

BIOLOGY/ALLIED HEALTH DEPARTMENT

Insights From the Professor

Our Changing World

I am happy to report that the Biology Department is continuing to grow. We currently have about 270 biology majors and about 140 pre-allied health majors. Helping shepherd these students through their degrees are 10 dedicated, full-time professors and several well-qualified adjuncts. These adjuncts allow us to teach classes such as Introduction to Dentistry and Introduction to Clinical Lab Science. We are considering adding an Introduction to Medicine class in the future.

Our six active clubs include the Biology, Pre-Allied Health, Pre-dental, Pre-medical, Pre-veterinarian, and Tri Beta (Biology National Honor Society) clubs. These clubs facilitate shadowing experiences; provide MCAT, DAT, and GRE training for those planning to take these tests; incorporate community service into professional preparation; and provide crucial leadership opportunities for many students. Peer support is a key component of success.

Our research degree, spearheaded by Ben Thornton, is growing well. About 24 students are pursuing this track, and many others are also doing research as extra preparation for their future careers. This March, we had eight students presenting at the American Society of Biologists.

Still, we wonder how we can even better

prepare all of our students. As we have labored over the future direction of the department, several things pop up as areas to consider. We plan to address the issue of soft skills. The average graduate from college will change jobs about once every two to three years. By the time our alumni are 40, they will have worked in 8-12 jobs. The current student assumes that knowledge is only a "Google" away. Why learn what you can easily find online? So we need to reconsider how to teach classes in this new mindset while still bridging the knowledge expectations of future employers. With this rapid change of jobs, soft skills will become paramount in obtaining a job.

Another area we plan to strengthen is the posting of job opportunities outside of the medical field. Our graduates are qualified for a plethora of jobs, but often don't hear about them. Additionally, those good, solid students with GPAs in the 2.75 to 3.4 range probably will not be going to professional school. We need to enlighten them to the many other options available both inside and outside the medical field.

We entreat your prayers for us and for our students as we continue to prepare them to finish the work God has for all of us so we can finally go home.

By Keith Snyder, Chair

Life Sciences

Students in Service

Eli Robinson is serving in Peru with AMOR Projects

My experience as a pre-med student serving at a medical clinic in Peru has been all that I wanted it to be: watching surgeries, learning medical techniques, getting to know the pharmacy, teaching people how

evangelism is where lives are changed and where the Holy Spirit is hard at work. The big and small instances where the Holy Spirit was working was the most unforgettable.

One of the big times was when

I was out doing Bible studies in the community. My Bible worker partner and I walked up to the aftermath of a house fire. Taking in the sight, we gazed past the charred remains of a fence that surrounded the house but was now heaps of ash and coal. Our eyes then came upon the only green tree remaining on the

property. In its shade sat a family—the parents and two small girls. They sat on bricks that were salvaged from the blaze, and they used sticks to stir the food cooking over a fire.

Seeing such need, we did not know how we could be of service or what words we could say to bring comfort in such a time of pain. However, knowing we had arrived in that place for a purpose, we greeted the family, and they eagerly invited us into the shade of their tree. We all embraced and shared what little words of comfort we knew in Spanish at the time. Then, as missionaries often do, we asked what we could do to help.

They mostly just needed the necessities: food, clothing, and

bedding. So we prayed for them and set off to gather what supplies we could. From the generosity of the missionaries at AMOR Projects, we were able to collect a sizable donation of necessities that the family desperately needed. In this way, we were able to help meet the family's physical needs. Then, following the Holy Spirit's leading, we sought to meet the family's spiritual needs. For example, we taught the father how to be a colporteur so he could learn about God while earning money to support his family. Now, months later, we are doing Bible studies with the family.

All that was done in this situation was clearly the work of the Holy Spirit; we simply allowed ourselves to be used by Him. Our arrival to the burned house was no "coincidence." That day we were visiting one of our



Eli enjoys working triage at one of AMOR Projects' mobile medical clinic.

to live a healthy life, and helping people in need. All of these have been incredible experiences that will shape my future as a physician. However, these are not the aspects that have made my mission experience complete. In addition to medical work at my service destination, AMOR Projects also is involved in a lot of evangelistic work. This area of



Talking in the aftermath of the fire, Eli asked the family how he could help.



