

Department of Biomedical Sciences Newsletter
Fall Update 1
September 9, 2015



Location, Location Location!

Welcome back [Biomedical Sciences](#) students, staff and faculty for the fall semester. As you may have quickly noticed when back on campus, many things have changed over the summer months. Kirkhof Center added new dining services and [Kindschi Hall of Sciences](#) is now operational. In fact, Kindschi Hall houses multiple **BMS** faculty research labs and will greatly enhance our ability to provide high impact research experiences to **BMS**



Kindschi Hall of Sciences will contain multiple **BMS** research spaces for our students and faculty.



Henry Hall is the new home for the **BMS** Department.

students. In addition to the opening of Kindschi, many faculty in **BMS** have moved to Henry Hall as our new location for the **BMS** department and main office on the 2nd floor. Several **BMS** faculty have also moved offices within the second floor of Padnos Hall, so please check out our updated [directory](#) when looking for **BMS** faculty and staff. Feel free to drop by the main office as well to say hello or to simply get familiarized with Henry Hall.

Have a great start to the fall semester!

Dr. Dan Bergman

Chair and Associate Professor

bergmand@gvsu.edu

New Faculty in 2015-16 for Biomedical Sciences

Biomedical Sciences newest assistant professor is [Dr. Chris Pearl](#), who joins us this fall to teach **BMS 290** and **291**, and conduct his research. Dr. Pearl received his Ph.D. in Physiology from the University of California, Davis in 2006 and a M.S. in Biological Sciences from the University of the Pacific in 2000 and a B.S. in Biology from Saint Mary's College of California in 1998.



Dr. Chris Pearl

Dr. Pearl comes to **Grand Valley** via Western Michigan University where he was a professor. His primary research interest is the endocrine control of male reproduction, where he focuses on the effect of steroid hormones on overall fertility and the components of the male reproductive tract including the testis, epididymis, and

pituitary. Dr. Pearl's current research explores three main areas: estrogen signaling and reproductive decline during aging; endocrine disruption of the reproduction tract; and the link between obesity, endocrine dysfunction, and infertility. A southern California native, Chris is an avid fan of the LA Dodgers and LA **Lakers** (and hopefully soon to be a fan of the [GVSU Lakers](#)). He enjoys playing golf and reading science fiction.

In addition to **Dr. Pearl** joining BMS, we were also fortunate to hire one new affiliate faculty member and three new visiting faculty members in **BMS** for this academic year. The new affiliate in **BMS** is [Dr. Dan Vander Kooy](#), who earned a Ph.D. from the University of Illinois. **Dr. Vander Kooy** has years of teaching experience at multiple levels of the education system, including prior teaching experience as a visiting professor for **BMS**. And finally our three new visiting professors include, [Professor Tara Alger](#), who earned her M.S. at Wayne State University, [Professor Michelle Dawes](#), who earned her M.S. from Texas A&M, and [Dr. Carrie McKean](#) who earned her Ph.D. from Western Michigan University. All have taught elsewhere before joining the [Biomedical Sciences Department](#) this fall.

One Million Year Old Monkey Fossil Found

An international team of scientists, including a [Grand Valley State University professor and alumna](#), recently discovered a species of monkey fossil the team has dated to be more than 1 million years old. The discovery was made after the team recovered a fossil tibia (shin bone) belonging to the species of extinct monkey *Antillothrix bernensis* from an underwater cave in Altagracia Province, Dominican Republic. The species was roughly the size of a small cat, dwelled in trees, and lived largely on a diet of fruits and leaves.



Antillothrix bernensis tibia and cranium.
Photo by Siobhan Cooke.

“We know that there is a diverse extinct fauna on the Caribbean Islands, but dating the material has been difficult,” said [Dr. Melissa Tallman](#), **assistant professor of Biomedical Sciences** who was involved in the discovery and analysis of the fossil. “*Antillothrix bernensis* is one of two species of extinct primate on Hispaniola. Previously discovered primate material has all been dated to within the last 10,000 years. This new material is morphologically consistent with the previously collected material, but is dated to 1.3 million years ago. The fossil was embedded in a limestone rock that was dated using the Uranium-series technique. When the limestone rocks are formed, uranium gets trapped in them and decays by natural radioactive processes to form thorium and lead. Scientists know the rate at which uranium decays and by measuring the amount of uranium, thorium and lead present in the rocks today, one can calculate the age of the rocks, **Tallman** said.”

