



Undergraduate Research Mentor Award

The Undergraduate Research Mentor Award, established by the College of Arts & Sciences (CAS) in 2015, recognizes faculty members who have dedicated time and effort to mentoring undergraduate students in research both in and outside of the classroom. Students mentored by these faculty members have given presentations at regional or national conventions and/or had their research published in peer-reviewed venues. The award is part of a University-wide initiative to recognize and encourage excellence in undergraduate research.

Recipients chosen from each of the three CAS divisions are recognized during the April Student Awards Recognition Assembly. The first awards, given in 2015, went to Lilianne Doukhan, associate professor of music and French (Humanities Division); Karl Bailey, associate professor of psychology (Social Sciences Division); and James Hayward, research professor of biology (STEM Division).

The second annual Undergraduate Research Mentor awards were given out on April 19, 2016 to **L. Monique Pittman**, professor of English and director of the J.N. Andrews Honors Program (Humanities Division); **Harvey Burnett**, associate professor of psychology and chair of the Department of Behavioral Sciences (Social Sciences Division); and **Ryan Hayes**, associate professor of chemistry (STEM Division).

L. Monique Pittman has made a lasting impact on many Honors and English students. Alaryss Bosco says, “Dr. L. Monique Pittman has been an exceptional research mentor. Since my project’s infancy she has guided and encouraged me every step of the way. Her supreme organizational skills have been an inspiration and have kept me on track through the project. It has been a privilege to work with a leading expert in the field of Shakespeare studies.”

Charles Abreu, one of several students under Burnett’s mentorship, said this about his professor: “Dr. Burnett first mentored me in Research Methods IV, where he taught survey research methods, and oversaw my first official research project in my 2nd year. His wisdom and guidance enabled me to present the findings from that first project at a major conference. His teaching sparked my personal interest in research and has enabled me to go on to present three more projects at various conferences in Chicago this May.”

Ryan Hayes, whose research is featured in this brochure, has mentored many undergraduate students over the years. Zachary Reichert, a 2016 graduate, has worked with Hayes for the majority of his experience as an undergraduate. “As I have worked for Dr. Hayes, I have been particularly inspired by his enthusiasm as a teacher and researcher. However, his mentorship has provided me with more than inspiration. Throughout my time in Dr. Hayes’ lab, he has presented me with a number of opportunities to share my research with audiences both on and off campus. This has provided me with the confidence to discuss my work and ideas with others and has also given me an opportunity to deeply think about and synthesize the work that I have done. He has also provided me with a good amount of independence, allowing me to critically think about problems on my own while additionally offering important help and mentorship when needed.”

SIEGFRIED H. HORN EXCELLENCE IN RESEARCH AND CREATIVE SCHOLARSHIP AWARD RECIPIENTS 2016

The Siegfried H. Horn Excellence in Research & Creative Scholarship Award was established in 2011 in honor of biblical archaeologist Siegfried H. Horn. Horn served as the dean of the Seventh-day Adventist Theological Seminary, founded what is now the Siegfried H. Horn Archaeological Museum, directed the first Heshbon expeditions at Tall Hisban, Jordan, and established the journal “Andrews University Seminary Studies.” The award recognizes lifetime achievement in research and creative scholarship among faculty members at Andrews University. One recipient is selected annually from each of four disciplinary areas based on their scholarly productivity over the previous five years, and the awards are presented at the annual faculty & staff awards ceremony in March.

The 2016 recipients of the Siegfried H. Horn Excellence in Research & Creative Scholarship award were Stephen Zork, associate professor of music, for Arts, Humanities and Education; Karl Bailey, professor of psychology, for Pure and Applied Sciences; Ann Gibson, professor emerita of accounting, for Professional Programs; and Richard Choi, professor of New Testament, for Religion and Theology.

Stephen Zork, conductor of the University Singers and University Chorale and director of choral studies, conducts concerts, gives lectures and performs all around the world. Under his leadership, the University Singers have recorded seven albums. **Karl Bailey** is a leader in mentoring student research and in religiosity research. His project on the internalization of Sabbath-keeping and wellbeing was featured in the 2015 edition of “Research and Creative Scholarship.” **Ann Gibson**, formerly professor of accounting and the Hasso Endowed Chair of Business Ethics, is a sought-after accounting lecturer among treasurers in the Adventist church. **Richard Choi**, chair of the Department of New Testament, has presented scholarly papers at major conventions and serves as the president of the Midwest Society of Biblical Literature, chair of the Regional Coordinators Committee for the Society of Biblical Literature, and executive secretary and coordinator of the Chicago Society of Biblical Literature.

