Wrapping Up Another Year

As we wrap up the seventh year of the UNMC High School Alliance program I want to take a few minutes to thank a few people – these are in no particular order.

First, our students. It is a delight to work with and get to know better such talented and amazing human beings from all across our metro area. Thank you for wanting to be in this program.

Second, to our alumni. You all continue to impress us and make us proud to know you and call you part of the UNMC family.

Third, to The Sherwood Foundation, who continues to support this fantastic program.

Fourth, to the entire UNMC community of faculty, staff, and professional students who give their time and energy to make the high school students better and mentoring them to stay on course with their love of health science.

Fifth, to our school districts who share their talented and amazing human beings with us – and a special thank you to the Omaha Public Schools for loaning us certified high school teachers.

Sixth, the parents who allow their students to come to our campus to learn more about health science careers.

It is an understatement to say that we all have learned something new this year, but that is one of the many reasons we participate in education programs like this one.

I am looking forward to the 2017-2018 school year and seeing our alumni return to campus to begin their professional school careers and meeting the new students who want to be a part of this program.

Have a great summer and we will be back in August 2017! -- Heidi
Pharmacy

For the second year, Dr. Christopher Shaffer led the Introduction to Pharmacy course. Within this course, students were exposed to the different aspects that make up the role of a pharmacist.

Dr. Shaffer invited 10 Pharmacy students, ranging from 2nd to 4th year, to present specific concepts to the students. Dr. Shaffer’s tag-line “Better living through Chemistry” guided instruction. Students were introduced to the following concepts: pharmacognosy (the history of medicines), drug discovery, drug formulation, pathophysiology of cardiovascular disease, anti-cholesterol pharmacology and therapeutics, and personalized medicine.

Through the lecture and hands-on activities, students gained an understanding that the role of a pharmacist goes well beyond mortar and pestle. Students were given the opportunity to learn about drug development from Dr. Martin Conda Sheridan and Dr. Corey Hopkins, and spend a day in their labs seeing first-hand the process of developing new drug therapies. A field trip to Children’s Inpatient Pharmacy showed students the backstage pass to preparing medications for many different situations occurring within Children’s Hospital.

The students were also given the opportunity to shadow a pharmacist from different specialties. Spending the class time with the pharmacist, and seeing the different professionals that the pharmacist interacted with, really connected the students to the concept that the role of a pharmacist is changing.

The students will complete the year by giving a presentation on the education path taken to become a pharmacist in a specific field, and the professional organizations a pharmacist could belong to, and to continue to learn while practicing.

By: Kevin Scott, Certified High School Teacher

Behavioral Health

This spring the High School Alliance welcomed a new course to our catalog. Intro to Behavioral Health: Concepts and Career from Family Therapy to Forensic Psychiatry was developed in collaboration with faculty and staff from The Behavioral Health Education Center of Nebraska (BHECN), the Munroe-Meyer Institute and the High School Alliance. Course directors are Dr. Howard Liu and Dr. Joe Evans, with Dr. Kristen Hembree working as the course instructor.

Our goal for this course is to equip students with core concepts in behavioral health, including the criteria for common mental health diagnoses, cutting edge treatments, and the public health impact of untreated disorders. Students have been fortunate to hear from behavioral health researchers and clinicians, who talk not only about their field of expertise and practice, but also their educational background and career path.

Throughout the semester, students worked on a career exploration research project which included interviewing a behavioral health practitioner, writing a paper about their chosen career and presenting the findings to their classmates. Students worked in small groups to create a media project about stigma and mental health.

One of the many highlights of semester was visiting the Autism Care for Toddlers clinic. While onsite, students learned about treatment approaches used at the clinic and had an opportunity to observe children in the classroom setting.

During our class time, students completed an eight-hour certification course in Youth Mental Health First Aid. I’m happy to report each student passed the certification exam with flying colors!