Tallman, along with **Andrea Morrow, '14**, used three-dimensional geometric morphometrics

to confirm that the fossil tibia did belong to *Antillothrix bernensis*. This process helped them reconstruct how the small primate might have moved about in its environment and allowed the comparison of relatively young examples of *Antillothrix* bones to the newly discovered 1-million-year-old specimens.

“Since the days of Charles Darwin and Alfred Russel Wallace, scientists have long been puzzled over the age of primate fossils from this region. Many times when a long-lived species is discovered, there is a shift in its morphology over time,” **Tallman** said. “For these primates, at least in the tibia, they remained remarkably stable morphologically. They obviously adapted to their island environment in such a way that was flexible enough that it allowed them to persist for more than one million years. They were likely still around when humans first colonized the Greater Antillean Islands.”

The full study, “ 1.32 ± 0.11 Ma age for underwater remains constrain antiquity and longevity of the Dominican primate *Antillothrix bernensis*,” can be read via the [Journal of Human Evolution](#). For more information, contact [Dr. Tallman](#) at (616) 331-3603 or tallmame@gvsu.edu.

Engaging Undergraduate Students in Scholarship

[Dr. Cara Ocobock](#) was awarded the *Engaging Undergraduate Students in Scholarship Supplementary Startup Funds for New Faculty* from the [Office of Undergraduate Research](#). Her research will further advance anthropological theories about the evolution of endurance running. The purpose of the fund is to encourage new tenure-track faculty to actively engage undergraduate students in their research and scholarship. One of the best opportunities to set up research/ scholarship in a way that includes undergraduate students is early in a faculty member’s career. However, to do this, there are often additional supply and research support costs. This grant is offered to offset these startup costs and encourage new faculty to offer opportunities to undergraduate students interested in research and scholarship.



Dr. Cara Ocobock

National Science Foundation Research Experiences for Undergraduates (REU)

As part of an NSF-REU program in 2015-17 at the [Annis Water Resource Institute](#), [Dr. Dan Bergman](#) worked with Naymar Franqui-Diaz from the *University of Puerto Rico*. The main goals of the program are to give students a solid research experience, provide them with a set of quantitative skills that are valuable in research, and encourage them to think about the possibility of pursuing graduate degrees in science — and to have some fun in the process.



As part of the program, Naymar spent 10 weeks of the summer in Michigan conducting research on the neuropharmacological alterations of aggression using crayfish.

Using crayfish for biomedical research may not seem immediately applicable when considering human health, but basic biomedical research it turns out is largely about understanding organisms and their interactions with other organisms. Humans as you know are extraordinarily complex on many levels, yet we only understand a small fraction of the interactions, structures, chemicals, and pathways in our bodies. So often, the best way to determine the effect of a drug or disease on a living system is to study it first in an animal system. Drugs, vaccines and treatments in human medicine are largely based on years of physiological research with animals.

Undergraduate Research Fair

With all of the talk about research above, it is perhaps worth mentioning that the seventh annual [Undergraduate Research Fair](#) will take place Tuesday, October 6, 2015, from 5 p.m to 7 p.m. in 2250 Kirkhof Center (Grand River Room). At the event, students have the opportunity to get information about participating in research and creative projects directly from faculty and staff. Beforehand you can do some investigation of the research happening in Biomedical Sciences by going to our [Research tab](#) on our webpage.

Participating in research and creative projects at GVSU can expand students' academic experience and provide students with another way to look at the world. Research is a process of careful inquiry leading to the discovery of new information. Research is not limited to certain majors, but occurs in all disciplines. The [Undergraduate Research Fair](#) is sponsored by the Office of Undergraduate Research and Scholarship.

Former and Current Student News

- **Russell Yskes**, a 2011 **Grand Valley Biomedical Sciences** graduate was announced recently in the [Pine Rest Christian Mental Health Services' second class of eight psychiatry residents](#). The four-year program has capacity for eight residents per year for a total of 32 residents in 2017.

