

# IGNITE ENGAGE SUSTAIN-CANCER EDUCATION

CANCER AWARENESS

**LUNG CANCER**  
ACCOUNTS FOR  
MORE DEATHS  
THAN  
**ANY OTHER CANCER**  
IN BOTH MEN AND WOMEN.  
Source: American Cancer Society

2018 PROJECTED DEATHS

PROSTATE 29K	LUNG
BREAST 41 K	154 K
PANCREATIC 44 K	

Sources: American Cancer Society

Newsletter Committee

- Regina Robbins
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- Misty Pocwierz-Gaines
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## YES ! (YOUTH ENJOY SCIENCE) PROGRAMS 2018-2019

Dr. Maurice Godfrey & Dr. Joyce Solheim - Principal Investigators  
Dr. Regina Robbins—Co-Investigator



The National Cancer institute broke the unwritten policy to expand the NIH reach to K-12 and community when they started the Youth Enjoy Science program. While the “granddaddy” of these types of programs is SEPA, the fact that the largest institute of the National Institutes of Health (NIH) has entered the arena provides some hope that additional opportunities across NIH will be not too long in coming.

We are about to embark on year three of our YES! program and we have seen a great complement to our long standing SEPA. There are some specific differences between the programs, but the one common focus to support you, our partner schools and your students.

One of the most distinct features is the long term research experiences for some high school and undergraduate students. The others are the YES! Clubs that are now well established in the Omaha Public Schools NICE program and we hope to solidify across all interested partners (thank you Aislinn!).

Please mark your calendar for the next Cancer Biology and You Day October 29, 2019 at the Delta Hotel in South Sioux City, Nebraska. The topic will be reducing the risk of cancer, and there will be lots of fun, educational activities for students.

**YES! PROGRAMS 2019** Besides several visits to schools to connect with administrators, teachers and students, the following programs were held:

1. MARTY INDIAN SCHOOL VISIT APRIL 5, 2019 - SCIENCE ACTIVITIES—CANCER AND OTHER DISEASE AWARENESS
2. WAKANYEJA SYMPOSIUM—APRIL 23-24, 2019 - BRINGING TRIBAL COMMUNITY TOGETHER
3. DNA DAY —CANCER AWARENESS—APRIL 26-27,2019
4. WAGNER SCHOOL STUDENTS VISIT TO UNMC—MAY 3, 2019
5. YES TEAM VISITING MARTY INDIAN SCHOOL—SUMMER PROGRAM—MAY 13-15,2019
6. YES TEACHER WORKSHOP JUNE 24-26,2019
7. SHPEP-YES WISH Program—JUNE 8-15, 2019
8. YES—STEAM Camp- Native American Middle School Students—JUNE 24-28, 2019
9. SUMMER SCIENCE PROGRAM AT WAGNER—JULY 8-13, 2019

### YES! team Drs. Kumar and Godfrey visited Marty Indian School in South Dakota

On April 5, 2019, more than 50 students (K-8) were engaged in science activities including hands-on experiments on basic sci-



ence. The day-long event also included about healthy eating habits and preventing diseases such as diabetes, cancer etc.

**Wakanyéja: A Conference on American Indian Health Issues (April 23-24, 2019)** This



conference brought together tribal community members, respected elders, health advocates, academics, biomedical scientists, and tribal health representatives to help better understand community issues and work to address health disparities. More than a



dozen conference speakers and over 150 participants were engaged with these issues from multiple view points, including physical, mental, cultural, and spiritual factors in behavioral health. This conference was a collaboration between the Center for Great Plains Studies at the University of Nebraska and the University of Nebraska Medical Center. There are several other pictures of the conference which can be viewed at this web site: <https://unl.box.com/s/>

**DNA DAY—CANCER AWARENESS & PREVENTION —APRIL 26-27, 2019**



More than 250 students were involved in hands-on activities to explore the exciting worlds of DNA and public health. Students were directly involved in extracting DNA from strawberries and were extremely surprised to see DNA. Students also learned more about how ultraviolet (UV) radiation can cause DNA damage leading to skin cancer and ways to protect our skin from UV radiation.