LEFT TO RIGHT: Ann Gibson, Karl Bailey, Richard Choi, Stephen Zork





Exploring the Composition of the Pentateuch Conference

From April 3–5, 2016, the Siegfried H. Horn Lectureship Series hosted a conference organized by the student-led Torah Group. The Torah Group—which includes Old Testament PhD students Felipe Massotti, Kenneth Bergland, Scottie Baker and Rahel Shafer, assistant professor of religion & biblical languages—initially formed to provide a forum for discussing the Hebrew Bible.

With guidance from Old Testament professors Roy and Constance Gane, Richard Davidson and Jiří Moskala, and assistance from the Office of Research & Creative Scholarship the group began planning a conference on the composition of the Pentateuch. The conference featured respected scholars Richard E. Averbeck (Trinity Evangelical Divinity School), John Bergsma (Franciscan University of Steubenville), Joshua Berman (Bar-Ilan University), Daniel I. Block (Wheaton College), Richard M. Davidson (Andrews University), Roy E. Gane (Andrews University), Duane A. Garrett (The Southern Baptist Theological Seminary), Richard S. Hess (Denver Seminary), James K. Hoffmeier (Trinity Evangelical Divinity School), Benjamin Kilchör (Staatsunabhängige Theologische Hochschule Basel), Gerald A. Klingbeil (Andrews University, Adventist Review), Michael LeFebvre (Christ Church Reformed Presbyterian) and Jiří Moskala (Andrews University), as well as other Andrews University faculty and PhD students.

Attendees came from across the United States to participate in the conference, which is the first of its kind to be held at Andrews University. The presenters addressed current issues in Pentateuchal studies, particularly arguments for Mosaic authorship as opposed to the commonly held Documentary Hypothesis.

Amanda McGuire-Moushon, a PhD candidate in Old Testament at Andrews University, remarked, “This event was an extremely valuable experience. The issues were addressed within a faith-based, scholarly framework that is not often seen in a conference like this with such well-known scholars.”

The Torah Group plans to organize a second conference in 2018. The results of this year’s conference will be published as an edited volume.

Third Annual Andrews Research Conference

Early career creative scholars and researchers in the arts and humanities gathered at Andrews University for the 3rd annual Andrews Research Conference, May 4–8, 2016. Presenters and attendees traveled from across the United States, Nigeria and Romania to participate in the conference.

The conference was sponsored by the North American Division Office of Strategic Planning and Assessment; the General Conference Office of Archives, Statistics, and Research; the Andrews University Office of Research & Creative Scholarship; and the Andrews University Departments of English, History & Political Science, International Languages & Global Studies, Music, and Visual Art, Communication & Design.

Plenary presentations were given by L. Monique Pittman, professor of English and director of the J. N. Andrews Honors Program, on the topic of “Color-Conscious Casting and Multicultural Britain in the BBC Henry V (2012): Historicizing Adaptation in an Age of Digital Placelessness” and David Trim, director of the General Conference Office of Archives, Statistics, and Research, on “America’s favourite sect? The afterlife of the Huguenots: in the visual arts, literature, drama, music, and the movies.”

On Thursday and Friday, participants gave oral presentations and lecture recitals, exhibited art, and showed an original film. Leisure activities began with a vespers on Friday evening, featuring local artist Nathan Greene. On Saturday afternoon, a group of attendees traveled to Battle Creek and enjoyed a tour of the Historic Adventist Village and Oak Hill Cemetery before returning for vespers, featuring then-provost, now president, Andrea Luxton.

Francisco Burgos, associate professor of English & foreign languages at Oakwood University, expressed his appreciation for the conference. “The format of the conference was excellent. I could see total respect

for each and every one of the speakers and the studies presented; the organization was impressive; and I was able to learn many valuable lessons from all my colleagues,” he said.

Michael Weismeyer, a PhD candidate in the Department of History at the University of California, Los Angeles, remarked that, “The Andrews Research Conference was a great experience. Coming from a non-Adventist university, it was rewarding to be able to interact with other Adventist scholars from a variety of disciplines.”

