







BIOLOGY/ALLIED HEALTH DEPARTMENT

Insights From the Professor

Janet Accardo: Organizing Our Service

anet, I would like to ask you a few questions to help our alumni get to know you better.

Can you tell me a little about where you grew up?



I was born in Hagerstown, Maryland, and lived in Waynesboro, Pennsylvania, (near Hagerstown) during my early childhood. When I was 6 years old, my family moved to Platte Valley Academy in Shelton, Nebraska, where my parents worked. Another

opportunity took us to Hot Springs, Akansas, and we lived there several years. After raising six children, my mother completed her teaching degree while we lived in Arkansas and then accepted a call to teach at David G. Fleagle Elementary School in Seaford, Delaware. While living in Delaware, I completed the eighth grade, went on to high school, and graduated from Highland View

Academy in Hagerstown, Maryland.

Where did you attend college, and what were your interests?

I attended Southern and graduated with an AS in Office Administration. My emphasis was medical, but I have worked in a variety of office environments.

What paths did you follow after graduation?

After graduation, I lived in Georgia, Florida, and Tennessee. I have served at the Georgia-Cumberland Conference Office, at a medical center, at a marine construction company, and at several staffing agencies. Most recently, I worked at a heating and air company.

You have many family pictures in your office. Can you please tell us a little about your family?

After college, I married and had two daughters: Jessica (a graduate of Southern in 2012) and Kaitlyn. It is a blessing that my daughters and their families (including grandsons Lucas and Andrew) live near me here in the Chattanooga area, as well as two sisters and a brother and their families. I also have a brother in North Carolina and a sister and her family in Washington state.

Accardo, continued on page 3

5

Alumni Spotlight

Andrew Cuevas, Biology, December 2019 Graduate

Hello! My name is Andrew Cuevas (class of 2019), and I'm currently a second-year medical student at Loma Linda University School of Medicine. Before I get to the meat and potatoes of this article, I'd like to thank all of the wonderful professors at Southern—especially those in the Hickman Science Center. Their education, guidance, and encouragement are among the top reasons that I'm able to attend medical school.

A few weeks ago, Professor Tim Trott reached out to me, asking if I'd be willing to write about how the ongoing pandemic has changed the experience of medical school. At first, I thought it'd be an easy answer: "Well, classes were shifted online and I get to save time commuting to and from school!" After a few days of introspection, I realized that the answer, still unfolding on a daily basis as the year progresses, is not so much one of fun and productivity but, rather, of discipline, fatigue, and isolation.

To begin, those who have gone through medical school (or any STEM graduate program, for that matter) can attest to the times of loneliness, when "grinding" is required to succeed. The first year of the program is one of adaptation, continual improvement, and struggling to keep one's head above water. Even then, the academic load can prove to be too much for some (of our class of about 160, 20 ended up repeating the year—actually not that bad compared to other years . . . or so I've been told). From talking to

those individuals, my pseudo-study found that the major determining factor between those who succeeded academically and those who didn't is discipline. Students who schedule their day, limit (or eradicate) their social media use, and put in the long hours necessary can almost be certain of success. Those who are unable to do one or all three of the aforementioned have a much more difficult time.

Sure, the amount of material is

shop. The end of first year was very difficult to push through, and the wrapping-up of second year, including my board exams in June, is proving to be even more difficult to push through. Depending on the specialty, physician burnout is as high as 54% according to the American Medical Association website. The numbers seem to be similar for medical students, based on statistics on the My Well Being Index website, with some psychiatrists and psychologists



Andrew Cuevas, '19, pauses on the helipad of Loma Linda University Medical Center during an Emergency Medicine rotation.

difficult, but after a few months it becomes the new normal and you're able to work through what you once could only dream of. (I recall telling my brother what I had to study the following week, and he sounded less-than-thrilled for his stint in medical school—for which he was recently accepted! Congrats, Danny!). However, as the year drags on, fatigue finds a nice place to set up

in Loma Linda fully dedicating their practice to medical students. The days are long; most students put in close to 10 hours of studying per day, if not more. There's very little time for relaxation. Exercising, while necessary, still begs the question of what could be studied during that time. We have time for hardly anything other than school, and school isn't much of a comfort

these days. A friend from Southern recently visited Southern California and noted: "all of you medical students are tired. I can see it in your eyes." We are.

