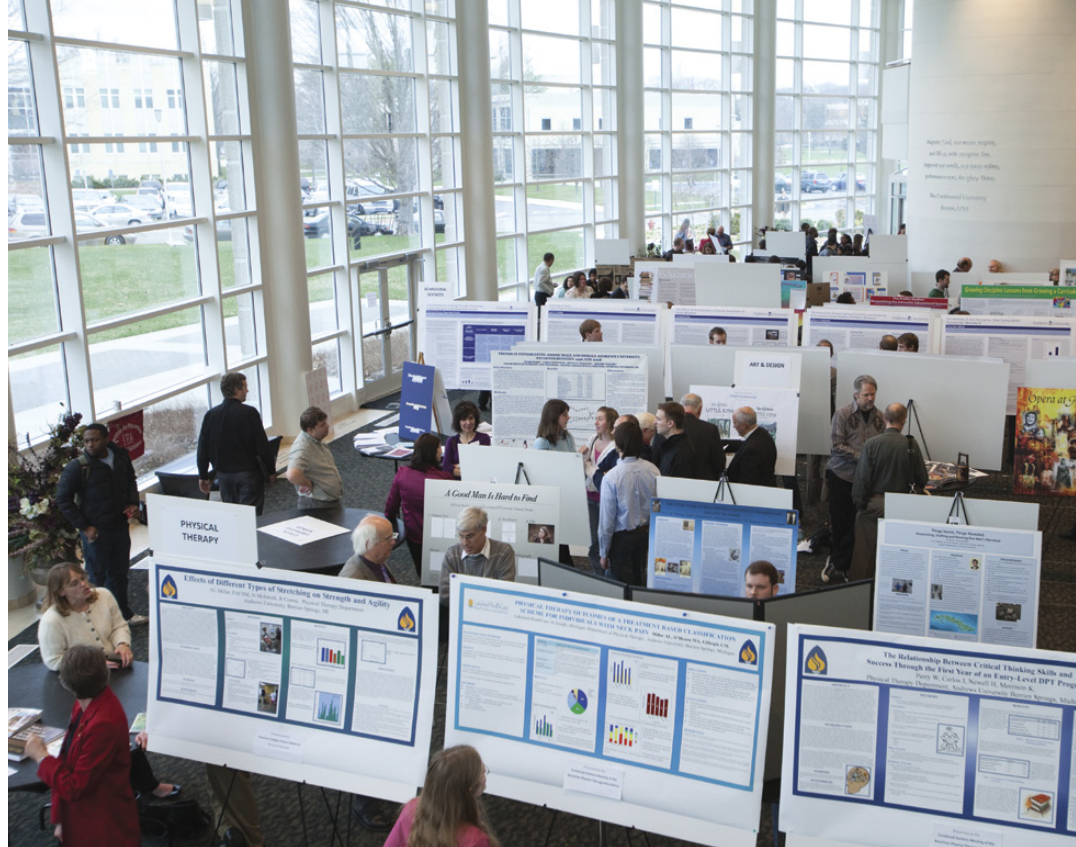


Andrews Celebrates Research and Creative Scholarship

by Andre Weston



Research ensures a university remains a legitimate community of critical thinkers. Andrews University has continued its support of research by supporting avenues of open participation in scholarly exploration. One such opportunity was Andrews University's first Celebration of Research and Creative Scholarship on Thursday, April 2, in the Howard Performing Arts Center. This scholarly event was jointly sponsored by the Office of Research & Creative Scholarship and the Office of the Provost. The event was designed to address the important roles of research/creative scholarship in academics, student mentoring and the community. Presentations portrayed the research studies of Andrews' faculty members, as well as the contributions of their undergraduate and graduate students.

The evening unfolded in two parts. From 4–6 p.m., students, faculty and staff were invited to an open exchange of research. The information sharing included over 120 poster and video presentations covering a wide range of topics from the scientific, "Converting Cow Manure and Disposable Water Bottles into Fiberboard," to the literary arts, "A Good Man is Hard to Find." Attendees browsed the presentations in a packed Howard Center lobby while conversing with faculty and student presenters about their

topics. The presenters showcased analytical literary reflections, pedagogical findings, creative arts exhibits and a wide range of other conclusions, assertions and proposal research from 21 University departments.

