Memphis, TN; Janvi Patel, Christian Brothers University, Memphis, TN
- 4. Exploring Demographics: Why are African American Students Leaving or Staying in the Biology Program?**  
Kendra Wright, Sedra Sous, & Jaime Sabel, University of Memphis, Memphis, TN
- 5. Impact of Outdoor Science Activities on Participants' Understanding of STEM Techniques, Learning, and the Natural World**  
Carolyn Jess, Jill Zipperer, & Kristy Daniel, Texas State University, San Marcos, TX
- 6. The Impact of Two Sequential CURES on Student Outcomes in an Introductory Biology Laboratory Course**  
Emma Throneburg, Rachel Pigg, Natalie Christian, Jeffery Masters, & Mikus Abolins-Abols, University of Louisville, Louisville, KY
- 7. Using Discord as Primary Student-Student and Student-Teacher Interaction Tool for an Online, Synchronous Biology Lab During the COVID-19 Pandemic**  
Rebekah White & Stefanie Leacock, University of Arkansas, Little Rock, AR

**BIOLOGY EDUCATION RESEARCH COMPETITION (UNDERGRADUATE & HIGH SCHOOL STUDENTS)**

- 8. A Comparative Analysis of ChatGPT's and Other Language Models' Performance on Open-Note Biochemistry Exams Versus Student Performances**  
Ana Roman, Maria Simaitis, Katelyn Sheely, Michael Yotam Roth, & John Cogan, The Ohio State University, Columbus, OH
- 9. Bubble: Simplifying and Gamifying Science Literacy Through an Educational Technology Platform**  
Rafee Mirza, Barry Fishman, Kali Francisco, & Ally Vern, University of Michigan, Ann Arbor, MI
- 10. Building a Basis for Community College Biology Education Research: Exploring Factors Which Influence Core Concept Understanding**  
Noah Courtney, David Esparza, & Michelle Smith, Cornell University, Ithaca, NY
- 11. STEM Outreach Impacts Students' Self-Efficacy in Scientific Skills**  
Vivian Swearingen, Sophia Taylor-Davis, Kamani Barnes, Pepper Hornung, Aubria Johnson, & Christie Palladino, Aiken County Career and Technology Center, Warrenton, SC
- 12. The Benefits of Collaborative Group Exams Transcend Specific Modes of Implementation**  
Jillian Arzoumanian, Michelle Roux-Osovitz, & Jeffrey Grim, University of Tampa, Tampa, FL; Suann Yang, SUNY Geneseo, Geneseo, NY
- 13. Why is Cancer Weird? Implementation of a Cancer Biology Lab for K-12 Students**  
Sophia Taylor-Davis, Kamani Barnes, Emily Heath, Alexandria Martin, Vivian Swearingen, & Christie Palladino, Aiken County Career and Technology Center, Warrenton, SC

**MENTORED STUDENT RESEARCH COMPETITION (UNDERGRADUATE & HIGH SCHOOL STUDENTS)**

- 14. A Novel Approach to Bone Marrow Biopsies: Disease Detection and Biomarker Identification of Blood Cancers via Peripheral Blood Sampling**  
Anushka Peer, James Logan High School, Union City, CA; Varalakshi Murugesan, Vellore Institute of Technology, Chennai, India
- 15. Harnessing Bacterial Activity for Sustainable Decolorization of Textile Dyes and Pollution Mitigation**  
Jolene Hayden & Banhi Nandi, Georgia Highlands College, Rome, GA
- 16. Improving Contemporary Mathematical Models of Metastatic Cancer: Analyzing PACC Quiescence, Treatment, and TME Stress-Response**  
Caitlin Garrett, Vandegrift High School, Austin, TX; Hana Dobrovolsky, Texas Christian University, Dallas, TX
- 17. Trials of Triage: Using Classification to Detect Implicit Bias in Patient Disposition during Hospital Triaging**  
Hireh Poosarla & Phil Mui, Aspiring Scholars Directed Research Program (ASDRP), Fremont, CA

**GENERAL (NON-COMPETITION) CATEGORY CONT.**

- 18. A Case for Place: Leveraging Placed-Based Education through Local Soundscapes to Make Connections to Ecosystem-Level Assessments of Prairie Conservation**  
Kelsey Deal, ASTEC Charter Schools, Oklahoma City, OK
- 19. A Case-Control Study of the Effectiveness of a Microbiology-Focused CURE in an Introductory Biology Course**  
Andrew Mashintonio & Richard Heineman, Kutztown University, Kutztown, PA

**20. An HHMI-Supported Course-Based Research Program—A Call to Participate**

Viknesh Sivanathan, Howard Hughes Medical Institute, Chevy Chase, MD

**21. An OER Biotechnology Lab that Costs Less than 50 Cents per Student**

Maryann Williamson, Northern Virginia Community College, Sterling, VA

**22. Building a Community Among Maryland Community Colleges: An Inter-Institutional and Interdisciplinary Effort to Improve Engagement in Laboratory Activities**

Kelly Livernoche, Anne Arundel Community College, Arnold, MD; Sean McNamara, Community College of Baltimore County, Catonsville, MD; Gina Wesley, Montgomery College, Rockville, MD; Allison Bell, Howard Community College, Columbia, MD; Richard Barclay, Smithsonian National Museum of Natural History, Washington, DC; Heather Killen, University of Maryland, College Park, MD

**23. Complimentary Course Pairing: An Approach to Engage Community College Students with Vision and Change Core Competencies and Infuse Diversity, Inclusion, and Equity into Biology and English Curriculum**

Ranya Taqieddin, Saint Charles Community College, Saint Peters, MO

**24. Democratizing Student Access to Help: The Nationwide, Virtual Peer Mentoring Network of the Genomics Education Partnership**