By: Michele Merrill, MA, Certified High School Teacher

Important Dates

April 14: No School – teacher work day
May 8: Registration Night for the Class of 2018
May 19: Last day for Seniors
May 24: Recognition Day at 1:30 pm in the Truhlsen Events Center of the Michael Sorrell Building
May 26: Last day for Juniors and the last day of the year

Important UNMC Events

April 20-29, 2017 Nebraska Science Festival
Spring 2017 Buffett Cancer Center opens
July 8, 2017 – Alumni Reunion – SAVE THE DATE
HOSA State Leadership Conference

Seven students won 11 medals at the HOSA State Leadership Conference held in Kearney, Nebraska on March 21-22.
Grace Corrigan – 2nd Pathophysiology and 2nd Medical Assisting
Jordi Castelan – 2nd Medical Spelling
Rizwan Siddiqui – 1st Biomedical Laboratory Science and 1st Epidemiology
Allison Zetterman – 3rd Forensic Medicine (team event)
Taylor Burghardt – 3rd Forensic Medicine (team event) and 3rd Pathophysiology
Lea Sobrilsky – 3rd Behavioral Health
Darienne Blair – 2nd Job Seeking Skills and 3rd Trans-cultural Healthcare

Congratulations HOSA students!
This year marks the seventh year of the HSA Anatomy course and the fifth year that UNMC College of Medicine students have volunteered in class.

The exposure to UNMC professional students has been a great way for the HSA students to gain content knowledge and personalized academic guidance.

Thirty-five High School Alliance students were enrolled in the Anatomy course this spring. Drs. Simet and McCumber, faculty in the Genetics, Cell Biology, and Anatomy Department were in the spotlight as lead faculty for the first time this year.

The strong presence of Drs. Simet and McCumber strengthened the discovery of the upper and lower limbs through hands-on activities instead of didactic lectures. The students had opportunities to take what they had learned during small group sessions and apply it to resistance training in the UNMC Student Life Center Gym.

The course especially fostered the fascination of students with interest in future careers in physical therapy, orthopedics, and surgery. Student confidence levels were also raised as a result.

As a whole, the students successfully completed the anatomy units threaded with gross anatomy, radiology, physiology, and living anatomy elements. High School Alliance students genuinely strengthened their study skills, team working skills, and passion for health science this semester in Anatomy.

By: Kevin Scott, Certified High School Teacher
Study of Patient Care

Under the direction of Dr. Sara Brown and Mrs. Annie Bowman, students explored the many roles of nurses in today’s healthcare environment. Students met many professionals in the nursing fields of neurology, diabetes, maternal-child health, trauma/flight nursing, and orthopaedics to name a few.

Students began the semester by learning about vulnerable populations and appropriate communication skills for working with patients. They had the opportunity to work with students from the UNMC College of Nursing to learn vital signs and demonstrate their mastery of those skills.

In addition to the above-mentioned topics, students learned about seizure disorders and diabetes, and the impact of each on the individual, the family and the community. We had guests who included clinicians, patients and family members for each topic. Students toured the Nebraska Medicine epilepsy clinic, learned how to use a glucometer and perform basic first aid for a person experiencing a seizure or diabetic emergency.

Throughout the semester, students worked in small groups to create and implement an awareness campaign on a current health concern for a specific target population. Students were encouraged to be creative and use social media, as well as other avenues, that would appeal to their target populations, as to make it more real world albeit, on a small scale.

The instructors and students are especially grateful to the guest speakers and College of Nursing students who joined us this semester.

By: Michele Merrill, MA, Certified High School Teacher

Whitney Brodersen (Omaha Benson) learns how to take the blood pressure of Anna Weddington (Omaha Benson) with a UNMC accelerated nursing student.

Chad Bowman (Bennington) (front left) has his blood pressure taken by Jordi Castelan (Omaha South) and Grace Corrigan (Bennington) (back right) takes the blood pressure of a UNMC accelerated nursing student.
The Genetics class was a challenge for its students this semester, however with the expert help of Dr. Maurice Godfrey the students expanded their knowledge from completing simple Punnett squares for determining the genotypes of offspring and tracing inherited diseases through a pedigree, to exploring how genes can be linked and how often recombination events occur. Students also learned how to calculate the frequency of recombination events and how to map the location of genes on a chromosome.

At the beginning of the semester, students participated in creating a ReeBop Baby using simple Mendelian genetics and conducted a lab simulation using “Orchid DNA” to determine who was selling illegal clones of the Orchid World Black Orchid. All UNMC High School Alliance students each submitted a saliva sample to the 23 and Me company for ancestry analysis and discussed their ancestral origins based on the 23 and Me ancestry analysis.

