We have now had a year of our YES program. While we have had years to develop partnerships and programs for health and science engagement in general, the YES program has a singular focus, cancer education. We have had several programs in our first year and we now have at least 50 participants enrolled in different aspects of our programs.

Our first teacher professional development workshop was a huge success (Described in this issue). We will be visiting our partner schools in the coming months to establish programs as the YES program begins to mature.

One of our participating students is Ms. Audrey Bavari, a student in the UNMC High School Alliance program (www.unmc.edu/alliance) and the daughter of the first person we have ever featured in our SEPA Role Model Poster Project. That is truly a wonderful link between our SEPA and YES programs.

We will be presenting a poster on the Cancer Biology and You Day that was held in April at the upcoming International Cancer Education Conference.

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**YES Program** - The purpose of the YES program is to encourage partnerships between biomedical scientists, science educators, and community leaders for cancer education and prevention. The YES program also aims to increase the number of Native American cancer research and health care professionals. High school and undergraduate college students with Native American ancestry can participate in cancer research experiences at the Fred & Pamela Buffett Cancer Center at the University of Nebraska Medical Center or at the University of Nebraska at Omaha. Dr. Regina Robbins is mentoring three YES! intern participants in the field of Public Health: Treyten Ozuna, Bobbie McWilliams & Liliana Tamayo. Two YES! Program students (Treyten and Bobbie) involved in cancer research projects in Public Health presented their work at the event. Picture: During YES cancer research meeting, organized by Dr. Regina Robbins, Ms. Bobbie McWilliams presented on the lived experience of cancer and shared data that can contribute to cancer education within the Native American population. Ms. McWilliams has specific interest in Skin Cancer and developed various qualitative tools to interview and learn from Native American skin cancer survivors.

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YES! Cancer Awareness and Research Meeting: Results from the ongoing Community Readiness Assessment were discussed. A number of insightful recommendations were made by community members such as: 1) Engage and collaborate with other community groups (e.g., Inclusive Communities -table talks; High School Alliance; OPS NICE program; SEPA, UNMC; Buffett Cancer Center; Ponca; NUIHC etc.), 2) Extend our efforts and research into nearby reservation communities, 3) Address misconceptions about causes of cancer, 4) Share stories about cancer-create space to engage in dialogue about cancer, 5) Present information about cancer at local community events (e.g., pow wow; AISES: Inter-tribal student council meetings; SACNAS, etc.), 6) Create more fun events to present information at, 7) Publish cancer-related information in newspapers and in social media, 8) Conduct a SWOT analysis of the community (strengths; weaknesses; opportunities; threats), 9) Communicate with community leaders, 10) Collect stories of local people effected by Cancer and do so in culturally relevant ways. All inputs will be incorporated in an effort to promote cancer prevention and control within local urban Native American community.

Also, Two YES! Program students involved in cancer research projects in labs at the Fred & Pamela Buffett Cancer Center presented their work at the event. In the laboratory of Dr. Youri Pavlov, college student Mariah Abney's project has been analyzing how cancer gets started. DNA in our cells sometimes becomes damaged by environmental factors, such as by ultraviolet rays if we are exposed to too much sunlight without appropriate skin protection. A protein (called DNA polymerase zeta) in our cells helps to fix damage to DNA (called mutations), but in the process it also sometimes creates new mutations that lead to cancer. Mariah is investigating how specific parts of DNA polymerase zeta regulate its functions. Another student in the YES! Program, high school student Audrey Bavari is analyzing proteins that contribute to the growth and spread of pancreatic cancer. Pancreatic cancer disease is very deadly, and currently only ~8 or 9% of the people who get pancreatic cancer live for more than five years after their diagnosis, so a better understanding of the disease and more advanced therapies are greatly needed. Audrey has begun testing whether the protein APLP2, which has been shown to increase pancreatic cancer cell proliferation and metastasis, acts by altering the level of laminins or their interactions with integrins. Laminins and integrins are proteins that can regulate cell adhesion or movement. Understanding how specific proteins make pancreatic cancer so dangerous will help in the development of novel targeted therapies for this lethal cancer.
The YES Program also focused on providing in depth knowledge about cancer biology and cancer awareness to teachers from various middle and high schools. This learning opportunity for teachers was explicitly aimed at increasing student achievement and awareness about cancer. In total 12 teachers from 12 different schools (Beatrice High School, Fort Calhoun High school, Fremont Senior High, Holdrege High School, Humboldt Table Rock Steinauer School District, Milford High School, Nebraska City High School, Norfolk Catholic High School, Oakland-Craig High School, Scotus Central Catholic, Wausa High School, Westside High School) were attended. The intensive program included talks about cancer genes, cancer research resources, examining cancer patient data, learning about antioxidants and cancer prevention. All the teachers were also involved hands-on-activities such as breast cancer risk using pedigree analysis, skin cancer —evaluating the case of mole on a shoulder and the results of biopsy provided in their test kit. YES team member Dr. Kumar discussed in depth about antioxidants, free radicals, prevention of cancer and hands-on-activities involving laboratory experiment to analyze the antioxidant concentrations in different beverages.
National Cancer Institute-Sponsored Youth Enjoy Science (YES) Research Program

at the University of Nebraska Medical Center
Fred & Pamela Buffett Cancer Center

National Cancer Institute-supported Youth Enjoy Science Research (YES) Program, which is open to students from throughout the U.S. In this program, undergraduate college students with Native American ancestry can participate in cancer research in laboratories at the Fred & Pamela Buffett Cancer Center. These experiences include summer research projects, or (for Omaha residents) working on research projects that can be accomplished part-time during the school year is also an option. High school students in the Omaha region can also participate in this research education program. All students receive payment for their participation, and, for some undergraduate students, financial support for housing, food, and travel to Omaha may be available in the summer.

For additional information, please contact:

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1. BOARD MEETING: Delta Hotel – Marriott, South Sioux City, Nebraska
   Friday—September 14, 2018
   Time: 10:00 am – 2:00 pm

2. October 30 (Tuesday), 2018 SEPA Behavioral Health Day for college students and high school juniors and seniors (Delta Hotel, South Sioux City, NE)

Email us with your questions at: yesinfo@eppleyits.com or sepa@unmc.edu

YES — Breast Cancer Awareness

Cancer in American Indians and Alaska Natives is the...

#1 Cause of Death for Women
#2 Cause of Death for Men

The most commonly diagnosed cancers are...

#1 Breast
#2 Lung
#3 Colorectal
#1 Prostate
#2 Lung
#3 Colorectal

Lung cancer is the leading cause of cancer death for men and women. Other leading causes of cancer death are...

Prostate
Colorectal
Breast

Acknowledgement: American Indian Cancer Foundation

Symptoms of Breast Cancer

- Appearance of a lump
- Nipple discharge
- Presence of swelling in the breast
- Redness of the breast or nipple
- Skin changes of the breast