Katie Sandlin & Laura K. Reed, The University of Alabama, Tuscaloosa, AL; Wilson Leung, Washington University in St. Louis, St. Louis, MO; D'Andrew Harrington, College of Southern Nevada, Las Vegas, NV; David Lopatto, Grinnell College, Grinnell, IA; S. Catherine Silver Key, North Carolina Central University, Durham, NC; Melanie Van Stry, Lane

College, Jackson, TN; Jamie Siders, Ohio Northern University, Ada, OH

**25. Development of a Flexible and Structured Model of Supplemental Instruction**

Jon Lau & Picabo Roscher, Truckee Meadows Community College, Reno, NV; Sam Stynen, Steven Armstrong, & Brittney Ryun, University of Nevada Reno, Reno, NV

**26. Diversifying Academia: Understanding and Implementing Equitable and Inclusive Hiring Practices through Faculty Learning Communities**

Stanley Lo, Erik Arevalo, & Eva Fuentes-Lopez, University of California San Diego, La Jolla, CA; Mike Wilton, University of California Santa Barbara, Santa Barbara, CA

**27. Effect of Climate Change on Resource Management in Some Selected Secondary Schools in Pankshin, Plateau State**

Toma Maina Antip, Federal College of Education Pankshin, Plateau State, Nigeria

**28. Engaging Students in Authentic Investigations Through Community Science**

Sarah Jones, Emma Oschrein, Taran Lichtenberg, Jennifer Schwarz, & Kayri Havens, Chicago Botanic Garden, Glencoe, IL

**29. Enhance Student Competency in Ecology with Figure Sets and 4-Dimensional Ecology Education (4DEE)**

Emily Rauschert, Cleveland State University, Cleveland, OH; Suann Yang, SUNY Geneseo, Geneseo, NY

**30. Enhance Student's Learning Efficiency and Knowledge Application Capacity: Active and High-Impact Teaching of Plant and Human Nutrition**

Hong Li Wang, University of Arkansas, Little Rock, AR

**31. Evolving the Culture of Biology through Teaching Assistant Training in Inclusive and Evidence-based Practices**

Kaleb Heinrich, The University of Alabama, Tuscaloosa, AL; Stephanie Gutzler, Georgia State University, Atlanta, GA; Erin Shortlidge, Portland State University, Portland, OR; Mitra Asgari, University of Missouri, Columbia, MO; Adam Chouinard, Oregon State University, Corvallis, OR; Star Lee, University of California Irvine, Irvine, CA

**32. Following the Science in the Age of Institutional Corruption**

Antonio Chaves, Montgomery College, Takoma Park, MD

**33. Fostering Scientific Literacy Across Disciplines: A Graphic Organizer-Based Approach to Analyzing Research Articles**

Ashley Burkart, Estrella Mountain Community College & Maricopa Community College District, Avondale, AZ

**34. Implementation of Collaborative Group Exams in Biology Courses Reduces the Student Performance Gap**

Jillian Arzoumanian, Michelle Roux-Osovitz, & Jeffrey Grim, University of Tampa, Tampa, FL; Suann Yang, SUNY Geneseo, Geneseo, NY

## NABT BIOLOGY EDUCATION POSTER SESSION • 8:15AM – 10:15AM • Harborside Ballroom C

## GENERAL (NON-COMPETITION) CATEGORY CONT.

**35. Inclusion in Learning Assistant Programs: Validation of a Measure Assessing Inclusion in Classes with Peer-Led Group Work**

Michael Moore, Taylor Arnold, & Ronia Kattoum, University of Arkansas, Little Rock, AR

**36. Maximizing Quantitative Skills: A Curricular Approach to Gain without the Pain**

Emily Weigel, Georgia Institute of Technology, Atlanta, GA

**37. Models for Incorporating the History of Biology into the Classroom**

Cody Williams, Western Michigan University, Kalamazoo, MI

**38. Moths: They're Cooler than You'd Think, and Students Can Trap Them to Conduct Their Own Research Projects!**

Peter White, Brian Keas, & Chris Brown, Michigan State University, East Lansing, MI

**39. ORACLE: Operationalizing Research Around College Lab Experiences**

Sarah Gerken, University of Alaska Anchorage, Anchorage, AK

**40. Providing Authentic Research Opportunities for Community College and High School Students**

Sharon Gusky, Northwestern Connecticut Community College, Canton, CT; Angela Norige, Torrington High School, Torrington, CT

**41. Responsible Conduct of Research Education in an Undergraduate Developmental Biology Lab Course**

Stefanie Leacock, University of Arkansas, AR

**42. The Impact of Using Human Examples and Cultural and Religious Sensitivity Teaching Strategies on Evolution Understanding and Acceptance in Alabama Introductory High School Biology Classrooms**

Briana Pobiner, Smithsonian Institute, Washington, DC; William Watson, Diocese of Camden Catholic Schools, Camden, NJ; Paul Beardsley, California State Polytechnic University Pomona, Pomona, CA; Constance Bertka, Science and Society Resources, Potomac, MD; Amanda Townley, Georgia Southern University, Savannah, GA; Ella Beaudoin, Cambridge University, Cambridge, United Kingdom

**43. The RIOS Institute: Supporting STEM Education Transformation through Innovation, Education Research, and Collaborative Learning for a Racially-Just, Inclusive, Open STEM Education**

Kaitlin Bonner, St. John Fisher University, Rochester, NY; Carrie Diaz Eaton, Bates College, Lewiston, ME; Karen Cangialosi, RIOS, Lewiston, ME; Bryan Dewsbury, Florida International University, Miami, FL; Sam Donovan, BioQUEST, Pittsburgh, PA

**44. University Life Science Lab: A Vision and Change Transition**

Alan Jones, University of Central Oklahoma, Edmond, OK

**45. Using Book Clubs to Connect Students Across 2-YR and 4-YR Campuses: A Proposed Student Learning Community**

Sayali Kukday, Iowa State University, Ankeny, IA; Heather Rissler, Northern Iowa Community College, Mason City, IA; Nousha Sabet, Western Iowa Tech Community College, Sioux City, IA

**46. Using the MEGA-plate Experiment to Engage Students in Microbiological Concepts and Evolutionary Thinking around Antibiotic Resistance**

Justin Pruneski, Heidelberg University, Tiffin, OH; Stephanie Carr, Hartwick College, Oneonta, NY; Stephanie Matthews, North Carolina State University, Raleigh, NC; Nikolas Stasulli, University of New Haven, New Haven, CT

Science and Global Issues: Biology, a full-year, hands-on course, designed for the NGSS.