“The 2016 Andrews Researchers [sic] Conference for me was a delightful experience filled with experiential and empirical details. This is what research is supposed to be about; the easy atmosphere and warmth that attended every presentation makes me want to attend the next conference,” said Johnson Babefemi Akintayo, a lecturer in the Department of Mass Communication at Babcock University in Nigeria.

The fourth annual Andrews Research Conference will be held from May 17–21, 2017. The conference will return to the first theme of its three-year cycle: early career researchers in STEM. Adventist undergraduate students (advanced), graduate students, post-docs and early career faculty in STEM are invited to present. More information can be found at andrews.edu/research/arc.

*Debbie Michel,
“Lake Union Herald”
managing editor,
presents at the
conference.*



Projects supported by the Office of Research & Creative Scholarship, 2015–2016

Faculty Research Grants: 2015–2016

Erich Baumgartner (Leadership), *The Changing Role of Church Planters in the Life Cycle of a New Church Plant*

Skip Bell (Church Ministry), *Christ in the City: Incarnational Ministries that Transform Lives and Grow the Church*

Petr Cincala (World Mission), *John Matthews* (Discipleship & Religious Education), **Kathleen Beagles** (Discipleship & Religious Education), **Peter Swanson** (Christian Ministry) and **René Drumm** (Behavioral Sciences), *Identifying Components of Effective Pastor Training: A 10-year Review of Student Input*

Ivan Davis (English), *Fred Newton Scott and Journalism Training at the University of Michigan*

Kari Friestad (Visual Art, Communication & Design), *Exhibition and Studio Work Plan (2015–2016)*

Daniel Gonzalez-Socoloske (Biology), *Characterization of manatee habitat and its use with side-scan sonar in Isla de La Juventud, Cuba*

Thomas Goodwin (Biology), *Distribution and paleobiology of hibernation in fossil ground-dwelling squirrels from the Meade Basin, SW Kansas, USA*

James Hayward (Biology) and **Shandelle Henson** (Mathematics), *Comparison of Surface Patterns on Cannibalized and Noncannibalized Gull Eggs*

Lori Imasiku (Teaching, Learning & Curriculum), *Voices from the multigrade classroom: Zambian community schools*

Jimmy Kijai (Graduate Psychology & Counseling) and **LeRoy Ruhupatty** (Accounting, Economics & Finance), *Student engagement and its relationship to development of values, religious commitment and community services at selected Adventist colleges/universities in the Southern Asia Pacific region*

Hyun Kwon and **Rodney Summerscales** (Engineering & Computer Science), *Paper biosensors and mobile apps for affordable detection of cancer biomarkers*

Kanya Long (Biology), *Complementary local and international research opportunities for undergraduates in the Arbovirus Ecology Laboratory*

Peter Lyons (Biology), *Structure and function of carboxypeptidase O*

Robson Marinho (Leadership), *Practical Application of Kolb's Experiential Learning Cycle to Professional Development as Perceived by the Participants of Leadership Development Programs in Cross-Cultural Settings*

Desmond Murray (Chemistry & Biochemistry) and **Kanya Long** (Biology), *Hybrid Heterocyclic Boronic Acids as Potential Inhibitors against Alphaviruses*

Benjamin Navia and **John Stout** (Biology), *The effect of model calls with varying sound intensities and multiple frequencies in the phonotactic selectivity and its neural correlates in female crickets*

Boon-Chai Ng (Engineering & Computer Science), *Creating and Testing Anodized Aluminum for potential application as an interposer in the test socket industry*

Joel Raveloharimisy and **Arian Timoti** (Behavioral Sciences), *Understanding Poverty in Madagascar*

Rhonda Root, **Robin Johnson** and **Ariel Solis** (Architecture), *Cavan Burren Research Project, Republic of Ireland*

Felipe Tan and **Jim Ford** (James White Library), *Subject Analysis of the Books in Ellen G. White's Private and Office Libraries*

Shannon Trecartin (Social Work), *Examining the Factor Structure of the Latent Construct "Physical Home Environment" using the National Health and Aging Trends Study*

Randy Younker (Institute of Archaeology), *A book on the Archaeology and History of Salemi, Sicily*

Robert Zdor (Biology), *Cloning & Sequencing of Weed Deleterious Rhizobacterial Genomic Sequences Associated with Production of the Plant Hormone Auxin*

Faculty Research Grant Renewals: 2015–2016

Lisa Ahlberg (Chemistry & Biochemistry), *Investigation of 1,3-Dipolar Cycloaddition Mechanisms: Synthesis of Thiolactamycin and Derivatives*

