

SATURDAY
November 15

#MABT2014

7:00am – 8:15am

Past President's Breakfast

David's Restaurant, Marriott Key Center • Invitation Only

Four-Year College and University Section Executive Meeting

Room 7 • Invitation Only

8:30am – 9:30am

GENERAL SESSION

The Lacks Family represented by Shirley Lacks & Victoria Baptiste

Recipients of the 2014 NABT Distinguished Service Award

Bio appears on page 9.

Henrietta Lacks: Treasured Memories and Her Family's Journey

Grand Ballroom A • Special Speaker

During this presentation, the Lacks Family will share visual images and stories of their journey discovering Henrietta Lacks' great contributions to medicine and society, while answering some of the key questions that readers of the bestselling *The Immortal Life of Henrietta Lacks* often wonder about. The presentation will reflect on Henrietta as a woman and as a medical icon who has affected people lives worldwide. Discussions with the family will explore aspects of the roles we all play related to moral obligations, religion, health care, education and family. The presentation will also include a moderated Q&A Session.

9:30am – 10:00am

BELS Special Event: Book Signing & Reception

Grand Ballroom A • Special Speaker

Join members of the family of Henrietta Lacks for a special reception and book signing event.



Sponsored by **PASCO**

10:00am – 12:45pm

#687 The College Board Presents: Integrating Inquiry-Based Activities and Assessment in AP Biology

Room 16 • Symposium • AP Biology • HS

Session I:

Strategies for Designing and Implementing an Effective AP Biology Curriculum

In this session, participants will investigate the use of project based learning in AP Biology. Projects allow students to apply skills to integrated content areas and provide instructors with opportunities to use formative assessment to provide real-time feedback to students about their knowledge of content, as well as their ability to act and think like scientists. We will also highlight some of the ways that formative assessment differs from summative assessment in design and implementation.

Session II:

Transitioning Traditional AP Biology Activities to Inquiry-Based Critical Thinking Activities

In this session, participants will transition a traditional classroom and/or lab activity to one that integrates skills and content to align with the Learning Objectives of the Curriculum Framework. Participants will learn techniques for easily transitioning existing labs, how to modify the duration of inquiry activities, and the role of assessment during and after the activities.

Session III:

Writing and Reviewing Assessment Questions for the AP Biology Examination

In this session, participants will participate in a debrief of the 2014 AP Biology Free Response Examination. Participants will also learn techniques for writing and reviewing questions that integrate skills and content in AP Biology.

Jennifer Pfannerstill (jpfannerstill@nscds.org), North Shore Country Day School, Winnetka, IL; Gordon Uno (guno@ou.edu), University of Oklahoma, Norman, OK; Jim Smanik (jsmanik@gmail.com), Sycamore High School, Cincinnati, OH; Sharon Radford (radford.sharon@paideiaschool.org), Paideia School, Atlanta, GA; and Tanya Sharpe (lsharpe@collegeboard.org), The College Board, Duluth, GA

9:00am – 1:00pm

Special Workshop: #597 Bloodsuckers and Climate: Insect-Borne Disease Investigations at the Yale Peabody Museum of Natural History

T Room 25A • Environment/Ecology • MS HS GA
Tickets Required

Investigate insect-borne infectious diseases (dengue, malaria, chikungunya, leishmaniasis) and expanding ranges due to climate changes (temperature, precipitation). Explore interdependent relationships in ecosystems. Grades 7-12. NIH/SEPA funded.

Beth Biegler Hines (beth.hines@yale.edu), Yale Peabody Museum of Natural History, New Haven, CT

abbrev.
key

- GA:** General Audience
- E:** Elementary
- JH:** Middle/Jr. High School
- HS:** High School
- 2C:** Two-Year College
- 4C:** Four-Year College
- ES:** Exhibitor Session



Sustainability Symposium: Engaging Students in Scientific Solutions & Civil Discourse

Saturday • 10:00am – 12:45 pm

Room 25B

Highlighting resources to teach sustainability concepts, the symposium will give you practical tools to engage your students in meaningful dialogue about climate change and explore solutions for the world's most pressing issues. The symposium will also review NABT's involvement in the "Sustainability Improves Student Learning (SISL)" project and the Association's ongoing commitment to promote sustainability education.

Taking initiative, solving problems, implementing ideas, and being able to participate in civil discourse about interconnected scientific, economic, and social ideas are important skills that our students need so they can meet the challenges of work, citizenship, and a changing climate.