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## 9:00AM–10:15AM

## SPECIAL PROGRAMMING PRESENTED BY 3D MOLECULAR DESIGNS

**1536-98156 Going with the Flow—From Genes to Proteins Using 3DMD Modeling Kits**

**Grand Ballroom II (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Participants engage in modeling and visualizing their understanding of transcription and translation, and how they influence the 3D structure of protein. Participants will disrupt their models and predict possible consequences.

Mark Eberhard, 3D Molecular Designs, Milwaukee, WI

**1536-96530 Beyond Heterozygote Advantage: Using New BioInteractive Sickle Cell Resources to Explore A Key Human Phenomenon**

**Grand Ballroom III & IV (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

How can two patients with the same genetic variation have different disease outcomes? We'll explore this phenomenon with an activity focused on the central dogma that extends into genetic medicine.

Kristen Short, Fort Wayne Community Schools, Fort Wayne, IN and Sherry Annee, Brebeuf Jesuit Preparatory School, Indianapolis, IN

**1536-94482 Lessons from Quantitative Biology @ Community Colleges: Overcoming Barriers to Implementing Open Education Resources**

**Grand Ballroom VII (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Quantitative skills are a necessary component of scientific literacy. But implementing non-textbook resources can be intimidating. Let's navigate perceived barriers and use evidence-based research to co-create solutions.

Melanie Lenahan, Raritan Valley Community College, Clinton, NJ; Jennifer Adler, Kentucky Community & Technical College System, Cynthiana, KY; and Sheela Vemu, Waubesa Community College, Sugar Grove, IL

**1536-94340 Pollen Apocalypse: Using Local Phenomena to Teach Climate Science**

**Grand Ballroom X (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS**

What is happening to allergy seasons? How does pollen cause allergies? Come explore a Climate Education Pathways project that uses evidence-based investigations, modeling, and student agency to empower climate action.

Rebecca Brewer, Troy High School, Lake Orion, MI

**OBTA Directors & Regional Coordinators**

**Iron (4th Floor) • Committee Meeting (75 min) • GA**

Help NABT recognize outstanding biology teachers in your state! This meeting will include updates and on the new procedures for the OBTA.

Mark Little, National OBTA Coordinator

**1536-94190 Fascinating Catalase: Structure, Function, and Evolution**

**Kent A (4th Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Catalase is found in most organisms. This hands-on workshop explores the enzyme's evolution and phylogeny, and its unique structural characteristics. We will perform simple experiments to measure catalase activity.

Elizabeth Cowles, Eastern Connecticut State University, Willimantic, CT

**1536-94473 Why Representation Matters? Curriculum Reform and Mentoring From an HBCU Perspective**

**Kent B & C (4th Floor) • General Biology • Symposium (75 min) • ML, HS, GA**

HBCU professors and students provide insights into their experiences in a U.S. Department of Education funded peer-mentoring project. Students explore the impact of representation and mentoring on their education experiences.

Catherine L. Quinlan, Jasmine Prime, Charis Haynes, Selama Tesfamariam, Kennedy James, Eliana Lewis, Daina Potter, and Ilesha Fields, Howard University, Washington, DC

**1536-94442 Is Bigfoot Among Us? Follow the Evidence to Combat Pseudoscience**

**Laurel C & D (4th Floor) • Nature of Science • Hands-on Workshop (75 min) • ML, HS, GA**

Join NCSE to determine whether environmental DNA (eDNA) belongs to the elusive Bigfoot. This lab simulation highlights the importance of citing evidence in order to justify a claim.

Lin Andrews, Blake Touchet, and Cari Herndon, National Center for Science Education, Oakland, CA



## 10:30AM–11:00AM

**1536-96933 Reimagining Scientific Literacy for Community Engagement****Dover B & C (3rd Floor)**  
• Instructional Strategies • Demonstration (30 min) • 2Y, 4Y, GA

Scientific literacy plays an important role in the education of all undergraduate students. This talk explores how a community engagement tool was utilized to address socio-scientific topics of interest to enhance scientific literacy for non-STEM majors.

Samiksha Raut, University of Alabama at Birmingham, Birmingham, AL

**SPECIAL PROGRAMMING PRESENTED BY NOURISH THE FUTURE****1536-99348 Tomorrow's Science is Looking for Leaders****Essex A (4th Floor)** • General Biology • Demonstration (30 min) • ML, HS, GA

Introduce students to high-tech STEM careers through the lens of agriculture! Learn about teacher leadership opportunities and explore free resources from [nourishthefuture.org](http://nourishthefuture.org) that connect your curriculum to a real-world context.er.

Heather Bryan, Nourish the Future, Columbus, OH and Gary Abud Jr, Education Projects, Grosse Pointe Woods, MI

**SPECIAL PROGRAMMING PRESENTED BY NATIONAL GEOGRAPHIC - CENGAGE****1536-99708 National Geographic Learning - Cengage Presents: Lab it Up with National Geographic Learning****Essex B & C (4th Floor)** • General Biology • Hands-on Workshop (30 min) • HS

*Lab It Up!* from National Geographic Learning is a chance for Biology teachers to get hands-on by doing one of the Minilab lessons from the new National Geographic Biology program.