Provost Heather Knight served as emcee for the second part of the Celebration of Research, held in the Howard Center auditorium. There, the provost introduced seven faculty presentations to an attentive audience. Expressing thankfulness the research celebration had finally moved from planning to actualization, she disclosed conversations about the event began over two years ago. At that point, she said, "It seemed like only a dream." Knight thanked John Stout, dean of research, for helping transform that dream into a reality and said the celebration demonstrated an appreciation of scholarship. "We want this event to show we support research at Andrews," she stated.

President Niels-Erik Andreasen also addressed the audience with a reiteration of the need for research. He outlined three reasons for research. "Because it's fun," he said. "It's good for students," and "It adds to the common good." Discouraging participation in research for material gain, Andreasen said, "Don't think of research as something to do to get a promotion. Do it because it's good for the students."

Stout described the main purpose of the evening as an effort to "make the Andrews

University faculty and student body aware of just how much research/creative scholarship was actually happening." Stout says the celebration emphasizes how important research is to faculty as professional scholars and as a demonstration to students of how research promotes growth and equips their analytical abilities. He also identified the night as a presentation of faculty-student partnerships. "One of the most important educational opportunities students experience," he says, "is to work closely with a mentor in an area of the mentor's research expertise."

The research presentations concluded with a selection from the opera "L'Amico Fritz," produced by the Department of Music.

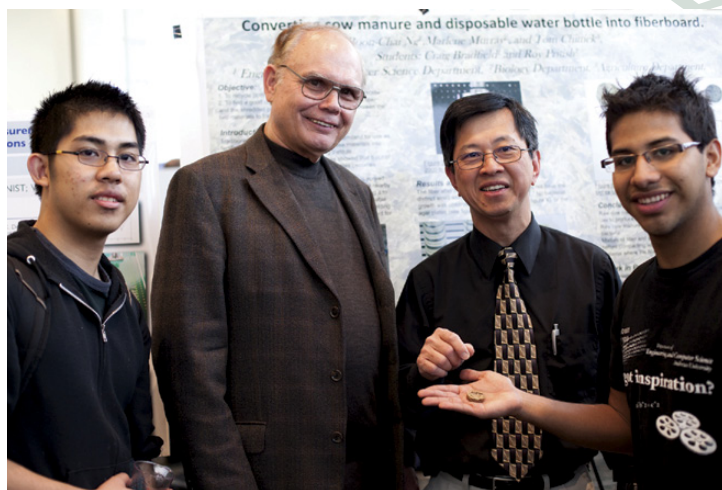
Stout acknowledged plans to make the Celebration of Research an annual event. He called the night a fusion of research into mainstream Andrews' life. "We, the president, provost, research office and many others, feel this event laid the foundation for more effectively weaving research and creative scholarship into the educational fabric that students, faculty and administration create together at Andrews University."

Honors Research Symposium

On Friday, April 17, 2009, the J.N. Andrews Honors Program, directed by L. Monique Pittman, assistant professor of English,



More than 120 poster and video presentations were on display in the lobby of the Howard Performing Arts Center during the first Celebration of Research and Creative Scholarship. They represented 21 University departments.



Engineering student Atniel Quetz (far right), holds a sample from the research project, "Converting Cow Manure and Disposable Water Bottles into Fiberboard." Pictured with him, left-right: Maverick P. Maguad, engineering student, John Stout, dean of research and professor of biology and Boon-Chai Ng, associate professor of engineering and computer sciences.

One of the most important educational opportunities students experience is to work closely with a mentor in an area of the mentor's research expertise.

hosted the annual Honors Research Symposium.

More than 40 Honors students presented their research, which ranged from biological studies on crickets to feminist analyses of *Paradise Lost*, to chemical experiments with pesticides. The research symposium marked the culmination of months of work, as most of the presenters had been working on their projects since last year. Before presenting their research, the students were first required to defend a proposal of their projects in front of a board of Honors faculty, in addition to presenting a condensed version of

their projects at the poster session in March. Among the disciplines represented in the symposium were biology, chemistry, English, history, graphic design, psychology and communication.