This workshop will:

- Provide a platform to discuss issues related to teaching about climate change and sustainability,
- Offer research based, practically-sound pedagogical ideas to overcome challenges and teach safely about climate,
- Cover common misconceptions and points of disagreement,
- Create opportunities to practice communication (discourse) techniques,
- Provide in-class activities (with modifications for the large lecture course),
- Provide concrete suggestions for campus-community project based learning based on experiences,
- And include guidance on how to evaluate student and project outcomes.

Symposium Facilitators include:

Debra Rowe, Ph.D. is the President of the U.S. Partnership for Education for Sustainable Development, Co-Founder of the Higher Education Associations Sustainability Consortium, Founder/Facilitator of the Disciplinary Associations' Network for Sustainability (www.aashe.org/dans), Senior Fellow at Second Nature, and Senior Advisor to the Association for the Advancement of Sustainability in Higher Education (www.aashe.org). Debra has also been professor of energy management and renewable energies at Oakland Community College for over 30 years and teaches *Campus Sustainability* and *Corporate Sustainability* for the University of Vermont.

Teddie Phillipson-Mower is the *NABT Representative for Sustainability Education* and has been a biology and environmental educator for over 25 years in both formal and informal contexts, and at all levels, from pre-school through university graduate training. Teddie is currently a consultant for science and environmental program assessment and evaluation, teaches courses in habitat analysis and sustainability at Indiana University, teaches and practices permaculture, is the Program Officer of the Bluegrass and Hoosier Bioneers, and acts as a community sustainability outreach liaison for the University of Louisville.

NABT is a proud participant in the project entitled "Sustainability Improves Student Learning (SISL)," a multi-disciplinary STEM initiative funded by the U.S. Department of Education.

10:00am – 12:45pm

continued

**#519 BEACON/NESCent
Evolution Teacher Workshop
- "Evolution in Action"**

Room 17 • Hands-on Workshop •
Evolution • 4Y

Attend this hands-on workshop to learn about classroom resources and activities focusing on "Evolution in Action". This workshop is a follow-up to the BEACON/NESCent Evolution Symposium on "Evolution in Action".

Louise Mead (lsmead@msu.edu),
BEACON, East Lansing, MI and Jory
Weintraub (jory@nescent.org), NESCent,
Durham, NC

**Sustainability Symposium:
Engaging Students in
Scientific Solutions & Civil
Discourse**

Room 25B • Symposium •
Environment/Ecology • 2Y 4Y GA

Highlighting resources to teach sustainability concepts, the symposium will give you practical tools to engage your students in meaningful dialogue about climate change and explore solutions for the world's most pressing issues. The symposium will also review NABT's involvement in the "Sustainability Improves Student Learning (SISL)" project and the Association's ongoing commitment to promote sustainability education.

See the previous page for more details.

**Regional Teacher Academy
(RTA) Planning Meeting**

Room 25C • Invitation Only

10:30am – 11:15am

INVITED SPEAKER

Jay Labov, Ph.D.

Recipient of the 2014 NABT
Honorary Membership

See page 10 for biography.

**Musings of a Policy Wonk on
Working With, Having Been,
and Being a Teacher**

Room 23 • Special Speaker

Before spending almost 20 years at the National Academy of Sciences working on the improvement of biology and science education, Jay Labov was a practitioner of these disciplines. This presentation will look back on 30 years of his own teaching career, as well as his close work with teachers, and how those experiences have influenced and improved his current work regarding education policy.

10:00am – 11:15am

**Committee Meeting:
Nominating Committee**

Room 7

Betsy Ott (bott@tjc.edu), Committee Chair

**#ES45 Custom Digital
Solutions for Biology Labs**

Room 9 • Symposium • General
Biology • 2Y 4Y

Demonstration of our custom digital capabilities highlighting some examples of pre-lab solutions, online lab courses, videos, online lab manuals and more.

Katy Trionfi (ktrionfi@hmpublishing.com), Hayden-McNeil Publishing,
Plymouth, MI

**#518 Using Manipulatives
to Teach Surface Area
Volume Ratio**

Room 10 • Hands-on Workshop (75
min) • General Biology • HS 2Y 4Y

Surface area/volume ratio is a fundamental concept to understand the cell size and its

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10:00am – 11:15am

continued

functions. Students will use manipulatives to explore perimeter/area ratio and then build to a more complex three-dimensional surface area/volume concept.