Brock O'Shell, National Geographic Learning - Cengage, St Johns, FL

**1536-93820 Using Noches Bilingües to Recruit Hispanic Students to STEM Fields****Grand Ballroom I (3rd Floor)** • Science Practices • Paper (30 min) • 2Y, 4Y, GA

The number of Hispanic students in STEM majors is much lower than other populations. This presentation will introduce using Noches Bilingües to recruit and retain Hispanic students in STEM majors.

Kelly Moore and Elesha Goodfriend, Walters State Community College, Morristown, TN

**SPECIAL PROGRAMMING PRESENTED BY 3D MOLECULAR DESIGNS****1536-98151 Oh Meiosis! Modeling the Processes That Create Genetic Diversity****Grand Ballroom II (3rd Floor)** • General Biology • Hands-on Workshop (30 min) • ML, HS, 4Y

Engaging in scientific modeling improves student engagement and understanding. Participants will learn how to use 3DMD's Chromosome Connections Kit to model the processes of meiosis that lead to genetic diversity.

Susan Remshak, 3D Molecular Designs, Milwaukee, WI

**1536-96779 How to Use and Contribute to HHMI BioInteractive's New Educator Resource Library****Grand Ballroom III & IV (3rd Floor)** • Instructional Strategies • Hands-on Workshop (30 min) • HS, 2Y, 4Y

Join us as we share an exciting new BioInteractive feature — the Educator Resource Library! We'll discuss using and contributing to this repository of educator-generated materials connected to BioInteractive resources.

Kristine Grayson, University of Richmond, Richmond, VA and Missy Holzer, Great Minds PBC, Somerset, NJ

**1536-94507 Citizen Science for Students: Monitoring Marine and Freshwater Microplastics****Grand Ballroom VII (3rd Floor)** • Ecology / Environmental Science / Sustainability • Hands-on Workshop (30 min) • HS, 4Y, GA

Microplastics permeate terrestrial and marine ecosystems. Engage students and your community in citizen science by collecting, analyzing, and reporting microplastics. Your classroom data makes a difference!

Brittany Bauer, Wyoming East High School, New Richmond, WV; Cassie Klein, New Jersey Audubon, Matawan, NJ; Rumson Fair-Haven Regional High School, Matawan, NJ; Garrison Union Free School District, Matawan, NJ

## 10:30AM–11:00AM

**1536-94157 Evolution with Viruses for ALL Students****Grand Ballroom VIII (3rd Floor)** • Evolution • Paper (30 min) • ML, HS, GA

We will discuss how bacteriophages, model viruses that infect bacteria, are used for student-driven research on evolution and antibiotic resistance regardless of student expertise and available funding.

Zach Pratt, Parker High School, Janesville, WI and Maribel Gendreau, Hampton Roads Academy, Newport News, VA

**1536-93400 Using NASA's GeneLab Platform to Explore Gene Expression****Grand Ballroom IX (3rd Floor)** • AP Biology • Demonstration (30 min) • HS, 2Y, 4Y

Gene expression is a key concept that is difficult for students to investigate. In this lesson, students are introduced to RNA sequencing and analyze NASA data to explore the topic.

Jennifer Callison-Bliss, Wheeler High School, Smyrna, GA

**1536-93994 Crickets for Lunch? Using 3D Instruction to Build Science Literacy****Grand Ballroom X (3rd Floor)** • General Biology • Hands-on Workshop (30 min) • HS

The "Crickets for Lunch?" unit encourages high school biology students to reflect on community, culture, and personal experiences as they learn how to communicate their knowledge of life science concepts.

Kia G. Boose, Kevin S. Garner, and Maceo Cooper, Baltimore City Public Schools, Baltimore, MD

**Member Resources Committee****Iron (4th Floor)** • Committee Meeting (30 min) • GA

Review resources, services, and program recommendations to better support both NABT members and the biology teacher community.

Catherine Ambos, Committee Chair

**Social Media Committee****James (4th Floor)** • Committee Meeting (30 min) • GA

Use social media outlets such as Facebook and X to broaden the NABT Community and promote programs that support biology and life science teachers.

Stacey Kiser and John Moore, Task Force Chairs

**1536-93667 Evolution with BiteScis: Misconceptions, Mastery, & Microorganisms****Kent A (4th Floor)** • Evolution • Paper (30 min) • ML, HS, 2Y

Explore BiteScis evolution lesson plans, which integrate current research and standards-aligned content, to help you target and overturn misconceptions and preview data from a pilot study on their effectiveness.

Stephanie Keep, BiteScis, Bedford, MA

**1536-94381 Closing the Equity Gap in Success with Development of an Integrated Biology Course for Non-majors****Kent B & C (4th Floor)** • Curriculum Development • Paper (30 min) • 2Y, 4Y, GA

Converting mixed majors biology courses into majors and non-majors sequences has led to increased student performance and closure of equity gaps by integrating molecular metabolism with system function and application.

Mandy Comes and Teresa Fulcher, Pellissippi State Community College, Knoxville, TN

**1536-96932 The Wolbachia Project: Student Research Experiences with Global Impact****Laurel C & D (4th Floor)** • Evolution • Hands-on Workshop (30 min) • 2Y, 4Y, GA

Wolbachia manipulates insect reproduction and reduces the transmission of mosquito-borne diseases. Join a global effort to determine the frequency and distribution of this microbial symbiont.