Lastly, and perhaps the most prominent throughout the pandemic, isolation creates a gaping hole in the spirit of most medical students. The hours of sitting in a cubicle at the library can definitely take a toll on the social life of those who were used to having one throughout college. Even at its worst, I could typically find a few hours a day to spend with friends, read, or do something for my own mental



L-R: Medical students Andrew Cuevas, Gus Moretta, socialize with dental students Derek Onjukka, and Brandon Dobrowsky.

health. That time simply doesn't exist for me or my classmates these days. Since March, of 2020 when California enacted a stay-at-home order and the university moved all courses online, we've been essentially doing school from our houses. At the beginning, this sounded like a blessing! We could watch recorded lectures at our own pace, decide the order in which we'd approach material, and have total control over our own schedules. Today, one calendar year since that began, I can look around at my classmates and see the desire to just spend time with others.

Now, I know what I've typed out here sounds spectacular, if not downright depressing. It's simply the way the system is: society's future doctors need to know a lot, and as the collective knowledge expands, so does the expectation for mastery. I believe it'd be a disservice to paint the struggles of

medical school, especially throughout this pandemic, in any other light. To their credit, the community has taken steps to reduce stress through medical school: courses are now graded on a pass/fail basis, and even boards are now following suit. While the stress of content still exists, the urge to compare yourselves to your peers is slowly fading. And, as a positive spin, notice this: despite the well-known lifestyle, tens of thousands apply to medical school every year. The desire to help society through medical healing persists.

My final year at Southern, I came across a verse that instilled within me a sense of peace and determination when facing great academic feats: "The excellence of knowledge is that wisdom gives life to those who have it" (Ecclesiastes 7:12). Despite the struggles I listed above, I honestly wouldn't trade any of it. I wake up every day knowing that I'll have the opportunity to learn more about the diseases that plague our bodies and how to go about treating them.

By Andrew Cuevas, '19, and Tim Trott

Accardo, from page I

Do you have specific hobbies that you enjoy?

Spending time with family, camping, hiking, bird watching, singing, ministry, and studying/teaching God's Word.

Why did this position interest you?

It interested me because I had been praying about serving the Lord and being a blessing to others in His work.

How do you see God's guidance in this move?

He opened doors and answered prayers for me to be here through

the application, interview, hiring, and training process in the midst of COVID-19 campus shutdown. He has repeatedly affirmed this decision, most recently by assisting in the sale of my home in East Ridge so that I could move closer to the university. Looking back, my experience as a student at Southern was very positive. The professors and staff members made a great impact on my life, and it reminds me of why I am here—to influence and bless the lives of students now and for eternity.

What challenges and joys have you encountered so far?

With any job there is a learning

curve, and this one is no exception. Some of the challenges have included learning the procedures of this department and of the university as a whole mixed in with COVID protocol, Zoom meetings, and getting to know/recognize faculty, staff, and students with face masks. I praise God for helping me each day! I love my job and the variety of its duties. The learning that occurs in our department about God's creation fascinates me. It is a joy to assist others—especially our students—and to get to know them!

By Keith Snyder

Students in Service

Riverside Farm Institute

Fear not, for I am with you; Be not dismayed, for I am your God. I will strengthen you, Yes, I will help you, I will uphold you with My righteous right hand.

Isaiah 41:10. NKJV



Alaina Burrowes with children at Riverside Farm Institute, Zambia.

Accepting the call to be a missionary was a significant step in my faith. From a young age, I had the desire to be used by God, but I also battled with the fear of not being welcomed, well-received, and protected. I praise God that He continuously works on our hearts and invites us daily to trust Him. Despite my fears and concerns, I felt impressed to share His love with others by becoming a missionary.