Umadevi Garimella (ugarimel@uca.edu), University of Central Arkansas, Conway, AR

#559 Testing the Effectiveness of Herbal Medicines

Room 11 • Hands-on Workshop (75 min) • General Biology • HS 2Y 4Y

Many different cultures have claimed curative powers of certain plants and many plant preparations are for sale as herbal medicines. In this workshop, participants will explore a fun lab to test these claims using common microbes and local plants.

Linda Sigismondi (lindas@rio.edu), University of Rio Grande, Rio Grande, OH

#507 Enhancing Classroom Learning through Digital Dissection

Room 12 • Hands-on Workshop (75 min) • General Biology • MS HS 2Y

This interactive workshop will introduce the range of alternatives to dissection now available, discuss their benefits and provide hands-on tutorials of several popular software programs such as *Froguts*.

Samantha Suiter (SamanthaS@peta.org), Trident Technical College/PETA, Summerville, SC

#640 Technology Tips and Tricks for the Biology Classroom.

Room 13 • Demonstration (75 min) • Instructional Strategies/Technologies • E MS HS

Twitter, Evernote, and Google Apps are three of the most powerful tools available for Biology Teachers today. Come learn

how to tweet, remember everything, and create a paperless classroom using these three amazing and FREE tools!

Josh Hubbard (joshhubbard@intercity.org), Inter-City Baptist School, Allen Park, MI

#528 Hands-On Human Ecology for the Next Generation

Room 14 • Hands-on Workshop (75 min) • Environment/Ecology • MS HS

Discover innovative activities for the Next Generation Science Standards that explore population growth, carrying capacity, resource consumption, human impacts on the environment and paths to sustainability. Receive curricula on CD.

Elizabeth Katoa (elikatoa@att.net), North Ridgeville High School, North Ridgeville, OH

#650 Addressing Mendelian Misconceptions: Using Accurate Models in Genetics Education

Room 15 • Hands-on Workshop (75 min) • Genetics • HS 2Y 4Y

Did you know that there's no evidence that a widow's peak or free earlobes are single-locus, completely dominant traits? We'll provide hands-on activities you can use to teach inheritance of single gene and polygenic traits using accurate examples.

Sarah Redd (sredd@rtc.edu), Renton Technical College, Renton, WA

#522 3D Printing in a Biology Curriculum: A Project-Based Learning Approach

Room 18 • Paper (75 min) • AP Biology • HS 4Y

Learn how 3D-printing technology can be used in a biology curriculum to help understanding of structure and function of proteins, evolution, and phylogeny through a project-based learning module focused on antibiotic resistance.

Kevin Crowthers (kevin.crowthers@worcesteracademy.org), Worcester Academy, Worcester, MA

#494 Using Bioethics Case Studies to Enhance a Biology Curriculum

Room 19 • Hands-on Workshop (75 min) • Bioethics • MS HS 2Y

Science teachers are often confronted with questions from their students about bioethical issues. Many teachers have concerns about time constraints or the controversial nature of the topics, but the study of bioethics can encourage important critical thinking skills.

Terry Maksymowych (tmaksymowych@ndapa.org), Academy of Notre Dame de Namur, Villanova, PA

#660 Worms and Cell Biology: Connect Students to Scientists' Work

Room 21 • Hands-on Workshop (75 min) • General Biology • HS 2Y

Teach students cell growth, division, and differentiation with a planarian experiment, video, and simulation. Activities are based on research techniques and findings of University of Illinois scientists who study planarian regeneration and behavior.

Barbara Hug, Chandana Jasti, and Hillary Lauren, University of Illinois, Champaign, IL

#614 Flipping a Large Lecture Introductory Biology Course: The Good, the Bad and the Ugly

Room 22 • Paper (75 min) • Instructional Strategies/Technologies • HS 2Y 4Y

We will discuss how flipping can increase student engagement, critical thinking and interactions. We will also discuss the pitfalls, and strategies for overcoming these challenges, in large (400+ students) lecture courses with limited resources.