*This session is a special presentation by the 2023 Huxley Award Winner.*

Sarah Bordenstein, The Pennsylvania State University, University Park, PA

## 11:15AM–12:30PM

**SPECIAL PROGRAMMING PRESENTED BY BIOZONE****1536-94477 BIOZONE's Latest Biology Titles: Learn How These Superb, Interactive Texts Deliver Flexible & Engaging Programs****Dover A (3rd Floor)** • General Biology • Demonstration (75 min) • HS

BIOZONE's innovative interactive worktext approach is a departure from traditional textbook learning—providing flexible, engaging, student-centered resources. Print and digital formats deliver powerful NGSS, IB, Texas, and AP programs.

Richard Allan, BIOZONE International, Hamilton, Waikato, New Zealand

## 11:15AM–12:30PM

**1536-94046 Moving Beyond the Central Dogma: A Systems Biology Approach to Studying Environmental Influence of Disease****Dover B & C (3rd Floor) • Science Practices • Hands-on Workshop (75 min) • HS, 2Y**

Conduct an interactive activity to learn how biomedical researchers are using bioinformatics and a systems biology approach to investigate the effects of per- and poly-fluoroalkyl substances (PFAS) exposure on health.

Andromeda Crowell, Orange High School, Hillsborough, NC and Dana B. Haine, UNC-Chapel Hill, Chapel Hill, NC

**SPECIAL PROGRAMMING PRESENTED BY LAB-AIDS****1536-94197 Lab-Aids Biology: Looking for Patterns in Species Diversity****Essex A (4th Floor) • General Biology • Hands-on Workshop (75 min) • HS**

Look for patterns in species diversity in coral reef ecosystems and other animals to determine cause and effect relationships and understand how ecosystem interactions affect patterns of biological diversity.

Lisa Kelp, Lab-Aids, Ronkonkoma, NY

**1536-94504 Learning Cellular Respiration, pH, and Quantitative Skills Together: Curriculum from a Two-Year / Four-Year Faculty Collaboration****Essex B & C (4th Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Practice an activity that helps students think quantitatively about pH changes in cellular respiration. Learn how faculty from two-year and four-year institutions collaborated to develop quantitative reasoning modules for biology.

Evdokia Kastanos and K. Rebecca Thomas, Montgomery College, Rockville, MD; Julie Takacs, Anne Arundel Community College, Arnold, MD

**SPECIAL PROGRAMMING PRESENTED BY BIOLOGY MAGNETS****1536-100299 Tools for Biology Education****Grand Ballroom I (3rd Floor) • Instructional Strategies • Hands-on Workshop (75 min) • ML, HS, GA**

Biology Magnets are educational tools for magnetic whiteboards that allow you and your students to easily model complex biological processes. A free module will be given to all who attend!

Tom Willis, Biology Magnets, St. Simons Island, GA

**SPECIAL PROGRAMMING PRESENTED BY 3D MOLECULAR DESIGNS****1536-98149 Teaching the Molecular Mechanisms of Addiction with Physical Models****Grand Ballroom II (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

This hands-on session introduces physical models to explore the mechanisms of cell communication in the brain at the molecular level, including the specific application to teaching the pathways of addiction.

Alan Allmen, 3D Molecular Designs, Milwaukee, WI

**1536-96532 Red-Light, Green-Light: Using BioInteractive Resources to Explore Cancer as a Phenomenon****Grand Ballroom III & IV (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Explore BioInteractive resources to investigate how cancer affects checkpoints (stop-lights) in the cell cycle. We will provide opportunities for participants to collaborate to discuss implementation in their classroom contexts.

Jim Lane, Mahtomedi High School, Mahtomedi, MN and Amaya Garcia Costas, Colorado State University-Pueblo, Pueblo, CO

**1536-94275 Exploring the Immune System Using Mini Cases and HHMI BioInteractive****Grand Ballroom VII (3rd Floor) • General Biology • Demonstration (75 min) • GA**

This workshop will explore narrative mini cases alongside the HHMI BioInteractive Immune System learning module. The activity introduces the cells of the immune system and walks through the timeline of a typical immune response while comparing it to several real-life immune reactions. Participants will identify and explain the role of memory cells when the body responds to various common antigens by interpreting graphs and images.

Melissa Haswell, Delta College, Midland, MI

**1536-94223 The Robots Are Here, Now What? Implications and Uses of AI in the Classroom****Grand Ballroom VIII (3rd Floor) • Technology in the Classroom • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

We will present what teachers should know about platforms such as ChatGPT and how the introduction of this platform presents both challenges and opportunities for learning.

Aaron L. Mathieu, Acton-Boxborough Regional High School, Acton, MA and Lee Ferguson, Allen High School, Dallas, TX

**1536-94501 Inspire Future Changemakers by Discovering Biodiversity Hotspots****Grand Ballroom IX (3rd Floor) • International / Global Education • Symposium (75 min) • ML, HS, GA**

Discover conservation efforts at biodiversity hotspots across five continents and generate new ideas to increase cultural responsiveness, address biodiversity loss, and motivate your students to solve ecological issues.

Brittany Bauer, Wyoming East High School, New Richmond, WV; Garrison Union Free School District, Garrison, NY; Rumson Fair-Haven Regional High School, Matawan, NJ; Cassie Klein, New Jersey Audubon, Matawan, NJ

## 11:15AM–12:30PM CONT.

**1536-94512 Elevating Student Voice & Choice: Creating an Inquiry-based, NGSS-aligned Project by Examining the Human Microbiome****Grand Ballroom X (3rd Floor) • AP Biology • Hands-on Workshop (75 min) • HS, 2Y**

By exploring the human microbiome, educators will design an inquiry-based, NGSS-aligned project, illustrating the importance of student choice and voice. They will also analyze data, formulate questions, and conduct research.

Carisa Steinberg, Syosset High School, Huntington, NY

**1536-94318 Teaching the Genome Generation: Investigating Genetic Ancestry in the Biology Classroom through Data Analysis****Kent A (4th Floor) • Genetics • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

In this hands-on workshop, participants will engage with a genetics curriculum focused on data analysis and quantitative skills framed around ancestry and genomic variation.