“We are extremely excited to have successfully filled our 2015 psychiatry residency class with an outstanding group of medical students from across the country,” says William Sanders, D.O., Pine Rest



2015-16 Pine Rest Christian Mental Health Services intern class; (L to R): Katie Kist, D.O., Kansas City University; **Russell Yskes, M.D.**, Wayne State University; Cameron Risma, M.D., University of Nebraska; Sara VanBronkhorst, M.D., Michigan State University College of Human Medicine; Daniel McCarthy, M.D., University of Toledo; Ashlee Jousma, D.O., Michigan State University College of Osteopathic Medicine; Matt Dandois, D.O., Michigan State University College of Osteopathic Medicine; and Shayna Bailey, M.D., George Washington University.

Psychiatry Residency Program Director. “We are passionate about continuing to build on the success of our first year psychiatry residents. We have already started to feel the positive impact in the community with the addition of more mental health providers. The addition of these great medical students will help the psychiatry residency program continue to focus on developing a welcoming academic environment while providing kind and compassionate care to our patients,” says Dr. Sanders.

Medical school graduates are required to complete a residency before entering practice. Residency for psychiatrists consists of four years of didactic and experiential training. Clinical rotations include psychiatric inpatient and outpatient care, general medicine experience, consultation liaison in acute care hospitals, emergency psychiatry at network180, and exposure to neurology. The new residents will be assigned to a dedicated adult inpatient-teaching unit at Pine Rest. Rotations will also include the child and adolescent unit, and geriatric unit at Pine Rest.

- One of [Dr. Tim Strickler's](#) student advisees and graduate from **BMS** in 2003 had a recent article written about him in the [Mining Journal](#), which is the predominant newspaper in Marquette and the U.P. An excerpt from the article is below.

MARQUETTE - Negaunee native David Siik is a multimedia force to be reckoned with, making a name for himself in many areas in recent years. For 12 years, he has been with Ford Models, one of the most renowned agencies in the world, appearing in many sports and fitness ads for a wide variety of companies, including Adidas, New Balance, Reebok, Brooks and Powerbar nationally and Asics and Mizuno internationally. Siik has been on the cover of Runner's World magazine five times and has been featured and been a contributing writer for - Men's Health, Men's Fitness, Women's Health, GQ, Esquire and Huffington Post, to name a few. He's had roles in a number of small films like "The Black Dawn" and "Daddy's Little Girl."



David Siik, **BMS** alumnus

...Negaunee High School Class of 1999 alum Siik graduated from **Grand Valley State University**, majoring in **biomedical science** and chemistry. As a member of the **GVSU** track team, Siik held several university records and was named to the USA Track and Field All-Academic team.

Interesting and Significant Items to Share

Don't be a stranger! The [BMS Department](#) would love to know what you have been up to (i.e. internships, professional school matriculation, employment, etc...). Send us your news or announcements to biomeddept@gvsu.edu, or feel free to chime in on social media at our [Facebook](#) or [LinkedIn](#) pages.

Important Upcoming Dates

- 9/10 – [Science on Tap](#) at 8:00pm at the Speak EZ Lounge
- 9/11 – **BMS Seminar Series** at 12:00pm in LSH 154
- 9/11 – AWRI Seminar Series with **Dr. Cara Ocobock** at 2pm at Lake Michigan Center in Muskegon
- 9/18 – CLAS Research Colloquium at 2:30pm in PAD 308
- 10/1 – Faculty Activity Plans (FAP) are due to Chair
- 10/1 – FTLC and CSCE Award Nominations due to CLAS Dean's Office
- 10/2 – **BMS Seminar Series** at 12:00pm in LSH 154
- 10/6 – Undergraduate Research Fair at 5-7pm in 2250 Kirkhof Center (Grand River Room).
- 10/9 – **BMS Seminar Series** at 12:00pm in LSH 154
- 10/16 – CLAS Research Colloquium at 2:30pm in PAD 308
- 10/23 – **BMS Seminar Series** at 12:00pm in LSH 154
- 10/24 – Fall Breather and CLAS Mindgating at Homecoming
- 10/25 – Winter textbook orders due from faculty
- 10/30 – Student Drop Deadline