Bethany Stone (StoneB@missouri.edu), University of Missouri - Columbia, Columbia, MO

11:30am – 12:45pm

Committee Meeting: Global Perspectives Committee

Room 7

Jacqueline McLaughlin (jshea@psu.edu), Committee Chair

#ES46 Student Engagement & Learning Outcomes in the Modern Learning

Room 9 • Demonstration (75 min) • Curriculum Development • HS 2Y GA

Late Nite Labs is the leading innovator of digital science labs. In this session you will receive an in-depth look at how our realistic science lab simulations offer an authentic, accessible experience that moves learning beyond the classroom.

Matthew Nelson (nikki@latenitelabs.com), Late Nite Labs, New York, NY

#521 Micro Mysteries

Room 10 • Hands-on Workshop (75 min) • General Biology • HS

Participants will work through a case study role-playing as CDC scientists. They will try to determine the source of a disease outbreak, then present their findings (with evidence) to the other participants.

Bonnie Schutte (bschutte@mvcisd.us), Mount Vernon High School, Mount Vernon, OH

#674 Let Your Students Detect Meningitis! A Student-Centered, Active Learning Approach

Room 11 • Hands-on Workshop (75 min) • Microbiology & Cell Biology • HS 2Y 4Y

This simulated lab diagnosis test is a student centered, hands on activity which engages the students, simulate

the real scenarios, and makes learning more interesting and personal. It has three parts, and can be completed in 45 minutes of class period.

Srinivasan Durairaj (durairaj@richland.edu), Richland Community College, Decatur, IL, Sangeetha Srinivasan (ssrinivasan@millikin.edu), Millikin University, Decatur, IL, and Carol Stokes (cstokes@richland.edu), Richland Community College, Decatur, IL

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Booth 313

Brighter Ideas, Inc. (The GFP Company)
presents innovative technology for education

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675, US Highway 1, North Brunswick, NJ 08902
PH: 908-565-6463; Email: wward@brighterideasinc.com



11:30am – 12:45pm

continued

#526 Ecolmm in Your Biology Classroom

Room 12 • Hands-on Workshop (75 min) • AP Biology • HS

Curious about Ecological Immunology? Come learn about this emerging discipline and how to include it in your biology classroom. Teachers will have the opportunity to try out an activity and discuss how Ecoimm topics would best fit into their classes.

Susan Dodge (lalimule@verizon.net), The New School of Lancaster, Lancaster, PA and Tara Flick (tara_flick@cvsd.k12.pa.us), Conestoga Valley School District, Lancaster, PA

#553 Quiz Time! Do You Know What CCSS, NGSS, AP, ELA, DOK, PARCC, DCI, CCs and PEs Mean? Come Find Out!

Room 13 • Hands-on Workshop (75 min) • Curriculum Development • MS HS

This hands-on presentation will explain what these acronyms mean and also examine what Next Generation Science

Standards (NGSS), Common Core State Standards (CCSS) and the New AP Biology Standards expect of teachers. Hand-outs will be provided.

Peggy Deichstetter (peggy.deichstetter@collegecareer.org), Common Core Institute, Chicago, IL

#498 Forest for the Trees: 5E Lesson Addresses NGSS

Room 14 • Hands-on Workshop (75 min) • Environment/Ecology • E MS

5E lesson on community structure and succession addresses NGSS middle school level. Highlights integration of NGSS dimensions within performance expectations. Designed to take place inside classroom, but can also be used as a primer prior to outdoor experiences. Handouts provided.

Christopher Dobson, Grand Valley State University, Allendale, MI

#622 Integrating Science and Art: A New Strategy to Teach Protein Synthesis

Room 15 • Hands-on Workshop (75 min) • Genetics • HS 2Y

Learn how inquiry unites art and science by promoting student thinking.

Participants will create a representative work of art that models transcription and translation. Info on FREE workshops & FREE curriculum materials.

Pam Snyder (PSnyder5396@gmail.com), Columbus City Schools, Ft. Hayes Career Center, Columbus, OH, Kerry Dixon (kerrydixon001@gmail.com), Hodos Education Consulting, Columbus, OH, and Rachael Moore (moore.1666@gmail.com), Pre-K-12 Licensed Visual Arts Teacher, Columbus, OH

Sponsored by the Ohio Soybean Council

#616 Next Generation Botany: Infusing Plant Biology into the Curriculum with Redbud (*Cercis canadensis* L.)

