

The DEAN'S MESSAGE

Although campus may seem less crowded during the spring and summer semesters, our college is just as full as ever with opportunities. BYU's schedule provides a substantial amount of time during these summer months for our students to pursue research and internships. Many students are able to take advantage of the research opportunities during these months and have valuable experiences where they will learn and discover much.

Within the college this summer, we have students involved in statistical research doing computational and mathematical analysis, others researching how to edit 3D photos, or tracking disease and drug use through Twitter. Other groups are working to develop microphone measurement systems to withstand the sound waves of NASA rockets, studying electrospray imaging using laser-induced fluorescence, and researching North America's first tall-spined iguanodontid—just to name a few.

However, opportunities for research are not limited to just the students. Traveling anywhere from southern Utah to Africa, our faculty members take advantage of these summer months to do research and to write up that research for publication. We have faculty members researching productive use of student mathematical thinking, exploring for buried graves and archaeological features associated with the LDS Church historical sites, among many other endeavors.

As our readers, you are already well aware of the great education that CPMS offers, but we realize that there is always room for improvement. There are several areas where we are always interested in hearing your feedback. If you have any feedback

regarding our websites or any other materials we produce, we welcome that feedback. We would like to know if the articles, subject matter, and quantity are serving your needs. We truly appreciate hearing from you.

We'd also like to hear from you about where your degree has taken you. Please email us (cpms@byu.edu) with any news about your career or your family. We'll be publishing some of the information we receive in the March 2014 issue of *Frontiers*. Speaking of *Frontiers*, we are still accepting submissions for the Memory Bytes section of *Frontiers*. You can email us with your anecdotes (of up to 200 words) about memorable experiences you may have had as a student.

You may also be interested to know that we have hired some great new faculty in the college this year. We look forward to introducing our exceptional new hires of 2013 to you in the near future. We are certain you will also enjoy getting acquainted with them through this newsletter.

Warm and safe June to all,

.....▶ **Scott Sommerfeldt, Dean**

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Chemistry professor, Emily Bates. Photo courtesy of BYU Photo.

Genetic Cause for Migraines Found

Discovery has personal meaning for one scientist.

As a teenage student athlete, Emily Bates hated never knowing when the next migraine would strike, disrupting her schoolwork, practices and competitions.

Now it's payback time.

The BYU chemistry professor published research this week in *Science Translational Medicine* that identifies mutations in a gene that makes people more susceptible to migraine headaches. The study is the first demonstration of a genetic cause for the common migraine and is an important step in the search for a cure.

"I had migraines really frequently and severely," Bates said. "I would lose my vision, vomit uncontrollably – it would wipe out an entire day. I decided then as a high school student that I was going to work on migraines, that I was going to figure them out and help find a cure."

"Her last migraine happened the day before a marathon she planned to run in October 2003. Though her migraines eventually stopped, she didn't.

"After earning a Ph.D. in genetics from Harvard, Bates did post-doctoral research with a team of geneticists at UC San Francisco's medical school. This gene hunting party worked with two families that appeared to have a dominantly inherited form of the affliction.

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