Sarah Wojiski, The Jackson Laboratory, Farmington, CT

**1536-94404 Reaching Every Student in Your Classroom—Culturally and Linguistically Responsive Pedagogy****Kent B & C (4th Floor) • Instructional Strategies • Hands-on Workshop (75 min) • ML, HS, 2Y**

Participants will be guided to recognize and share approaches in culturally responsive teaching they already use, as well as develop new ways to implement equitable classroom practices.

Dessy Dimova, MassInsight Education and Research, Princeton, NJ

**1536-94468 Conducting Research with the All of Us Database****Laurel A & B (4th Floor) • Science Practices • Demonstration (75 min) • HS, 2Y, 4Y**

The NIH is building the largest biomedical database of its kind and making it broadly accessible for research purposes. Learn how to access it to conduct your own authentic studies.

Louisa A. Stark, Genetic Science Learning Center at the University of Utah, Salt Lake City, UT and Rubin Baskir, All of Us Research Program at the National Institutes of Health, Bethesda, MD

**1536-94356 Bioinformatics in the Classroom: From Sanger Sequencing to Phylogenetic Trees****Laurel C & D (4th Floor) • Evolution • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

How can a single DNA sequence unveil the evolution and identity of an organism? Join Discover the Microbes Within: The Wolbachia Project (<https://wolbachiaproject.org>) for hands-on training using free bioinformatics software.

Sarah Bordenstein, The Pennsylvania State University, University Park, PA and Bob Kuhn, Innovation Academy STEM High School, Alpharetta, GA

## 11:30AM–2:00PM

**NABT Honors Luncheon Harborside Ballroom A & B (4th Floor) • Special Event (Tickets Required) • GA**

NABT is proud to recognize the 2023 NABT Award Recipients during this celebration. We will honor exceptional biology teachers from all levels, and everyone is welcome to help us congratulate these remarkable professionals.

## 2:00PM–4:00PM

## SCST SYMPOSIUM

**Highlighted Tips, Tools, & TA Professional Development****Dover B & C (3rd Floor) • Instructional Strategies • Symposium (120 min) • 2Y, 4Y****Increasing Learner Engagement by Modeling DNA Replication with 3D Printed Models & Interlocking Building Toys**

Molecular processes are difficult to visualize. I developed a collaborative hands-on activity so students can model DNA replication using 3D-printed “enzymes” and interlocking building toys. Electronic resources will be provided.

Tarren J Shaw, University of Oklahoma, Norman, OK

**Improving Inclusion and Belonging of STEM Undergraduates Through TA Teaching Professional Development**

In this session, participants will learn about the NSF-funded TA Teaching Professional Development (TA-TPD) and receive resources to create, advocate for, and reform the TA-TPD program at their home institution.

Stephanie Gutzler, Georgia State University, Atlanta, GA and Kaleb Heinrich, University of Alabama, Tuscaloosa, AL

**Meet Miro: The Collaborative Digital “Whiteboard” of the Future**

Bring your laptop to explore applications of Miro for in-person and online courses, from enhanced lectures with activities to semester-long projects. Move beyond paper to increase engagement, collaboration, and creativity.

Heather Scherr, Lone Star College-Kingwood, Kingwood, TX



2:00PM–3:15PM

**1536-94502 Teaching About Misconceptions and Science Communication Using Primary Scientific Literature****Dover A (3rd Floor) • Science Practices • Hands-on Workshop (75 min) • HS**

Participants will engage in an activity that uses primary scientific literature (PSL) to dispel misconceptions about various science topics and engage in a science communication activity to share their findings.

Ashli Wright, Florida International University, Miami, FL

**1536-93301 Marginalizing Misinformation & Mentoring Myth-Busters****Essex A (4th Floor) • General Biology • Hands-on Workshop (75 min) • GA**

Anti-vaxxers, climate change naysayers, COVID myths, wonder diets, and greenwashing by industry — all challenges our students. Help them develop skills in assessing credibility and expertise and busting bogus scientific claims in the media.

Douglas Allchin, University of Minnesota, St Paul, MN

**1536-94276 Dealing with a Zombie Epidemic: Applying Knowledge of Microbiology, Immunology, and Potential Treatments****Essex B & C (4th Floor) • Microbiology & Cell Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

This lesson puts students in the shoes of the CDC as they investigate the next pandemic by determining the type of pathogen attack and planning a viable treatment plan.

Kristy Daniel and Carrie Jo Bucklin, Texas State University, San Marcos, TX

**1536-94542 DEI Implementation Framework for College Classrooms****Grand Ballroom I (3rd Floor) • Science Practices • Hands-on Workshop (75 min) • 2Y, 4Y**

We will introduce a template guide for implementing DEI concepts in the classroom. Participants will discuss and apply these strategies to an example resource.

Bryan Dewsbury, Florida International University, Miami, FL; Elizabeth Harrison, Kennesaw State University, Kennesaw, GA; Gabriela Hamerlinck, University of Florida, Gainesville, FL; Davida Smyth, Texas A&M University San Antonio, San Antonio, TX; Heather Rissler, North Iowa Area Community College, Mason City, IA; Dayna DeFeo, University of Alaska Anchorage, Anchorage, AK

**SPECIAL PROGRAMMING PRESENTED BY 3D MOLECULAR DESIGNS****1536-98152 3D Molecular Designs Presents: Uncovering the Truth: Modeling a DNA Replication Error****Grand Ballroom II (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Explore the incredible versatility of the Flow of Genetic Information Kit by using it to model one type of replication error within the context of a real crime.