**Wagner School Students (5th Grade) visit to UNMC (May 3rd, 2019)** More



than 40 students visited UNMC - this was a great opportunity for them to explore science, technology and engineering outside the classroom. They were involved in several hands-on-activities which included 1. Mind & Brain Health Lab to improve mind and brain health and mobility 2. Motion Analysis & Virtual Reality Lab -Blend of engineering, biomechanics and brain imaging- a diagnostic tools for the treatment of walking disorders and 3. Recreation Therapy - to improve physical, cognitive, social and emotional functioning. Students were also excited to learn more about career opportunities in science. They visited Sorrel Center, Buffett

Cancer Center and other labs at UNMC.

**YES! Team Visiting Marty Indian School - Summer School Program (K-12) - May 13-15, 2019** This

three days science learning and career opportunities program was conducted by YES! team members Drs. Godfrey and Kumar. More than 50 students participated each day with different topic of hands-on-activities. The three day experiments included: 1. Skin Cancer and Prevention 2. Diagnosing Diabetes, Healthy Eating Habits and steps to prevent diseases such as cancer. This was a great opportunity for all the students to interact directly with scientists. They loved all the exper-



iments they could perform and results they obtained right there in the classroom. Also, every students were able to give a talk for few minutes about their learning experience.

**YES! TEACHER WORKSHOP—At The Fred & Pamela Buffett Cancer Center | UNMC Campus in Omaha, Nebraska, June 24-26, 2019**

This year's teacher workshop was organized at UNMC to promote and reinforce good teaching strategies which the teacher can take to the classroom to provide efficient and effective learning tools to the students. In total 18 teachers, from 7 different schools (Andes Central School, Marty Indian School, Pierre Indian Learning Center, St. Augustine Indian Mission School, Umó'ho<sup>n</sup> Nation Public School, Wagner Community School, Walthill Public School), who teach Native American students in Nebraska and South Dakota, participated. In this three day workshop, teachers were involved in various hands-on-activities, cancer research lab tours, and discussions which included amino acids and protein folding, chromosome and cancer, virtual dissection table & radiology, CRISPR and genome editing, stem cells and plants, personal genetics and ethics.



The overall goal of this workshop was to provide teachers with a variety of classroom activities aimed at giving them a broad background in the area of cancer biology and introducing ideas to integrate these concepts into their existing curriculum. This summer's workshop was partly taught by faculty from Harvard Medical School. The workshop was a great success—many teachers expressed desire to come back next year.



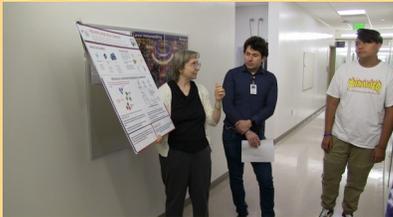
**SHPEP-YES WISH Program—June 8-15, 2019**

This year four Omaha-area high school students with Native American ancestry participated in the National Cancer Institute-funded Youth Enjoy Science Weeklong Institute for Students in High School (YES WISH) program at UNMC. This program exposed students to the fields of public health, biomedical sciences, nursing, pharmacy and medicine with a focus on cancer research. Students toured the campuses of the University of Nebraska-Omaha, University of Nebraska Medical Center and Metropolitan Community College. Through this program, the students gained insight into the life of college students, research opportunities and health professions education programs. This weeklong summer program is a part of the larger Summer Health Professions Education Program (SHPEP) program for undergraduate students funded by the Robert Wood Johnson Foundation. However, YES team took the initiative to introduce this to high school students so that they can get exposed to range of health professions earlier in their career. They had a great time and all of them expressed a desire to become a health professional.



**YES! Science, Technology, Engineering, Art and Math (STEAM) SUMMER CAMP - Native American Middle School Students—June 24-28, 2019**

The College of Public Health hosted a Science, Technology, Engineering, Art and Math (STEAM) Camp for thirteen Native American middle school students June 24-28, 2019. This camp was organized in partnership by the National Cancer Institute-funded Youth Enjoy Science (YES!) and Omaha Public Schools Native Indigenous Centered Education (OPS-NICE) program. During the camp, students



learned about cancer biology, cancer research and cancer-related careers with an integrated cultural perspective. Some of the traditions weaved into the camp included a traditional smudging at the start of each morning and some sessions taught inside a teepee erected on the west lawn outside the UNMC College of Public Health. The camp ended with the students creating artwork in different formats that reflected what they learned about cancer research. Exhibits of the students work, will be open in August at the Metropolitan Community College Fort Omaha Campus and in September in the Criss Library at the University of Nebraska at Omaha.

