

2nd Messenger

Biology Alumni Newsletter



“Transcendence” by Johnny Goodson

Winter 2017

March 2017

Contents

How and Why I Became a Genetic Counselor - Emily Brown ('11) pgs 1-2

Alumni Book Authors pg 3

Faculty News and Project Friendship Survey pg 4

Alumni News pg 5

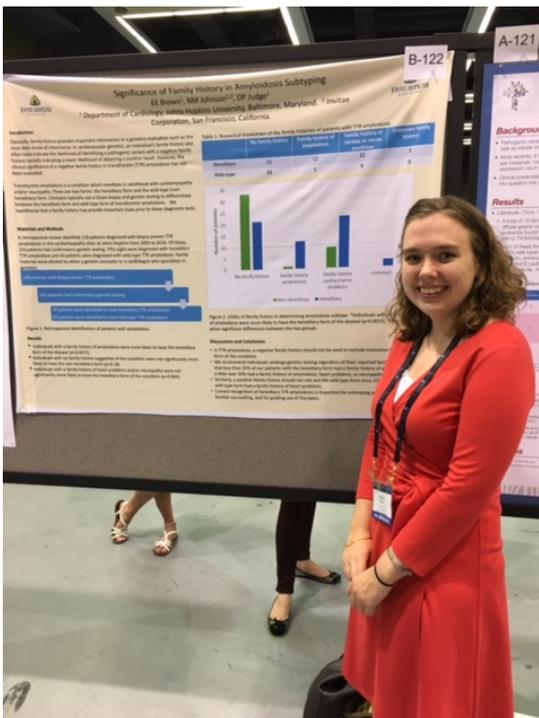
How and Why I Became a Genetic Counselor

By Emily Brown ('11), pictured on left

The mother's sobs echoed throughout the pediatric intensive care unit. She was saying goodbye to her three-month-old little girl who a few hours ago had been a happy, seemingly healthy baby. The family had brought her to the emergency department because she having trouble breathing. Within hours the baby developed acute heart failure, suffered a cardiac arrest, and consequently developed multiple organ failure. At the time, the cause of her heart failure was a mystery.

I didn't formally meet the family until a few weeks later in our genetic cardiomyopathy clinic, but even after a few weeks, the mom's grief was, of course, still raw. Her emotions ranged from anger to grief to confusion during that appointment. The medical team had saved a fibroblast sample from the child, and we were discussing the option of genetic testing to determine if there was a genetic etiology for her heart failure. It's cases such as this that I take home with me, think about during off-hours, and make me contemplate why I chose to become a genetic counselor.

When I first arrived at St. Olaf, as an eager first-year, I was convinced I wanted to become a genetic counselor. However, due to the wide variety of opportunities at St. Olaf including study abroad, diverse coursework, and research opportunities, my path became less clear. By senior year, I was contemplating attending medical school, a PhD program, or genetic counseling graduate school. I still distinctly remember having a pro/con list spanning my closet doors in Yitterboe. It was a tumultuous few months senior year, but after discussing my options with multiple wise professors, I made my decision to apply to genetic counseling school. I decided on genetic counseling because I wanted a career that combined both basic science and working with patients. My job allows me to be at the cutting edge of human genetics and at the same time see the direct impact for patients and families. ...continued on pg 2



...continued from pg 1 Even though I had finally decided the path I wanted to take, the graduate schools with a genetic counseling program still had to decide they wanted me--which they didn't. I lacked the specific experiences needed for such a competitive field. I spent a gap year serving with AmeriCorps, volunteering for a crisis hotline, and shadowing genetic counselors. I am so thankful I was forced to take a gap year. It not only rejuvenated me, but it also it opened my eyes to the world in ways I never would have seen otherwise. The next year I was accepted to the University of Maryland Genetic Counseling Program where I went on to receive my master's degree.

I currently work as a genetic counselor at the Center for Inherited Heart Disease at Johns Hopkins Hospital. I work with patients and families along with their physicians to help care for individuals with inherited heart conditions. Unfortunately, this means the families I work with have often lost a family member due to a sudden cardiac arrest or early onset heart failure. In these cases, our goal is to help provide answers, determine if other family members are at risk for the same condition, and be a support for the family.

For the family mentioned above, we were able to provide answers. Genetic testing revealed the baby had a rare autosomal recessive condition which is typically fatal in childhood. Using this genetic information, the family is now pursuing preimplantation genetic diagnosis to select for embryos which do not carry both mutations in attempts to have another child. Heart failure is an unusual presentation for this condition, and I can confidently say that without genetic testing we would never have been able to provide a diagnosis.