Preliminary Biology Research Results

Andrews scores on the biology Major Field Test have ranked in the top 10 percentile over the past 10 years. This occurrence, in combination with the fact that many Andrews biology students (54 percent) are coming into the department with average or subaverage SAT/ACT scores, and are collectively finishing, on average, in the top 10 percentile. prompted the National Science Foundation (NSF) to sponsor research on AU's apparently transformational education.

Because of these exceptional successes John Stout, with the collaboration of Gordon Atkins and the biology faculty prepared a grant with the purpose of discovering the educational experiences that were responsible. The National Science Foundation (NSF) funded this grant in 2003. With the provision of a second grant in 2007, the NSF extended the evaluation research led by Larry Burton, professor of teacher education and David Mbungu, associate professor of biology.

On April 2, 2009, preliminary findings from the research were available for viewing

during the Celebration of Research and Creative Scholarship. The research, which evaluated both alumni and current students, contained two components: an outcome study, led by Mbungu, and a process study developed by Burton.

In order to process the data, a wide range of criteria from SAT scores to ethnographics was evaluated. One hundred and twenty sample students were selected for interviews to see how and when transformation began for them. Specific questions about what the biology experience at Andrews was like were asked and interviewees named contributors to their success.

One thing reported often was an exposure to good teaching methods in the classroom and strong teacher-student relationships. Mbungu says, "They found that teachers were very willing to talk and they were always available." In fact, a sense of positive experiences with teachers (department ethos) and an appreciation for teaching approaches (pedagogy) were the top two reported reasons for success among all three study groups: biology students, biology alumni and behavioral neuroscience students. Students also described "working and thinking like a scientist" along with "personal or professional gains" as strong components they picked up as biology majors at Andrews.

Having good teachers is to Andrews' credit, but when an institution is consistently

Honor Seniors Thesis Symposium

Friday, April 17, 2009

Name	Major	Advisor
Keiko Andress	English	Beverly Matiko
David Bouzy	Accounting	Ann Gibson
Angela Brown	Communication	Delyse Steyn
Holly Brubaker	Biology	Robert Zdor
Benjamin Chase	Mathematics	J.H. Kang
Ryan Choi	Biology	John Stout
Yeon Chung	Biology	James Hayward
Eileen Corredera	Psychology	Herbert Helm
Alaina Elder	English	L. Monique Pittman
Silvi Gonzalez	Communication	Delyse Steyn
Jessica Groenweg	Pre-Veterinary	Katherine Koudele
Jeffery Habenicht	Psychology	Karl Bailey
JaYeon Hwang	Accounting	Carmelita Troy
Sereres Johnston	Physics	Margarita Mattingly
Chabu Kashito	Computer Eng	Boon Chai Ng
Adam Kim	Biology	Robert Zdor
Sharlene Kim	Biology	David Steen
Byung-Chan Lee	Religion	Erhard Gallos
Kristin Lee	Biology	Gordon Atkins
Alana Lewis	Biology	Gordon Atkins
Melissa Magsipoc	Biology	Gordon Atkins
John-Philip Markovic	Biochemistry	Desmond Murray
Brenden Matus	Biology	David Nowack
Sarah McDermott	Fine Arts	Robert Mason
Erin McLean	English	L. Monique Pittman
Libby Megna	Biology	James Hayward
Claudia Melgosa	Biology	James Hayward
Justin Meseraull	English	L. Monique Pittman
Robert Moncrieff	English	Scott Moncrieff
Benjamin Oliver	History	John Markovic
Anna Park	English	L. Monique Pittman
Brianna Payne	Biology	James Hayward
Pharez Rolle	Biology	Marlene Murray
Deborah Roquiz	Biochemistry	Desmond Murray
Eric Shull	Mathematics	Lynelle Weldon
Sulare Telford	Speech Path & Aud	Lena Caesar
Ryan Thornhill	Accounting	Carmelita Troy
Nicole Van Allen	Biochemistry	David Nowack
Katharine Van Arsdale	English	L. Monique Pittman
Jonathan Van Ornam	Biochemistry	Desmond Murray