## ANNOUNCEMENTS/UPCOMING EVENTS/NEWS



The Fred & Pamela Buffett Cancer Center

**For any information, please contact:**

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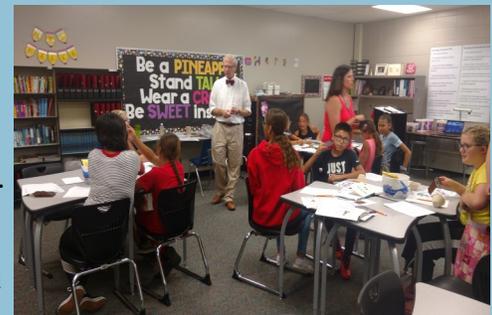
Eppley Institute for Research in Cancer & Allied Diseases  
University of Nebraska Medical Center, Omaha,  
NE 68198

- 1. Board Meeting: Delta Hotel –Marriott, South Sioux City, NE**  
Friday—September 13, 2019 Time: 10:00 am – 2:00 pm
- 2. YES! - OPS NICE 1st Middle School Club Meeting - Citizen Science & Water:**  
**University of Nebraska-Omaha, Omaha, Nebraska - Peter Kiewit Institute, Omaha, NE**  
Tuesday, October 1, 2019 Time: 8:30 am—2:30 pm
- 3. YES! High School Club Meeting - FAFSA Night:**  
**University of Nebraska Medical Center, Omaha, NE**  
Thursday, October 17, 2019 Time: 6:30 pm—7:30 pm
- 4. Cancer Biology and You Day: Delta Hotel, South Sioux City, NE**  
Tuesday, October 29, 2019 Time: All day program
- 5. YES! High School Club Meeting - Applying for College Night:**  
**University of Nebraska Medical Center, Omaha, NE**  
Tuesday, November 5, 2019 Time: Time: 6:30 pm—7:30pm
- 6. YES! High School Club Meeting - Scholarship Boot Camp:**  
**University of Nebraska Medical Center, Omaha, NE**

**YES! Program—Research Internship-2019** During Summer 2019, the YES Research program had 11 active interns. Seven of those interns participated in lab-based internships on various projects in the Buffett Cancer Center. The lab interns were Audrey Bavari, Alexander Nelson, and Chaulette DeCora (all University of Nebraska at Omaha students), Cecilia Barbosa and Gracie Thomas (both Omaha North High School students), and Jazlyn Gil (a Central High School student). The research areas ranged from early detection of pancreatic cancer, potential treatments for various cancers, and looking at genetic predispositions to cancer. Five interns worked with faculty members in the College of Public Health on various projects with a cancer health outcome. Bobbie McWilliams, an undergraduate at the University of Nebraska at Omaha, is working on an art-based case study of skin cancer examining the effects of cancer on the mind, body, and spirit with Dr. Regina Robbins. Erica Lafferty, an undergraduate at Oglala Lakota College and the South Dakota School of Mines & Technology, participated in an internship with Dr. Evi Farazi's lab investigating the relationship between Nonalcoholic steatohepatitis (NASH) and cancer in mouse models. Alec Ferreira, an undergraduate at Creighton University, is currently interning with Dr. Chandran Achutan. He is learning about the field of Occupational Health and exposure assessment and helping to design the citizen science middle school YES club project on water quality.



**Wagner Community Summer School Program—K-8- July 8-13, 2019** Summer program provides a great platform to learn science in a fun way and make new friends. This 5-day program was geared towards skill-building games, outdoor activities and fun-science engaging projects. YES! team members Dr. Godfrey and Ms. Soper conducted this program. More than 100 students participated and also many parents and other community members were involved. Overall, our program provides great opportunity to expose students to science in this early stage—which will help them to build up continued interest in education, plan for future careers in science and learn about healthy living to avoid killer diseases like cancer.



**YES! Teacher Research Experience Summer 2019** Two high school teachers from South Dakota were involved in YES! program lab research projects in summer 2019. Michael Mitchell was involved in a cancer genetics project, and Rick Hudson worked on studying the structure of a protein by x-ray crystallography.