While we cannot provide answers for every family we see, the times we do remind me why I became a genetic counselor—to help families and patients. To provide answers when there previously wouldn't have been any, to provide support to these families with rare genetic conditions, and to provide genetics expertise in the medical disciplines which don't focus on genetics.

Advice for individuals applying to genetic counseling graduate programs:

- *Volunteer with counseling organizations such as suicide prevention hotlines or SARN
- *Shadow genetic counselors
- *Consider taking a gap year and working as a genetic counseling assistant
- *More information on genetic counseling is available on the National Society of Genetic Counselor's website: www.nsgc.org

A Note to Alumni:

Gifts to the St. Olaf Fund are used support financial aid for current students, strengthen academic programs all over campus, and enrich life for those who live and work on the Hill. But did you know that you could designate your philanthropic support to a specific program or department? (Might we suggest the Biology Department? ;))

That's right; you can make your annual gift to the St. Olaf Fund and show the world how much you love biology at St. Olaf. These are the resources that let us do the extra things for students like help pay travel expenses to professional and academic events and annual events like the Biology Senior Banquet.

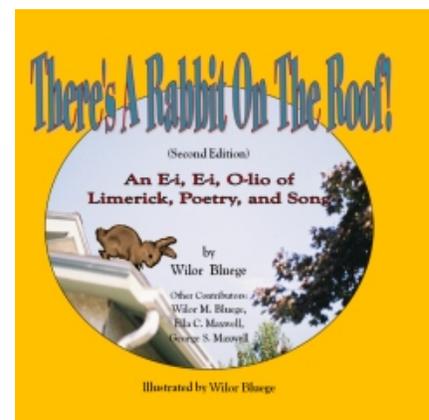
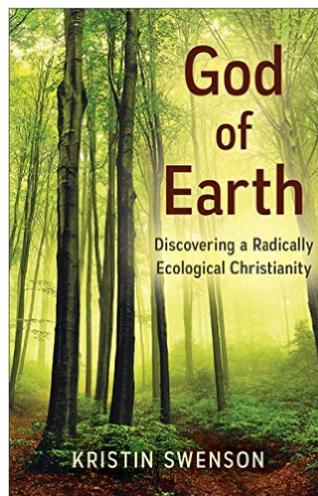
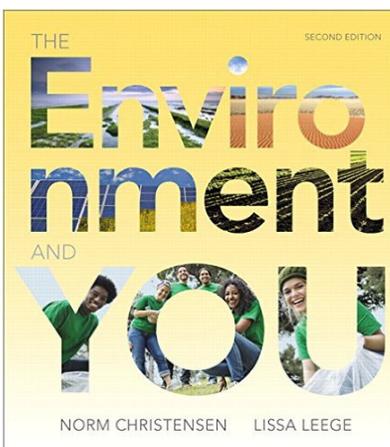
Will you visit stolaf.edu/giving and designate your gift to the "Biology Department?" And if you are celebrating a reunion this year, your gift will be counted in your class gift as well!

Email bioalumnews@stolaf.edu and let us know what you are (or aren't!) doing with your biology degree. We will include it in the next alumni newsletter. Pictures are great too!

Alumni Book Authors

What a fun group of books! Of all categories. Enjoy this list of books.