Of course with scientific knowledge there are ethical and societal implications. As students delved deeper into the procedures used to explore the human genome, discussions about why and if these procedures should be used arose. Students viewed the futuristic movie “GATTACA” and reflected on whether or not parents should be able to choose to take out any genetic alleles for disease and whether or not they should also be allowed to choose phenotypic traits that include height, weight, eye or hair color. All Genetics students read DNA USA by Ryan Sykes. Sykes uses genetic markers to trace the ancient origin of different populations and speculates the migration patterns that lead to their modern locations. Each student also chose a novel to read that discussed different aspects of modern genetics and the role they play in today’s society. Students wrote a book report based on their novel choice and reflected on the concepts presented and the influence they would have on them personally.

During the rest of the semester students explored how DNA fingerprinting is used for identification and to solve crimes while working in the Public Health Lab on the 8th floor of the Durham Research Center. Once students became experienced in running electrophoresis gels students spliced DNA and inserted the resulting pieces into bacterial plasmids which expressed a new phenotype. They glowed! Students were introduced to the use of genetically transformed bacteria as an intricate part of producing and delivering medication. Students also learned that while gene transformation can be used to transform the phenotypes of bacteria to make them glow or to produce human insulin and hormones, it can also be used by UNMC researchers in the quest to cure cancer.

By: Terri Gulick, MS Certified High School Teacher
UNMC High School Alliance Alumni
The Classes of 2011 · 2012 · 2013 · 2014 · 2015 · 2016 and 2017


Elkhorn High: Emma Fanning 2017


Ft. Calhoun: Killian Roehr 2016


Louisville: Madalyn McFarland 2012


Omaha Bryan: Matt Estabrook 2011; Mariah Bliss 2012; Daisy Gomez 2013; Monica Barajas 2014; Ashley Bacon 2017.


Papillion LaVista: Courtney King 2011; Stephanie Schiffert 2013; Nathaniel Vaughan 2013; Dylan Ashby 2015; Sydney Rheault 2015; Emma Taylor 2017.


Platteview: Mitchell White 2017


^ Denotes Second Year Senior 2015
*Denotes Second Year Senior 2016
+Denotes Second Year Senior 2017

Alumni Spotlight

Kevin Hanna
UNMC High School Alliance Class of 2012
Bellevue West Class of 2013
University of Nebraska-Lincoln Class of 2017
UNMC College of Medicine Class of 2021

In the photo on the left is Kevin Hanna (left) and Zach Stovall (right) when they were students taking anatomy in the High School Alliance back in 2012. The photo on the right shows Kevin (again on the left) after climbing over 14,000 feet!
Alumni Spotlight (cont.)

In this edition of the High School Alliance Alumni Spotlight, we meet Kevin Hanna. Kevin participated in the High School Alliance as a junior from Bellevue West in 2012.

Kevin told us that he had been interested in pursuing a career in medicine for as long as he could remember. When he heard about that UNMC had started a new program that let high school students take classes taught by UNMC faculty, he knew it would be a great experience and to learn more about the medical field before going to college.

“My favorite part about the High School Alliance was taking anatomy and getting to work with real cadavers. The anatomy course helped solidify my love for science and fascination of the human body.”

“The High School Alliance gave me a great opportunity to be exposed to the types of challenging courses that pre-medicine students are required to take in college, which I never would have been exposed to at my home high school. These classes taught be better study habits and time management skills, which have certainly helped me in my undergraduate career.”

We asked Kevin if he had any advice for future High School Alliance students and he said, “Find whatever you are passionate about and do not be afraid to totally throw yourself into whatever that is. College gives you a great opportunity to find what you love to do, so do not hesitate to take risks, explore, take some interesting electives, and get involved in a range of activities or clubs.”

That is great advice, Kevin, thank you. We will see you on campus in August 2017 when you begin your medical school career here at UNMC!

Finishing Up . . .

The 2016-2017 school year included five stellar seniors in our cohort of students. The stellar seniors wear red polos, complete an independent study project, and take the classes that they did not take the first year.

This year two students – Sydney Kirkpatrick from Omaha Burke and Morgan Daffer from Gretna (pictured in the front) spent a semester in research labs. Three students – Eduardo Mendoza-Lopez (Omaha South), Grace Corrigan (Bennington) and Jordi Castelan (Omaha South) (in the back row) -- completed an independent research project for Encounter Telehealth. All five of the stellar seniors competed in the Metro Science and Engineering fair.