

NPSMA PSM ALUMNI AND GRADUATION CHONICLE – 2019 Guidelines for Authors

All submissions are sent to both the Chronicle Editor and the Managing Editor/Coordinator (national.psm.association@gmail.com) and **must include the email addresses** of all featured students/graduates.

Student Presentation Summary: The 5MP Session organizers prepare this article that contains a narrative about the competition and the title slides and abstracts of the presentations. The information on the students should be updated prior to publication to include graduation dates and current positions. See the following sample.

STUDENT PRESENTATION SAMPLE #1

Molly Corder (6MP First Place Winner), graduated from Colorado State University in the spring of 2018, earning a Professional Science Master's Degree in Zoo, Aquarium and Animal Shelter Management. Molly is spending this summer completing internships at the Denver Zoo and Smithsonian Global Health Program and traveling in Europe. She has accepted positions with the Smithsonian Conservation Biology Unit and with George Mason University where she will pursue her doctorate in Environmental Science and Public Policy, with a research focus on endangered species reproduction and conservation medicine.



Assisted reproductive techniques such as artificial insemination (AI), gamete and embryo cryopreservation and estrus synchronization are routinely used to improve reproductive success in the agricultural livestock industry. These assisted reproductive techniques have been modified to aid in the preservation of endangered hoof stock species but are still not widely used. Such efforts will be paramount in the preservation of several of the world's most valuable species. This project focused on the use of fecal hormone analysis to document the length of the estrous cycle and assess the

synchronization protocol. Expected outcomes for include applications in global anoa populations under managed care. The long-term goal is to develop an assisted reproductive protocol that provides reliable and consistent results.

Alumni Profiles: Program Directors (or other administrators/faculty associated with PSM programs) may submit one alumni profile per program. Profiles should be about 350 words and photographs and quotes are encouraged. The style of the articles should be informal and information that develops a holistic portrait of the graduate may also be appropriate. Submissions should include the program and university names, date of graduation, and a tagline title that captures both the spirit of the submission and the reader's attention. Copy will be sent to the submitters for final approval.

In recruiting and accepting submissions, care should be taken to represent different universities, STEM fields, and employment sectors to display the impressive diversity of the PSM. Two sample entries follow on the next pages.

ALUMNI PROFILE SAMPLE #1

Story Length: 248 words

TOM LESTER

MASTER OF BUSINESS AND SCIENCE (2004)
KECK GRADUATE INSTITUTE

**PSM ALUMNUS LEADS DEVELOPMENT OF RARE DISEASE THERAPIES**

The extremely rare disease CLN2 is devastating; the inherited condition affects young children, many die before age 10. Tom Lester, senior director for product development at BioMarin, has been working since 2012 to change this grim outcome. “The program was more emotionally involving than others,” he says. “The disease moves so quickly, and the patients are so young. I found it was sometimes okay to cry at work. It was motivating.”

Thanks to the efforts of the cross-functional team Tom leads, children with CLN2 disease are receiving treatment all over the world. BioMarin has introduced the first therapy for CLN2 disease, Brineura, which received FDA approval in 2017. About the enzyme replacement therapy that is delivered directly into the patient’s brain, Lester says, “We talk about being innovative, but even for us this was a lot more innovative than most programs. There was never a product like this before.”

Lester’s success doesn’t surprise the KGI faculty who knew him from the MBS program. When Tom joined the MBS program, he was a recent University of Southern California chemical engineering graduate with an interest in biological sciences. Lester cites his Team Master’s Project experience and coursework in the MBS program as influencing his success at BioMarin. “It gave me exposure to product development. Taking a pharmaceutical development class was also an eye-opener for me. It really made me well suited for the job I have now. I knew how to see the perspectives of different functions and integrate them.”

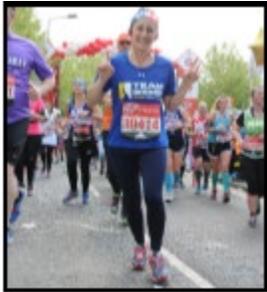
Lester is involved in the development of other enzyme replacement therapies. After more than a decade at BioMarin, he says, “I don’t think I’d ever work outside rare diseases again. It’s very tangible. You have a unique opportunity to see the people affected by the disease.”

Tom’s interests continued to have impact on the MBS program. Although there were no classes on rare disease therapies when he was a student, KGI now has a Center for Rare Disease Therapies and a Rare Disease Club.

Contributed by James Sterling, Professor, KGI and Faculty Director, Commission on Affiliation of PSM Programs.

ALUMNI PROFILE SAMPLE #2

Story Length: 337 words

**HEATHER NELSON O'CONNOR**

MASTERS OF SCIENCE IN APPLIED GENOMICS: A PROFESSIONAL
SCIENCE MASTER'S DEGREE (2004)
UNIVERSITY OF CONNECTICUT

THE PSM: KNOWLEDGE FOR LIFE

Entering the Applied Genomics program, Heather knew she wanted a career in forensic science. However, she couldn't foresee how much her PSM would contribute to both professional and personal lives.

The Applied Genomics degree combined knowledge in the theory and practice of genomics with relevant professional development training. Heather completed a full-time internship as a Forensic DNA Technician working on DNA backlog reduction at the Connecticut State Police Forensic Science Laboratory. Following graduation, Heather was a research scientist at UConn's Center for Applied Genetics and Technology (CAGT), conducting research on forensic markers.

In 2006, Heather was hired as a Criminalist 1B at the NYC Office of the Chief Medical Examiner. She has risen through the ranks to Criminalist IV with supervisory responsibilities. A professional highlight of the past year was making a presentation at the annual meeting of the American Academy of Forensic Sciences.

Heather developed expertise in many aspects of DNA analysis, including that of challenging samples. This led to Heather's participation (with her husband Craig whom she met during her PSM program) in two historical genetics projects, both in partnership with the CAGT and the Connecticut State Archaeologist. These studies were the subjects of BBC and History Channel specials and were covered by hundreds of print and electronic media.

Heather's PSM training plays a role in yet another chapter of her life. Heather learned that her mother has a mild form of cystic fibrosis due to two rare forms of the gene, and that she herself is a carrier of one of these. Thanks to her knowledge of complex genetics, she understood the basis and consequences of the diagnoses. In her spirit of confronting challenges head-on, first-time athlete Heather began training to run marathons to raise money for cystic fibrosis research. This new mission found her running for the Cystic Fibrosis Foundation in NYC marathons and for the Boomer Esiason Foundation in the London Marathon.

Heather Nelson O'Connor reflects the best of the successful PSM graduate: scientific expertise, professional acumen, teamwork, adaptability, resilience, and motivation.

Contributed by Linda Strausbaugh, former director of the M.S. in Applied Genomics program.