1. Lisa Leege: *Environment and You*, 2nd Edition (a college environmental science textbook), 2016. <https://tinyurl.com/zdmmmpsn> Features St. Olaf's STOGROW program!
2. Jane Dickinson: *People with Diabetes Can Eat Anything: It's All About Balance*, 2013. <https://tinyurl.com/h625xst>
3. Philip Nyhus: *Tigers of the World: The Biology, Politics, and Conservation of Panthera tigris*, 2010. <https://tinyurl.com/h9cj5h8> (editor)
4. Erik St. Louis: *Epilepsy and the Interictal State: Co- morbidities and Quality of Life*, 2015.
5. Erik St. Louis: *Electroencephalography (EEG): an introductory text and atlas of normal and abnormal findings in adults, children, and infants*, 2016. <https://tinyurl.com/zyd2dzm>
6. Erik St. Louis: *Prescriber's Guide to Antiepileptic Drugs*, Third Edition. Cambridge, UK: Cambridge University Press; Forthcoming in 2017.
7. Paul Hoff: *TransOral Robotic Surgery for Obstructive Sleep Apnea*, 2016. <https://tinyurl.com/zugy82c>
8. Kristin Swenson: *God of Earth: Discovering a Radically Ecological Christianity*, 2016. <https://tinyurl.com/jgzff22>
9. Steve Embury: *Sickle Cell Disease: Basic Principles and Clinical Practice*, 1994. <https://tinyurl.com/zt7evkw>
10. Nate Swenson: *Functional and Phylogenetic Ecology in R (Use R!)*, 2014. <https://tinyurl.com/z8u48f4>
11. Wilor Bluege: *The Balletic Centipede*, 2011. <https://tinyurl.com/hm8x63v>
12. Wilor Bluege: *There's a Rabbit on the Roof!* Second edition, 2017. <https://tinyurl.com/zfw8elb>
13. Wilor Bluege: *La Rama Dorada, Un Ballet Folklorico para Ninos*, 2015. <https://tinyurl.com/hkjkoxj>
14. Wilor Bluege: *Le Rameau d'Or, Un Conte de Fees et Ballet pour les Enjants*, 2015. <https://tinyurl.com/j23vgtj>
15. Wilor Bluege: *The Gospel According to Cat*, 2016. <https://tinyurl.com/hrde96y>
16. Wilor Bluege: *Frogs on a Log in a Bog*, 2016. <https://tinyurl.com/j46fr2e>
17. Tonya Kjerland: *Wild Rice Monitoring Field Guide and Handbook*, 2015. <https://tinyurl.com/z63kv72>
18. Robert McMahon: *An Introduction to Greenhouse Production*, various editions. <https://tinyurl.com/h8kwtdw>
19. Sarah Thornton: *Rags to Riches: A Dog's Tale of Hope and Friendship*, 2011. <https://tinyurl.com/gw769mr>
20. Bonnie Campbell('81): *Tim Neale My Life of Adventure*, 2017. *coming soon!*
21. Ralph Bovard: *Gilly & the Snowcats*, 2016. <https://tinyurl.com/h35ltko>



Have a great story to share for the next alumni newsletter?
Feel free to email broin1@stolaf.edu with your ideas!

Faculty News:

Jay Demas (Biology and Physics) was granted tenure and promoted to Associate Professor. Congrats to Jay!

Lisa Bowers had a baby girl! Phoebe Olivia Bowers (pictured right) was born on September 3rd, 2016 at 2:30 AM. She was 7 lbs 12 oz and will soon discover that *Caulobacter crescentus* is her favorite species of bacteria.

Visiting Professor Beth Pettitt also had a baby girl! June Michelle Pettitt-Wubbels was born Oct 3rd, 2016 at 11:41am, 19.5 inches and 8lbs 11 ounces.



Have you liked our facebook page? St. Olaf Biology (search @biooles) is for current biology students and alumni alike! Posts are done by students. If you ever have an opportunity (internships, jobs, summer gig) you would like to share with the current students or alumni, please email Joy Broin (broin1@stolaf.edu)!

Dear Project Friendship Alumni,
Were you involved in the mentoring program Project Friendship during your time on the Hill? If you were, we would love to hear your stories! Please take this quick, 3-minute survey about your Project Friendship memories, and you'll help us understand the impact of mentoring in the Northfield community.
<https://www.surveymonkey.com/r/QMY8RJD>

Thank you,
Ellie Fuelling
Oral History Project Manager
Project Friendship



Alumni News

Lisa S. Callies MD ('82):

I have been working in medical education since 1999, when I transitioned from primary care to teaching and supervising internal medicine resident physicians. I am now the Assistant Program Director for the Abbott Northwestern Internal Medicine Residency Program, as well as the lead physician for the residents' continuity clinic.

In addition to formal employment, I am also the president of the Minneapolis Society of Internal Medicine and I enjoy doing some volunteer work (locally and abroad). I have accompanied the St Olaf group on five of the medical interim trips to Peru; I also volunteer by caring for the underserved population of Minneapolis in a free clinic.

Lynn Rundhaugen ('90): After leaving St. Olaf, I was a lab technician and later a clinical trials coordinator at Northwestern University in Chicago. While employed there, I also earned a second undergraduate degree in Economics and a Master of Public Health. I finished my MPH requirements through a Health Communications Internship offered through the National Cancer Institute in Bethesda, MD. I permanently relocated to the East Coast in 2004, married Erik Larson (sadly, not an Ole, even with that name) in 2005 and have been happily ensconced at the NIH since that time as well. We are at home with our two Ragdoll cats, Oslo and Bergen, and I continue to develop two extra-curricular talents in ballroom dance and knitting. Erik and I don't compete in ballroom dance (we do it to look good on cruise ships!), but I do compete in Nordic-style knitting. I just won first and second place (see image) in the hand knitting category of the Sons of Norway Third District 2016 Third District Folk Art Exhibition & Competition held in Myrtle Beach, SC. I plan to enter the Sons of Norway International Convention's Folk Art Competition being held in Takoma, WA later this summer.



Just a few favorite Interim photos from students....