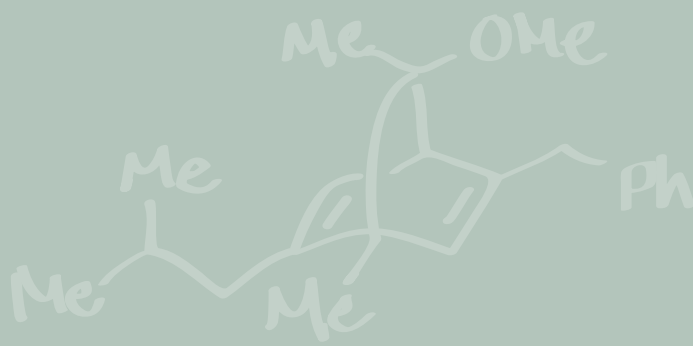
putting out graduates with scores in the 90th percentile on Major Field Tests and is carrying a 70 percent freshman graduation rate and an 85 percent acceptance rate into medical schools, evaluators look for additional components which signal a difference between that school and similar institutions.

For Andrews, there are several differences. Diversity—a strong Andrews talking point—shows up in the Department of Biology in a notable way. “When you look at national statistics, you will find that Andrews is diverse” says Mbungu. “We have a very high population of students who are traditionally underrepresented in sciences.” Specifically this refers to minority students who don’t surface as often in Science, Technology, Engineering and Math (STEM) subjects.

While, for example, African Americans enrolled in the sciences will typically constitute below 10 percent of a department’s students nationally. At Andrews around 28 percent of the program’s pupils are black. Hispanic students make up a smaller percentage of the department, and Asians, while not an underrepresented group in sciences, bring the percentage of non-white students to a majority. The study also found that all groups of students are experiencing a pull towards success. On Major Field Test scores, there is less than 10 percent difference between whites and minorities.

Another difference is Andrews biology majors are sticking with their program at higher rates. “Some of them (other schools)

When you look at national statistics, you will find that Andrews is diverse. We have a very high population of students who are traditionally underrepresented in sciences.



Left above: Tiffany Summerscales, assistant professor of physics, conducts research with the Adiabatic Gas Law Apparatus supplied by Physics Enterprises

Left below: Anna Park presents her English thesis project. She was one of 40 Honors students who participated in the Honor Seniors Thesis Symposium

have a retention rate of almost 50 percent,” Mbungu says, “but we keep more of our students. We keep a very high number of students and they graduate in biology—that is not common with other universities.” Larry Burton describes it this way, “We keep as many as other institutions wash out.” In fact, in the Andrews approach, 80–85 percent of freshmen will finish the introductory course, Foundations of Biology.

This reflects two principles: first, as Mbungu notes, not all freshmen in introductory science courses are confirmed biology majors. Many are still exploring the field and so the tendency is to cultivate their interest in biology instead of filter them out during their first course. Secondly, as John Stout says, “When a student is having trouble, we’re not there to weed them out. We’re there to help.” Thus the Andrews approach seeks to correct weakness instead of discarding it—an inverse to the talent sifting found in larger universities. Seventy percent of second semester freshman will go on to graduate in the program because of the retention approaches implemented during the first year. The findings suggested that high retention could be linked to the department ethos and effective pedagogy which students reported.

Andrews admission standards also seem to set the University apart. Admitted students who opt to become biology majors represent a wider than usual range of SAT/ACT scores—the majority of which were classified as “underprepared, adequately prepared or unknown” in the study. Only 46 percent were noted as “well prepared.” Despite this, Major Field Test scores from the research indicate that lower achievers are improving their knowledge of biology while higher achievers hold the line. Collectively, all levels of preparedness are finishing at Andrews with scores well above the national average.

The suggestions from these preliminary findings seem to be pinning biology success to the kind of students and the kind of teachers who interact in the department. Atypical academic and ethnic diversity among entrants seems to be mixing with caring, retention-driven faculty and igniting positive relationships which output higher success.

The complete findings from the study of the Department of Biology are due to be completed this summer. At that point the department will report back to NSF and, together with NSF, share the findings with science programs across the nation. ■

Andre Weston earned a BA in English from Andrews University in December of 2008. He is currently interning with the Office of Integrated Marketing & Communication and will be attending American University in Washington, D.C. for graduate school in fall 2009.

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