The Biology department faculty and staff participated in their annual summer retreat in August. Pictured above, left to right, are Christy Schaller, Max Taub, Rebecca Sheller, Maria Cuevas, Ben Pierce, Martin Gonzalez, Romi Burks, Maria Todd and Stacie Brown.

**Phase I Construction of the new science building has begun!**

After several years of planning and fundraising, the official groundbreaking ceremony for the new science building took place in April, and construction has commenced. The addition will include labs for biology, chemistry and physics in close proximity to encourage collaboration between disciplines. A cell culture lab, molecular biology center, biochemistry research lab and organic chemistry teaching and research laboratories will also be part of phase I, with a completion timeframe of approximately 18 months. Thank you to all of our generous donors! Fundraising efforts are continuing for Phase II, which will include a new 3-story entrance on the north side of the building.

MESSAGE FROM THE DEPARTMENT CHAIR:

To our new students, I hope your first weeks as college students have gone smoothly. Transitions can be a little stressful and overwhelming but I hope you know we are here to help you. Please take the time to stop by our offices, introduce yourselves and let us know how things are going. This is an exciting time and we hope that you have a great educational experience with us. You will quickly notice that we are a student centered department dedicated to fostering and promoting connections among the different sub-disciplines of biology and other academic subjects within the liberal arts.

Our goal is to provide you with a rigorous curriculum to prepare you well for postgraduate education and a variety of personal and career paths to help you become leaders in your chosen field. Please know that our main goal is to help you succeed. Take advantage of our open door policy. Get involved and get to know us! To that end, we encourage you to take advantage of all the opportunities SU and the Biology Department has to offer.

To our returning students, we are glad to have you back! We hope your summer was a fun, relaxing and productive one. You know the drill, study hard, seek help as soon as you need it and of course stop by our offices for anything you may need. We hope you will be mentors to our new students and as usual make us proud of all you do. Welcome back and we wish you much success this semester!

Dr. Cuevas

Did you know?

SU Biology majors as a group scored in the 97th percentile in the Biology Major Field Test (assessment exit exam in Biology Capstone). WOW!

CONGRATULATIONS!!

-Dr. Todd received the Exemplary Teaching Award from the Board of Higher Education and Ministry of the United Methodist Church.

-Dr. Gonzalez received the Southwestern University Teaching Award.

Biology Tutors: Tutoring will be Monday, Tuesday, Wednesday, and Sunday from 7 - 9 in SLC 223.
Summer Activities

For fun, Maria Cuevas went to Mexico with her two children to visit her sister. They visited Mexico City, Saint Miguel Allende, Guanajuato, Guadalajara, Puerto Vallarta and Teotihuacan. It was an amazing trip. Beautiful sites, snorkeling and lots of walking. She also attended the HHMI summer pedagogical workshop. It was a very productive and fun summer!

The Todd family enjoyed a 5-day trip to Galveston in July! Pictured below are Maria and Aidan at their favorite restaurant -Rainforest Café. Maria spent a most productive summer finishing a manuscript, co-writing two grant proposals and preparing a new course in Molecular Biology.

Students from Dr. Ben Pierce’s summer research lab include Areli Gutierrez, Daniel Gonzalez, Terry Zhou, and Joshua Page.

Aidan body-surfing while Sean (who majored in Marine Biology :^)) looks for brittle stars and shrimp in the Sargassum weed.
Dr. Ben Pierce along with Areli Gutierrez, a senior Animal Behavior major, conducted research on the Georgetown salamander as part of the SCOPE summer research program. Students Daniel Gonzalez, Terry Zhou, and Joshua Page assisted with field research. In July, Dr. Pierce attended the Joint Meeting of Ichthyologists and Herpetologist in Chattanooga, TN.

Dr. Burks took SCOPE students to Houston to collect snails and eggs this summer! Major Ecology lab efforts include the establishment of a working molecular ecology laboratory which has now submitted just over 300 samples for sequencing. Results are starting to come in and we are taking the next steps in analysis.

Dr. Burks traveled to Portland to spend some time researching chocolate at a store called Cacao. She also went to New York City for the weekend for some fun and more chocolate. Although not teaching FYS this Fall, she is continuing her chocolate education with hopes of co-writing a book someday. Dr. Burks will be a judge for the International Chocolate Awards in New York City in mid-September.

Stacie Brown and her family enjoyed their first family vacation to Disney World this summer!

Dr. Stacie Brown, Dr. Romi Burks and Dr. Erika Borden redesigned the first year biodiversity lab this summer, including hands-on microbial diversity lab as well as active-learning, inquiry-based class activities for Biodiversity.

Dr. Burks produced a series of videos for Inquiry-based Biodiversity class. Check out the Teachable Moments. https://www.youtube.com/playlist?list=PLDLseAn2__gfwEWWu5DmKRF6yy_bChus6
## Where are your professors?