I recently graduated from Southern Adventist University with a B.A. degree in Biology and minor in Chemistry. Before starting dental school, I am serving as a teacher and dental assistant at Riverside Farms Institute in Zambia.

Observing the dental need in Zambia has truly been an eyeopening experience. I am responsible for gathering instruments and assisting during dental procedures such as fillings, root canals, and

extractions, as well as the sterilization of the work area after each visit. The local people struggle to provide food and water for their families each day, which prevents them in many cases from prioritizing oral health. This leads to a great need in the community for dental care. When there is a dental need, the locals must travel to Lusaka, which is about two hours away from Riverside, to receive dental care. Since most people in the surrounding villages travel by foot and lack resources, they go long periods without receiving dental care.

Many of the patients we see avoid treatment until it is too painful to ignore. Sadly, by the time they get to the dentist, it is often too late to save the tooth or too expensive to restore. Riverside has recently received two dentists, whom I will be assisting in a dental truck. We will travel to different villages in hopes of addressing the

dental needs of these communities.

Another great need is for preventative dental care and education of dental hygiene to promote tooth longevity.

Mission work provides a chance for intervention and shares a universal message that these individuals are loved and truly significant. Serving others is what Jesus calls us to do, and I appreciate that I am able to be involved in serving the community here. I am beyond thankful that I followed God's call to Zambia. All of my fears and doubts that were binding me have disappeared, and I have no doubt that God called me here for a specific purpose.

By Alaina Burrowes Biology Alumna, '20



Alaina Burrowes assisting a dentist.

Department Happenings

A lot has been going on in the department since our last newsletter. Professor Lucinda Hill gave a presentation to the Core Academy of Science's Creation Celebration virtual conference held November 6-7, 2020. Her presentation, "Amazing Design," explored the fascinating evidence for design of the human eye.

Professor David Ekkens (retired) and his wife, Sharon, are helping us organize the museum. They have already worked on the birds and are now working on the mammals. Our collections have never looked better! We would like to say "thank you" for all of their help!

Happenings, continued on page 8

Allied Health Graduates 2020-2021



Jemarlynn Adalbai Nutrition/Dietetics



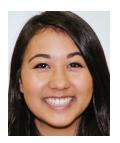
Kylie Burgess Physical Therapy



Quincey Carter Dental Hygiene



Sarah Cho Nutrition/Dietetics/HLSC



Emily Dee PT/Bus. Admin.



Rachel Flerchinger Physical Therapy/HLSC



Andrea Garcia Speech Pathology



Aaron Hernandez Physical Therapy/HLSC



Patience Hutchful Nutrition/Dietetics



Aime Michel Irumva Medical Lab Science



Edgar Kavistan Physical Therapy



Eduardo Kim Physical Therapy/HLSC



Sophie Linhares
Speech Pathology



Heather Mariano Nutrition/Dietetics/Music Performance



Davin Pagarigan Physical Therapy



Xina Sanchez Speech Pathology



Isabel Soto Nutrition/Dietetics



Joelle Toews PT/Archaeology



Josh Tumundo Physical Therapy



Brianna Underwood Physical Therapy/HLSC



Eric Wilkens
Physical Therapy/HLSC



Natalie Yoon Speech Pathology

Biology Graduates 2020-2021



Diana Alvarez BS Research



Kimberly Aguilera BA Biology



Tais Bautista BA Biology



Woobin Bong BS Biomedical



Erin Burke BS Research/Chemistry



Adam Butler BS Research



Jairo Campos Aguilar BA Biology



Emmalynn Canaday BS Research



Madeline Carritte BS Biomedical



Davis Carter BS Research



Garrett Cooper BS Biomedical



Paul Cooper BS Biomedical



Daniel Cuevas BS Biomedical



Cassidy Czaykowsky BS Biomedical



Emily DeWind BS Research



Chloe Elias BS Biomedical



Peter Elvin BS Research



Lauren Evans BS Biomedical



Emely Familia BS Biomedical



Brian Fish BS Biomedical



Emil Garcia BS Biomedical



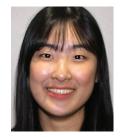
Joseph Hector BS Biomedical



Aaron Hong BS Biomedical



Rachel Hudgens BS Biomedical



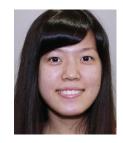
Ire Ju BA Biology



Esther Kim BS Biomedical



Ethan Kim BA Biology



Julia Kim BS Biomedical



Jake Krein BA Biology, Teacher Cert.