Room 18 (Session A) • Paper (30 min) • Plant Biology • HS 2Y 4Y

This presentation details an NGSS aligned lesson on the ecology of redbud, a beetle seed predator (*Gibbobruchus mimus* Say), and several species of parasitoid wasps (Superfamily: *Chalcidoidea*). Topics include trophic interactions and carbon cycling.

Stephen Rybczynski (rybczyns@gvsu.edu), Grand Valley State University, Allendale, MI

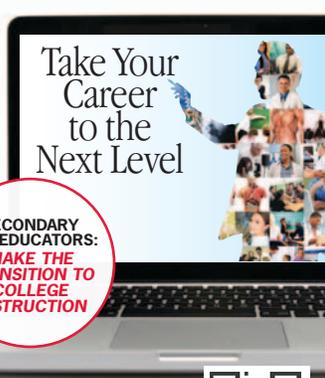
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11:30am – 12:45pm

continued

#587 Incorporating Climate Change into Your Biology Curriculum

Room 19 • Hands-on Workshop (75 min) • Global Perspective • HS 2Y 4Y

An acidifying ocean? Plants flowering earlier? A shifting range for disease vectors? We'll be discussing the many opportunities to incorporate the impacts of climate change on organisms and entire ecosystems into the biology classroom.

Dana Haine (dhaine@unc.edu), UNC-Chapel Hill, Chapel Hill, NC

#581 The Cellular Landscapes of David Goodsell: Biology at the Mesoscale

Room 21 • Hands-on Workshop (75 min) • General Biology • HS 2Y 4Y

Connect microscopic and molecular views of the cell using a unique teaching tool – the vibrant, accurate and engaging cellular landscapes painted by David Goodsell.

Tim Herman (herman@msoe.edu) and Diane Munzenmaier, Milwaukee School of Engineering Center for BioMolecular Modeling, Milwaukee, WI

#599 Open Minds: Seeing How Your Students Are Thinking

Room 22 • Paper (75 min) • Curriculum Development • MS HS

NGSS requires a different type of thinking by our students. When teachers create activities and design lessons that make student thinking visible they are better equipped to adjust their teaching strategies to increase student engagement and success.

Jim Clark (healthandmedicinejclark@yahoo.com) and Samantha Johnson (Samantha.johnson2@gmail.com), Arroyo High School, San Lorenzo, CA

#606 Case It! - An Effective Tool for Case-Based Learning and Undergraduate Research in Molecular Biology

Room 23 • Hands-on Workshop (75 min) • Instructional Strategies/Technologies • HS 2Y 4Y

Case It! is an award winning, NSF-supported project that provides molecular biology computer simulations and cases free of charge, based primarily on genetic and infectious disease. It is also a useful tool for undergraduate research applications.

Mark Bergland (mark.s.bergland@uwrf.edu) and Karen Klyczek (karen.k.klyczek@uwrf.edu), University of Wisconsin - River Falls, River Falls, WI

#582 Fixing the Need for a Nicotine Fix: Exploring Novel Methods in Treating Drug Addiction

Room 24 • Hands-on Workshop (75 min) • Neuroscience • HS 2Y 4Y

You are invited to become a researcher in a fictional drug addiction research facility which utilizes the body's natural immunity to prevent nicotine's diffusion across the blood brain barrier and test an assortment of patients' responses to your developed vaccine via ELISA.

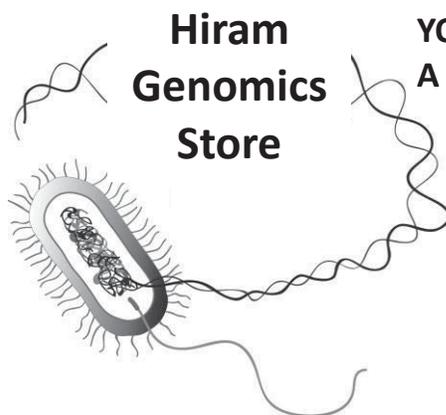
Tamica Stubbs (tamica.stubbs@cms.k12.nc.us), Phillip O Berry Academy of Technology High School, Charlotte, NC

1:00pm – 3:00pm

NABT Honors Luncheon

- Junior Ballroom A
- Special Program
- Tickets Required • GA

The grand finale of the NABT Conference, this popular celebration honors excellent biology teachers. Join us as we recognize the accomplishments and professional contributions of all of the 2014 NABT Award recipients, including the Outstanding Biology Teacher Award (OBTA) honorees. Everyone is welcome to attend!



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