Sherry Annee, 3D Molecular Designs, Milwaukee, WI

**1536-96534 BioInteractive Data Explorer: A Versatile Tool for Graphing And Data Analysis****Grand Ballroom III & IV (3rd Floor) • Science Practices • Hands-on Workshop (75 min) • ML, HS, 4Y**

Data Explorer is a user-friendly tool that enables students to analyze datasets. Participants will use Data Explorer and connected BioInteractive resources to consider its applications in their classroom contexts.

Peter J. Park, Farmingdale State College, Farmingdale, NY and Samuel J. Loftus, Shasta Middle School, Eugene, OR

**1536-94474 Mimicry in Velvet Ants: Investigating Evolution through the Practices of Science****Grand Ballroom VII (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS**

Participants will engage in a task for teaching evolution through mimicry in velvet ants (Mutillidae). Participants will also begin developing their own phenomenon-based tasks for teaching in their own context.

John Maddux, Festus Senior High School, Festus, MO and Jim Lane, Mahtomedi High School, Mahtomedi, MN

**1536-94100 Biodiversity in the Anthropocene: A Guided Inquiry Into Climate Resilience Through Island Biogeography****Grand Ballroom VIII (3rd Floor) • General Biology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Through the lens of island biogeography, students explore climate change unfolding on diverse spatio-temporal scales and problem-solving—from across continents and millennia into our ZIP codes and lifetimes.

Kirstin Milks, Bloomington High School South/Indiana University, Bloomington, IN and Armin Moczek, Indiana University, Bloomington, IN

2:00PM–3:15PM CONT.

**1536-94466 Bringing Justice, Equity, Diversity, and Inclusion into Classrooms Through Networking and Take-Away Resources****Grand Ballroom IX (3rd Floor) • Instructional Strategies • Hands-on Workshop (75 min) • GA**

Participants will choose networking tables led by the NABT JEDI Committee. Each table will have a different equity focus for participants to gather resources, discuss applications, and collaborate.

Enya Granados, Cedar Shoals High School, Athens, GA; Maribel Gendreau, Hampton Roads Academy, Newport News, VA; Catherine Bischoff, Rye Country Day School, Rye, NY; Holly Basta, Rocky Mountain College, Billings, MT; Zach Pratt, Parker High School, Janesville, WI; Alston Brown, Hampton Roads Academy, Newport, VA

**1536-93918 Using eDNA for Project Based Learning****Grand Ballroom X (3rd Floor) • Biotechnology • Hands-on Workshop (75 min) • HS, 2Y, 4Y**

Participants will learn methods to extract DNA from water samples in order to test for the presence of the amphibian pathogen *Batrachochytrium dendrobatidis* and salamandivorans.

Daniel Shay, North Central High School, Spokane, WA

**Professional Development Committee****Iron (4th Floor) • Committee Meeting (75 min) • GA**

Provide oversight, evaluation, and implementation support for NABT professional development activities including but not limited to the NABT Conference.

Committee Chair to be Named

**Nominating Committee****James (4th Floor) • Committee Meeting (75 min) • GA**

Recruit members to NABT leadership positions, including identifying and evaluating candidates for NABT elections based on nominations from members in good standing.

Bob Melton, Committee Chair

**1536-94521 Some Like it Hot: Extremophiles of Yellowstone National Park****Kent A (4th Floor) • Ecology / Environmental Science Sustainability • Hands-on Workshop (75 min) • ML, HS, GA**

Engage students in evidence-based argumentations using extremophiles of Yellowstone National Park. Back by popular demand, this presentation describes a lesson designed to strengthen students' understanding of resource availability, even in the harshest of ecosystems.

Julie Angle, Oklahoma State University, Stillwater, OK

**SPECIAL PROGRAMMING BY BEDFORD FREEMAN & WORTH****1536-10000 Effective Ways to Develop Science Practices for AP® Environmental Science Students, Using a Textbook**

**Kent B & C (4th Floor) • Ecology/Environmental Science/Sustainability • Demonstration (75 min) • HS**

Explore literacy and science skill enhancement opportunities for AP® Environmental Science students. Delve into the seven science practices using Environmental Science for AP® Course 4e.

Amy Fassler, Marshfield High School, Marshfield, WI

**1536-94956 Insights on Student Success in the Community College Ecosystem****Laurel A & B (4th Floor) • Instructional Strategies • Symposium (75 min) • 2Y, GA**

Panelists will share their experience and insight on how to support faculty professional development and scholarship at the two-year college level. They will also provide recommendations for those trying to do similar work.

James DeKloe, Solano College, Fairfield, CA; Evdokia Kastanos, Montgomery College, Rockville, MD; and Paulette Reneau, Georgia State University-Perimeter College, Decatur, GA; and Sheela Vemu, Waubonsee Community College, Sugar Grove, IL

**1536-94513 Teaching Naledi: Tools to Bring This Unique Discovery to Life for Your Students****Laurel C & D (4th Floor) • General Biology • Demonstration (75 min) • ML, HS, GA**

Encounter a range of *Homo naledi* resources that supports your teaching of this amazing discovery from multiple vantage points, including primary sources, 3D-printed fossils, and access to upcoming discoveries.

John S. Mead, St. Mark's School of Texas, Allen, TX

3:30PM–4:00PM

**1536-94382 Play, Simulate, and Model - Using the BioGraph Curriculum to Teach Core Biological Concepts****Dover A (3rd Floor) • Technology in the Classroom • Demonstration (30 min) • HS, 2Y**

Struggling to teach students complex biological content like gene regulation, genetic drift, or cell transport? Learn about free NGSS-aligned online simulations that model real-world phenomena and engage students as scientists.

Meng-Ping Tu, Stuyvesant High School, Forest Hills, NY and Erika Mitkus, The Governor's Academy, Byfield, MA

## 3:30PM–4:00PM CONT.

**1536-93865 The Empathetic Educator: Tips for Building Relationships in the Classroom****Grand Ballroom I (3rd Floor)**  
• Instructional Strategies • Demonstration (30 min) • ML, HS

Building strong relationships with students is critical for creating an inclusive and welcoming classroom. Learn about the strategies that an early-career educator leveraged to build relationships with his students.