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### Favorite TV Shows, Books & Movies

**Maria Cuevas:** My daughter got me hooked on Sherlock. I am anxiously awaiting season 4! I also love the Big Bang Theory—it's so funny!  
Movies I liked: The Hundred Foot Journey and Begin Again  
**Stacie Brown:** Modern Family and Project Runway  
An avid reader, favorite series is Harry Potter  
**Christy Schaller:** Person of Interest and Big Bang Theory  
**Romi Burks:** Books I read: Gillian Flynn's Gone Girl & Dark Places  
Movies I liked: Chef & The Hundred Foot Journey  
TV shows: Watched all 4 seasons of Downton Abbey  
**Martin Gonzalez:** My favorite summer TV viewing was the 2014 FIFA World Cup.

### Words of Wisdom:

Enjoy your time in college, it goes by quickly! Stay active and involved in your classes and the community.  
- Stacie Brown  

Get out of your comfort zone and try new things. You may be surprised to learn how much you like something you didn't think you would. Southwestern is the best place to do just that. Take advantage of all we have to offer.  
— Maria Cuevas

### Join our group!  
[https://www.facebook.com/groups/SUBIOLOGISTS](https://www.facebook.com/groups/SUBIOLOGISTS)
Presentations and Publications

Presentations:
Heather Petty presented breast cancer research that she conducted with Maria Todd during the 2013 HHMI SCOPE research program:

Petty HM, King JM, Cuevas ME, Sheller RA and Todd MC

Dr. Ben Pierce attended the National Meeting of McMillan Higher Education in Philadelphia where he made a presentation on new multimedia and educational software that accompanies the 5th edition of Genetics: A Conceptual Approach. McMillan is the publisher of his three textbooks on genetics.

Publications:
Todd, MC, Petty HH, King JM, Piana, Marshall BN ,Sheller RA and Cuevas, ME.
Overexpression and delocalization of claudin-3 protein in MCF-7 and MDA-MB-415 breast cancer cell lines. Oncology Letters, in press

Meredith Liebl, Kate Roberts, Amanda Mohammed, Megan Lowther, Erica Navaira, Anna Frankel, Suzy Pukys, and Romi L. Burks, Southwestern University, Staying SMArT: Introduction, Reflection, and Assessment of an Inquiry-based Afterschool Science Program for Elementary School Students,

http://seceij.net/seceij/winter14/staying_smart_i.html

Dr. Ben Pierce published an article coauthored with former Southwestern University students Kira McEntire (2013) and Ashley Wall (2012):
SUMMER RESEARCH OPEN HOUSE

Maria Cuevas pictured below with three of her research students: Morgan Gallo, Kelsey Rice and Taylor Vickers. They investigated the expression of the tight junction protein occludin in a panel of reproductive female cancer cell lines. Their research also focused on the possible effect of estradiol on occludin expression and the invasive capabilities of the endometrial cancer cell line HEC-1A.

Dr. Burks, pictured above with Sofia Campos, Alia Tamez and Allie Watts.

1) Fast to Learn, Slow to ID: Molecular ecology work on *Pomacea* from Uruguay (Sofia and Alia)
2) Hatching Habits: Hatching efficiency, behavioral response and predation rate of *Pomacea maculata* with predator cues (Allie)

Martín Gonzalez and students Kylie Borden and Sebastian Gualy participated in the 2014 SCOPE Summer Research program. Our laboratory studies the transcriptional and posttranscriptional regulation of the Integrative Conjugative Element R391. R391 is a DNA structure capable of moving between bacteria and imparting antibiotic and heavy metal resistance on its host.

Kylie Borden presenting her research on transcriptional regulation of ICE R391

Sebastian Gualy discussing his research with Aaron Rodgers of the Green Bay Packers
New Professors

Originally from Oklahoma, Dr. Brown moved to Austin, Texas in 2006 to complete her Ph.D. in Molecular Genetics and Microbiology at the University of Texas at Austin. Her studies focused on competition and cooperation between various species of oral bacteria. She previously taught microbiology at Texas State University and UT Austin, and is excited about teaching the intro biology labs at Southwestern. In her spare time, Dr. Brown enjoys baking cookies (and eating them!), spending time outside, and keeping up with her energetic children (ages 1 and 3).

Keith Syska is delighted to be teaching Organ Physiology at SU this semester. Last fall, Keith was a lecturer at the University of Texas McCombs School of Business, and prior to that, he taught MCAT and LSAT prep classes for 10 years. Keith earned a J.D. from the University of Texas School of Law, where he served as an Associate Editor for Texas Law Review. Keith has a 14-year-old daughter, and he enjoys playing chess, baking pizzas, and mountain biking.