Stanley Beikmann (Agriculture), *Using What JFS Archaeology has Learned—for Education and Conservation of Plants, Water and Soil*

Larry Burton (Teaching, Learning & Curriculum), *Denominational Persistence and Denominational Exit Among Adventist University Alumni*

Greg Constantine (Visual Art, Communication & Design), *Creation and Exhibition of "Poetic Licenses"*

Kenley Hall and **Joseph Kidder** (Christian Ministry), *Pilot Case Studies of NAD Churches who are Attracting and Keeping Young Adults (18–30)*

Ryan Hayes (Chemistry & Biochemistry), *Structure Identification and Toxicity Assessment of an Arginine-based Heterocyclic Amine*

Kenneth Logan (Music), *Documentation of William Huber Jr. Collection at The Library of Congress and Its Namesake; Musical Composition Fostering and Efficiency Project*

David Mbungu (Biology), *Modulation of Phonotaxis by Monoamines*

Getahun Merga (Chemistry & Biochemistry), *Synthesis and Characterization of Conjugated Gold and Silver Nanoparticles with Sulfur Containing Amino Acids*

Nicholas Miller (Church History), *The Religious Roots of the Civil War: Slavery, Judgment, and the Moral Government of God*

Marlene Murray (Biology), *The Effects of Omega-3-Fatty Acids on Intracellular myo-Inositol*

David Nowack (Chemistry & Biochemistry), *Preliminary investigation into the relationship between dendrimer structure and enzyme activity*

David Randall (Chemistry & Biochemistry), *Development and use of NO chemical sensor*

Denise Smith (Biology), *The Role of the Oncogene HER2/neu in breast cancer and potential therapeutic screening*

Chi Yong Yun (Music), *Johann Samuel Schroeter Piano Concertos*

2015–2016 Undergraduate Research Scholars

Charles Abreu (Karl Bailey, Behavioral Sciences), *Cluster analysis of eye movement patterns and degrees of belief*

Will Allen (Boon-Chai Ng, Engineering & Computer Science), *Creating and Testing Anodized Aluminum for potential application as an interposer in the test socket industry*

Christiana Atkins (Harvey Burnett, Behavioral Sciences), *Moral Reasoning and Judgments about Ending Life Revisited: The Influences of Education, Spirituality and Resilience*

Kaydra Bailey (Desmond Murray, Chemistry & Biochemistry), *Liquid Crystalline Rhodanines as Biological Stains*

Christian Bardan (Peter Lyons, Biology), *Analysis of mammalian carboxypeptidase O expression patterns*

Alaryss Bosco (Monique Pittman, English), *A Machiavellian Framing of Power Dynamics in Shakespeare's Henry V as adapted by Olivier, Branagh, and the BBC's Hollow Crown*

Noah Chun (Getahun Merga, Chemistry & Biochemistry), *Characterization of naked noble metal nanoparticles before and after binding them to specific organic molecules and biomolecules*

Saharsh Dass (Shandelle Henson, Mathematics), *Mathematical Models of Animal Behavior*

Jonathan Doram (Anneris Coria-Navia, Teaching, Learning & Curriculum), *Surviving or Thriving: A Mixed Methods Case Study Investigating the Impact of Racial and Ethnic Diversity on Student Levels of Thriving in a Choral Classroom*

Hazel Ezeribe (Peter Lyons, Biology), *An analysis of carboxypeptidase folding mechanisms*

Josias Flores (Romulus Chelbegean, Religion & Biblical Languages), *Being a Pastor's Husband*

Amante Gonzalez (Romulus Chelbegean, Religion & Biblical Languages), *Being a Pastor's Husband*

Noel Harris (Joel Raveloharimisy, Behavioral Sciences), *Using Theories of Change for the Education of Social Responsibility: A Theoretical Framework*

Cooper Hodges (Duane McBride, Behavioral Sciences), *Religiosity & Perceived Stress Among College Students*

Bomi Kim (Darah Regal, Speech-Language Pathology & Audiology), *Auditory Memory and Figure-Ground Ability Among University ESL Students: A Comparative Study*

Shanelle Kim (Monique Pittman, English), *Religion, Morality, and Gender in Ben Johnson's Volpone*

Jeong Bin Lee (Benjamin Navia, Biology), *L3 auditory interneuron responses to dual-frequency calling songs in female crickets (Acheta domestica)*