Corey Kulon BA Biology

Biology Graduates 2020-2021 (continued)



Alexandra Lang BS Biomedical



Danika LeBlanc BS Biomedical



Collin Lee BS Biomedical



Joshua Lum BS Biomedical



Kalisa Lum BS Biomedical



Joshua Mangunsong BS Biomedical



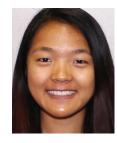
Mark Marbun BS Biomedical



Paige Martin BA Biology



Evelina Mendizabel BA Biology



Niang Muang BS Biomedical



Hannah Oh BA Biology



Brandon Park BS Biomedical



Hyunsoo Park BS Biomedical



Win Pasaribu BS Biomedical



Bryce Peeke BS Biomedical



Noah Poole BA Biology



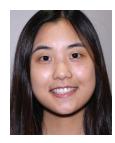
Janna Que BS Biomedical



Christian Ries BA Biology



Elizabeth Sewell BS Biomedical



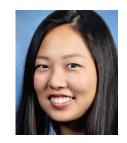
Sujin Sin BS Biomedical



Kevin Singh BS Biomedical



Laura Strothman BS Biomedical



Caleigh Tsuchiya BS Biomedical



Madison Tsuchiya BS Biomedical



Blake Unsell BS Biomedical



Kyle VanDenburg BS Research



Matthew Wilson BS Medical Science



Daniel Woo BS Biomedical

NOT PICTURED

Henri Marbun BS Biomedical

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Biology/Allied Health Department PO Box 370 Collegedale, TN 37315 1.800.SOUTHERN www.southern.edu

Janet Accardo, Office Manager
Joyce Azevedo, PhD
Randy Bishop, MSPT
Aaron Corbit, PhD
Ann Foster, PhD
Noemi Gonzalez, MS, MT (ASCP)
Lucinda Hill, MD
David Nelsen, PhD
Rick Norskov, MD
Keith Snyder, PhD
Ben Thornton, PhD
Tim Trott, PhD

Happenings, continued from page 3

Professor Aaron Corbit has started a new epidemiology class, and multiple students have expressed their enjoyment of it. We hope that offering epidemiology will open even more career opportunities for our graduates.

Speaking of epidemics, COVID-19 has presented challenges for many of our classes and especially for our labs. All classrooms on campus are operating at half of their seating capacity. This has meant that our professors must teach labs held in two to three seperate rooms. Many professors are hitting their daily step goals early, as they have had to constantly be moving between lab rooms, sometimes split across multiple floors.

A big thanks to Professor Joyce Azevedo for helping to organize our Giving Day fundraiser this year, and a big thanks to you all for your donations as well! We could not have raised as much as we did without your support. The Biology/Allied Health Department raised a total of \$7,330 earmarked for the purchase of a new shaking incubator.

We won second place in the 4:00-5:00 p.m. challenge, which garnered us an extra \$500. Our department was fourth place overall in total dollars raised, with Chemistry, Nursing, and Applied Technology raising more.

Lastly, Professor David Nelsen has two reasons to celebrate. First, he is coauthor of a research article recently accepted for publishing in the journal *Palaios*. The article is titled "Independent Confirmation of Fluvial Reworking at a Lance Formation (Maastrichtian) Bonebed by Traditional and Chemical Taphonomic Analyses." Look for this to be published in the next few months. In addition, Professor Nelsen finished third place out of 62 students, faculty, and staff in Southern's annual 6K trail race. Maybe he is a little faster because of all the extra walking he has had to do while managing A&P I and General Biology II labs!

By David Nelsen