Personal belongings recovered from the fire.

regular Bible study appointments, and as we finished the Bible lesson, we asked if they knew anybody who would also like Bible studies, which

was something we had never asked before. Though they could not think of anyone, they told us of the family whose house had burned down the night before. They showed us to the place of the fire and went on their way.

Thus, we arrived just where we needed to be—just where God wanted us to be.

Through experiences like this, I have learned that the most effective service occurs when we allow ourselves to be used by God and filled with the

Holy Spirit. When serving in this manner—whether it is doing Bible studies, medical work, or manual labor—that is when we have power to make remarkable change.

By Eli Robinson submitted to Tim Trott

Alumni Spotlight

Brian Dickinson, Hometown Veterinarian

Brian Dickinson, DMV, graduated from Southern in 1997 with a BS in Biology. He then attended the University of Tennessee College of Veterinary Medicine, and completed his DVM in 2001. He practiced in coastal North Carolina for three years before moving back to the

Ooltewah/Collegedale since December of 2005. He has grown the practice to become an AAHA-certified hospital, with two other associate doctors, as well as more than 30 support staff. “I enjoy seeing old classmates, professors, and community members that I remember from my childhood. My

my stint at Southern: Joyce Azevedo’s seven-layer bean dip was always a crowd favorite. My last semester of my senior year at Southern consisted of classes taught exclusively by David Ekkens. I also remember the summer I took the Tropical Biology elective from Stephen Nyirady. That was an amazing time!



Collegedale area in 2004. After practicing in a few different clinics around Chattanooga for a year and a half, an opportunity to own a practice came his way. He was offered the chance to purchase the small animal clinic in which he had worked during college and academy. It had always been his dream to own a practice and to serve the community in which he grew up.



Dickinson has owned and operated Animal Medical Professionals in

passion is helping to nurture the human-animal bond and to preserve the unconditional loving relationship that exists between pets and their owners.”

He is married and has three children and three cats. He enjoys running, aquarium reef-keeping, and family time.

Concerning his days as a university student at Southern: “Several things come to mind as fond memories from

Duane Houck was, by far and away, the most influential professor and mentor I had in the Biology Department. He was always encouraging and kind in regard to my veterinary pursuits. I honestly do not know if I would have continued my pursuit of a DVM if it wasn’t for him. If I had one piece of advice to pre-vet students, it would be to get a job working at a local veterinary hospital to gain experience. Cultivate a professional relationship with the doctor(s). Invest your time and energy into the profession.”

