

# Times and Democrat Tribute to Henrietta Lacks: Claflin researchers closing disparity gaps on HPV

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Feb 28, 2018

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Henrietta Lacks is an unsung hero in medical research. We celebrate her life during Black History Month. She and her family were poor, and worked on a tobacco farm in the South as had her slave ancestors.

Her cells were taken by researchers/scientists in 1951 at Johns Hopkins University and without her knowledge became one of the most important tools in medicine.

Mrs. Lacks died over 65 years ago, but her HeLa cells were the first “immortal” human cells grown in culture, and they are still alive today. Thus far in scientific research, HeLa cells provided insight for the development of the polio vaccine, and have uncovered discoveries related to cancer, viruses, the effects of atom bombs, in vitro fertilization, gene mapping, etc. The cells have been marketed around the globe. Henrietta Lacks’ family members have not profited from this discovery and could not even afford health insurance.

From Henrietta Lacks’ cells, scientists discovered that the human papillomavirus (HPV) causes cervical cancer, the second most common cancer next to breast cancer among women in the United States. Reported in 2018, The American Cancer Society estimates that 13,240 new cases of invasive cervical cancer will be diagnosed and about 4,170 women will die from cervical cancer.

In the United States, Hispanic women are most likely to develop cervical cancer, followed by African-American, Asians and Pacific Islanders, and whites. HPV is a sexually transmitted infection in both males and females. HPV is categorized into high-risk and low-risk types. Cervical cancer is largely attributable to persistent infection with HR-HPV types. HR-HPV types -16 and -18 are predominantly associated with 70 percent of cervical cancer cases, whereas two LR-HPV -6 and -11 cause 90 percent of anogenital wart cases. Approximately 79 million Americans are infected with HPV, causing vulvar cancer, vaginal cancer, penile cancer, anal cancer and head/neck/oral cancers.

HPV is an infection that is rarely discussed within our society. Recent studies at Claflin University are in accordance with national studies indicating a low level of knowledge and awareness, as well as widespread misconception regarding sexually transmitted infections, especially HPV, according to research that began in 2011 by Tiffany Rickenbacker.

Research conducted on incoming freshmen in 2016 resulted in only 55 percent having heard of HPV, and this increased to 75 percent after educational training during workshops as reported by Keiara Reames, who graduated in biology in 2017. Keiara participated in RISE (Research Initiative for Scientific Enhancement) and presented her research at national conferences. She is currently a graduate student in the Biotechnology Program working toward a master-of-science degree. Her current research involves detecting cancer-causing genes in HR-HPV and LR-HPV. She is continuing this research that was initiated by Adia Loudon, who is currently a graduate student in the Rollins School of Public Health At Emory University. Researchers at Duke University have shown prevalence of certain HPV types in African-American women not prevalent in Caucasian women.

There are proven ways to decrease the incidence of cervical cancer. The HPV vaccination, discovered by using HeLa cells, is used to protect individuals from contracting HPV infections. Gardasil, Gardasil 9 and Cervarix are three available vaccines on the market. Research indicates that both girls and boys should be vaccinated at the age of 11 or 12 years old to prevent future cancer due to certain types of HPV. Vaccination is administered as three injections over a six-month period at the following times: 0 month, 2 months and 6 months.

The Vaccine for Children Program offers vaccines at no cost for eligible children through physicians enrolled in the program. For more information, refer to CDC at [www.cdc.gov/vaccines/programs/vfc](http://www.cdc.gov/vaccines/programs/vfc). Regular Papanicolaou (Pap) smear screening is encouraged to detect early onset of cervical cancer.

Information on prevention of cervical cancer can be found at the Cervical Cancer Free SC website

(<http://www.cervicalcancerfreecoalition.org/partners/partner-states/south-carolina/>). The Public Health Student Alliance at Claflin University leads

annual community outreach efforts in educating and promoting awareness about HPV. There is a great need for increased health promotion as we address diseases and conditions associated with HPV and contribute to closing the gap in health disparities with disproportionate incidence in minority populations.

Claflin is in the third year of a five-year, \$1.3 million federal grant to prepare students to enter PhD programs and conduct research in biomedical and behavioral sciences. Our research is guided by the principles of bioethics, and we teach our students the importance of conducting research with informed consent by participants.

Graduate students enrolled in Dr. Gloria McCutcheon's research ethics class at Claflin suggest watching the movie titled, "The Immortal Life of Henrietta Lacks" starring Oprah Winfrey and for a more detailed version of the science and bioethics, one should read Rebecca Skloot's book of the same title and rated The New York Times Bestseller.

*The described research at Claflin University is supported by National Institute of General Medical Sciences of the National Institutes of Health under Award Number R25GM113740, the Research Initiative for Scientific Enhancement. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. Dr. Gloria S. McCutcheon is principal investigator and Dr. Samina N. Assanie-Shivji is co-investigator. McCutcheon is interim chair and professor of biology at Claflin.*