Alexander Eden, Florida International University, Miami, FL

**SPECIAL PROGRAMMING PRESENTED BY 3D MOLECULAR DESIGN****1536-98157 3D Molecular Designs Presents: Hydrophobic Marvels: Using Water Models to Unravel the Self-Cleaning Secrets of Lotus Leaves****Grand Ballroom II (3rd Floor)**  
• General Biology • Hands-on Workshop (30 min) • ML, HS, 4Y

Explore the wonders of lotus leaves as water droplets bead and flow. Engage with interactive water models to build your understanding of lotus leaves self-cleaning properties.

Andrew Taylor, 3D Molecular Designs, Milwaukee, WI

**1536-96535 BioInteractive's New Online Community: A Space to Connect and Learn With Fellow Life Science Educators****Grand Ballroom III & IV (3rd Floor)** • General Biology • Hands-on Workshop (30 min) • HS, 2Y, 4Y

You're invited to BioInteractive's new Online Community! We'll discuss how this Community connects life science educators so you can share ideas, enhance classroom practice, and learn from each other's experiences.

Marjee Chmiel, Howard Hughes Medical Institute, Chevy Chase, MD and Melissa Haswell, Delta College, University Center, MI

**1536-94505 Mathematics and Computational Thinking in OpenSciEd High School Biology****Grand Ballroom VIII (3rd Floor)** • General Biology • Demonstration (30 min) • HS

Experience phenomenon-based, storyline curriculum in high school biology! Use an agent-based model (in the form of a tabletop game) to generate evidence to answer questions about predator-prey interactions.

Kate Henson, University of Colorado Boulder, Boulder, CO

**1536-96587 NABT Equity Networking Social****Grand Ballroom IX (3rd Floor)** • Instructional Strategies • Special Event (30 min) • GA

Network with other practitioners who are passionate about justice, equity, diversity, and inclusion. This event is open to all levels and light refreshments are included.

NABT Justice, Equity, Diversity, and Inclusion (JEDI) Committee

**SPECIAL PROGRAMMING PRESENTED BY LABXCHANGE****1536-94964 The Virtual Lab Experience****Kent A (4th Floor)** • Curriculum Development • Hands-on Workshop (30 min) • ML, HS, 2Y, 4Y

Join a workshop on virtual labs on LabXchange, where you will discover the power of online labs to enhance your teaching and learning experience.

Jenny Frank, LabXchange, Harvard, Cambridge, MA

**SPECIAL PROGRAMMING BY BEDFORD, FREEMAN & WORTH****1536-10001 Get AP Biology Ready with BFW Publishers****Kent B & C (4th Floor)** • AP Biology • Demonstration (30 min) • HS

Explore the transformative potential of the Biology for the AP® Course (BFW Publishers) program, in enhancing pedagogy and student engagement, with a focus on CED alignment, AP Practice, and Skills.

Thomas Menna, BFW Publishers, Hamilton, NJ

**1536-92422 Where Are We Now? Evolution Teaching and Learning Across the United States****Laurel C & D (4th Floor)** • Evolution • Paper (30 min) • HS, 4Y, GA

Examining results from a national study on evolution education from universities around the United States, this session focuses on answering the question, "Where do we stand?" through a unique lens.

Amanda Townley, Georgia Southern University, Statesboro, GA

## 4:15PM–4:30PM

**Announcement of the 2023 Poster Winners****Grand Ballroom V & VI (3rd Floor)** • Special Event • GA

NABT is pleased to announce the student winners of the Biology Education Research Competitions and the Mentored Student Research Competitions.

## 6:00PM–8:00PM

**Baltimore Haunted History Tour & Closing Reception****Waterview ABC • Special Event (Tickets Required)** • GA

Conclude your 2023 NABT Conference experience with an evening of Baltimore history and haunts.

Join us for a bite and a beverage harborside at the hotel before our guides lead the groups in a walking tour of Baltimore's most historic waterfront neighborhood, closing out at a popular spot to cheers to a successful conference.

## 4:30PM–5:30PM

**GENERAL SESSION & PRESENTATION OF THE 2023 NABT DISTINGUISHED SERVICE AWARD****Lee Berger**

See biography on page 10

**The Future of Exploration in the Greatest Age of Exploration****Grand Ballroom V & VI (3rd Floor)** • Evolution • Special Speaker • GA

Dr. Lee Berger is an award-winning researcher, explorer, author, and speaker. Since finding a fossilized femur of an early hominin as an undergraduate, Lee has become one of the most successful (and recognizable) paleoanthropologists in the world. Berger's decades of research on human origins in Africa, Asia, and Micronesia have resulted in numerous new discoveries, including the discovery of two new species of early human relatives—*Australopithecus sediba* in 2008 and *Homo naledi* in 2013. Berger may be best known for his significant discoveries, but his contributions to exploration sciences have also resulted in advances in the application of technology to explore, excavate, and recover hominid remains in sub-equatorial Africa.

In this interactive presentation, Dr. Berger will share details about his work at the Rising Star Cave System in Africa's Cradle of Humankind, including some of his most recent findings. The presentation will then be followed by Q&A.

NABT is proud to name Dr. Lee Berger the recipient of the 2023 Distinguished Service Award for Enhancing Biology Education.

# SUNDAY NOVEMBER 5

## 8:30AM–10:30AM

**Four-Year College & University Section Meeting****Dover A (3rd Floor)** • Committee Meeting • 4Y, GA**Two-Year College Section Meeting****Dover B (3rd Floor)** • Committee Meeting • 2Y, GA**DAYLIGHT SAVINGS TIME!****DON'T FORGET TO CHANGE YOUR CLOCKS!**