By Brian Dickinson & Joyce Azevedo

Allied Health Graduates 2017-2018



Elizabeth Ayala
Speech Lang Pathology



Jason Carrazana
Physical Therapy



Dalles Carr
Physical Therapy



Naomi Cruz
Speech Lang Pathology



Samuel Duany
Physical Therapy



Ian Durias
Medical Lab Science



Loany Garrido
Physical Therapy



Catalina Hannah
Dental Hygiene



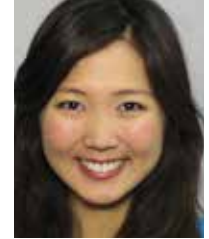
Brenton Hevener
Physical Therapy



Jonathan Imperio
Medical Lab Science



Ryan Johnson
Physical Therapy



Alice Kim
Nutrition/Dietetics



Michael Kovach II
Physical Therapy



Marietta Kusumo
Medical Lab Science



Dave Mallari
Medical Lab Science



Amber McKeever
Medical Lab Science



Leisa Ong
Medical Lab Science



Irisse Pagarigan
Medical Lab Science



Lizabeth Paulino
Medical Lab Science



Abri Ranzinger
Physical Therapy



Kurtis Rogers
Physical Therapy



Yanielle Seeley
Nutrition/Dietetics



Sungyun Seo
Physical Therapy

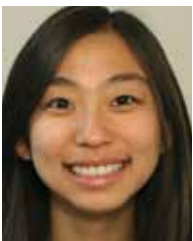


Cassandra Veluz
Speech Lang Pathology



Ruth Yepez
Physical Therapy

Biology Graduates 2017-2018



Jessica Ahn
BS Biomedical



David Bonney
BS Biomedical



Leslie Calvo
BS Biomedical



Rachel Clark
BS Research



Chelsea Dancek
BS Biomedical



John Davilmar
BS Research

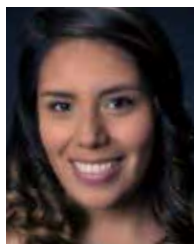
Biology Graduates 2017-2018 (con't.)



Claude Delille
BS Biomedical



Isaac Delote
BS Biomedical



Jacqueline Dulanto
BS Research



Alexa Fisher
BS Research



Leilani Gammada
BS Biomedical



Yuna Han
BA Biology



Gabriel Hidalgo
BS Biomedical



Hannah Houghtaling
BA Biology



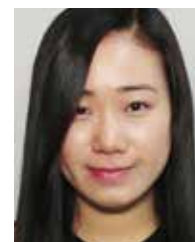
McKinzie Johnson
BS Research



Gloria Khrapova-Andrusiak
BS Biomedical



Aaron Keiser
BA Biology



Ha-Eun Kim
BS Biomedical



Jeein Kim
BS Biomedical



Riley Kim
BA Biology



Jin Soo Lee
BS Biomedical



Jon Lee
BA Biology



Rashid Logan
BS Biomedical



Matthew Lopez
BS Biomedical



Madai Lugones
BA Biology



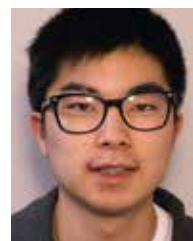
Alan Machado
BS Biomedical



Nicholas McCall
BS Biomedical



Matthew Melton
BA Biology/Teaching



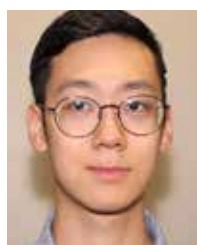
Joseph Min
BS Music/Biomedical



Renee Mitchell
BS Biomedical



Philip Paik
BS Biomedical



Bumsoo Park
BS Biomedical



Daniel Park
BA Biology



Andrew Peverinl
BS Biomedical



Christian Soeharsono
BS Biomedical



Gustavo Suarez IV
BS Biomedical



Arden Uhrh
BA Biology



Lisa Yun
BS Biomedical



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Keith Snyder, PhD
Debbie Strack, Office Mgr.
Ben Thornton, PhD
Tim Trott, PhD



Department Happenings

We had the privilege of hosting biochemist Michael Behe, PhD, on March 15th. He spoke for the Origins Convocation in the morning and then again for the E. O. Grundset lecture series in the evening. He is a luminary in the intelligent design (ID) movement, which advocates the position that certain features of the natural world are best explained by deliberate and purposeful design as opposed to natural, unguided processes.

Behe is probably best known for his 1996 book, *Darwin's Black Box*, in which he directly addressed a statement made by Charles Darwin in his seminal work, *The Origin of Species*, published in 1859. Darwin wrote: "If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down. But I find no such case." In his book, he takes up Darwin's challenge by asserting that there are, in fact, systems in living things that cannot be built by "numerous, successive, slight, modifications." Behe called these systems

"irreducibly complex," defining such systems as "composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning." His book discusses several examples of irreducibly complex systems found in the realm of molecular biology, including the bacterial flagellum and the vertebrate blood clotting cascade. However, his presentation went beyond simply arguing that such systems defy Darwinian explanation; he boldly asserted that such systems, which are common in living things, are best explained by purposeful design.

One interesting aspect of his argument is that it, like other ID arguments, is solely based on scientific observations and does not rely on the Bible or any other holy book. This shows that while biblical revelation is certainly necessary for a complete understanding of reality, nature can give testimony to the Master Designer all by itself.

By Aaron Corbit