Julie Logan (Yun Myung Oh, Mathematics), *A characterization of sphere curves: Summary and new*

Bernardo Martinez (Rodney Summerscales, Engineering & Computer Science), *Providing immersive virtual reality walkthroughs of large, architect-designed buildings*

Hannah Mbungu (Sherine Brown-Fraser, Public Health, Nutrition & Wellness), *The Effects of Preservation Techniques on Nutrient Quality in Selected Foods Using a Refractometer*

Karla Mulzac (Benjamin Navia, Biology), *The effect of dual frequency calls in the phonotactic response of female cricket Acheta domestica*

Rufaro Musvosvi (Hyun Kwon, Engineering & Computer Science), *Matlab Gui application for Optical trapping*

Fonda Mwangi (Rachel Williams-Smith, Visual Art, Communication & Design), *From Good to Great-An Action Research study to Improve the New Faculty Onboarding Experience*

Candace Neufville (Darah Regal, Speech-Language Pathology & Audiology), *Auditory Memory and Figure-Ground Ability Among University ESL Students: A Comparative Study*

Michael Plantak (Ryan Hayes, Chemistry & Biochemistry), *Ames Test Optimization for Evaluating Mutagenicity of Arginine-Based Heterocyclic Amines*

Zachary Reichert (John Stout, Biology), *The effect of model calls with varying sound intensities and multiple frequencies in the phonotactic selectivity and its neural correlates in female crickets*

Zachary Reichert (Ryan Hayes, Chemistry & Biochemistry), *Structure Identification of Mutagenic Arginine-Based Heterocyclic Amines*

Timothy Robertson (Joon Kang, Mathematics), *Sufficient conditions for the uniqueness of positive solutions to an elliptic model*

Elmany Saint-Fleur (Garth Woodruff, Agriculture), *Sustainable Agriculture*

Randy Sanchez (Thomas Goodwin, Biology), *Distribution and paleobiology of hibernation in fossil ground-dwelling squirrels from the Great Plains*

Heaven Shin (Hyun Kwon, Engineering & Computer Science), *Paper biosensor design and test*

Connor Smith (Garth Woodruff, Agriculture), *Identifying and Preserving Endangered Plants in Tall Hishbon, Jordan*

Rashida Smith (James Hayward, Biology), *Measuring the effects of sea surface temperature on seabird cannibalism in the Salish Sea*

Christa Spieth (Boon-Chai Ng, Engineering & Computer Science), *Testing anodized aluminum for potential application as an interposer in the test socket industry*

Gabriel Stanier (Ryan Hayes, Chemistry & Biochemistry), *Isolation and detection of Arginine-based HCA in Complex Plant Proteins*

Krystal Uzuegbu (Lionel Matthews, Behavioral Sciences), *Psycho-social, Religious, and Socio-demographic Predictors of Racial Attitude in a Selected Group of Americans*

Zachary Verhelle (Hyun Kwon, Engineering & Computer Science), *Electrochemical paper biosensor development*

Chrystal Wedderburn (Øystein LaBianca, Behavioral Sciences), *Survey of Habitation Caves in Jordan*

Hyelin You (David Nowack, Chemistry & Biochemistry), *Stabilization of Aqueous Ascorbic Acid Solutions using PAMAM Dendrimers*

Dillon Zimmerman (Getahun Merga, Chemistry & Biochemistry), *Arylidene Barbiturates as Potential Bifunction Nanoparticle Linkers*

Support Research and Creative Scholarship at Andrews University

Internal grants and Undergraduate Scholar Awards are supported by the Office of Research & Creative Scholarship. To meet the needs of the growing research initiatives around campus, we have instituted a Fund for Research which will be used to support faculty and student research activities above and beyond what is normally funded through the internal grant process, to cover travel expenses to national and international conferences, and to support the hosting of research conferences where our faculty and students can interact with other researchers from around the world.

You may support research at Andrews by choosing to designate a gift to the Office of Research & Creative Scholarship. Please visit www.andrews.edu/go/give/SCHOLAR or fill out the form to the right to support research at Andrews.

The Fund for Research



My check is enclosed.

Please charge my credit card.

Visa MasterCard AmEx Discover

Card #: _____ Security Code: _____

Name on Card: _____ Exp. Date: _____

Signature: _____

Name: _____

Address: _____

City, State, Zip: _____

Please make checks payable to Andrews University