



Brooklyn Health Disparities Center (BHDC) is a joint venture of SUNY Downstate Medical Center, the Arthur Ashe Institute for Urban Health, and the Brooklyn Borough President's Office.

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Who Is Henrietta Lacks and...How does Brooklyn Health Disparities Center Envision Cancer Research in the Future?

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Henrietta Lacks

Henrietta Lacks' cancer cells are the source of the "HeLa" cell line and have been used in more than 74,000 studies resulting in contributions to the fields of cell biology and in vitro fertilization, to vaccines, and to the treatment of cancer.

According to Johns Hopkins (hospital where Henrietta Lacks' cervical cancer was treated) website,

"Today, these incredible cells—nicknamed "HeLa" cells, from the first two letters of her first and last names — are used to study the effects of toxins, drugs, hormones and viruses on the growth of cancer cells without experimenting on humans. They have been used to test the effects of radiation and poisons, to study the human genome, to learn more about how viruses work, and played a crucial role in the development of the polio vaccine."

Mrs. Lacks' story, while ultimately a story of hope and triumph, began with her tragic death at a young age and breach in medical ethics. Lacks, an African American mother was, without her knowledge, the source of these cells from a tumor biopsied during treatment for cervical cancer at Johns Hopkins Hospital in Baltimore, Maryland, U.S., in 1951. It should be noted that Johns

Hopkins was one of few hospitals that treated African American patients in the Baltimore area at that time.) Researcher Dr. George Otto Gey, cultured the cells and created the cell line known as HeLa. Mrs. Lacks cells were remarkable in that they doubled every 20 to 24 hours while cells from other cancer patients died quickly. Mrs. Lacks received no request for consent to culture her cells, nor were she or her family compensated for their extraction or use.

Today, because of Mrs. Lacks' and others, medical ethics now require informed consent of patients and research participants, as well as, notification and/or compensation of family members where appropriate.



On Friday, March 1, 2019, Brooklyn Health Disparities Center (BHDC) collaborated for the fourth time with SUNY Downstate Medical Center and the John Conley Division of Medical Ethics and Humanities, Stony Brook University, and Cold Spring Harbor Laboratory to sponsor the Fourth Annual Cancer Health Disparities Symposium. The event featured the

Keynote Address by Alfred Lacks Carter, the grandson of Henrietta Lacks entitled, “Henrietta Lacks: Her unauthorized launching of a scientific revolution”. Mr. Lacks shared his family’s journey as they pursued facts about the good, the bad, and the ugly facts regarding Henrietta’s treatment and the impact this history has had on the Lacks family. Most positive was the fact that Mr. Lacks has established a not for profit named Henrietta Lacks House which provides transitional housing and life skills training for previously incarcerated men. Information about the program is available at HenriettaLacksHouse.org.



Significant cancer prevention and outcomes health disparities exist in Blacks as they are affected at a much earlier age and plagued by higher mortality than other populations. The population is also affected by social determinants of health including access to social and economic opportunities; the resources and supports available in our homes, neighborhoods, and communities; the quality of our schooling; the safety of our workplaces; the cleanliness of our water, food, and air; and the nature of our social interactions and relationships. Innovative ways to engage this population using non-traditional interventions screening, prevention and treatment approaches is essential to decrease the burden of cancer in our community. Cancer is the leading

cause of premature death in Central Brooklyn and a major public health problem for this population. Incredibly, Henrietta Lacks cells and her story continue to contribute to better understanding of the dilemmas surrounding social determinants of health and Cancer in Black communities.

BHDC continues, through its research initiatives, to focus upon and to analyze the racial ethnic disparities in various cancers. As an example, we know that in the US, individuals of African descent are at higher risk for developing GI cancers (colorectal and pancreatic) and also exhibit higher mortality rates for these cancers compared to individuals of European ancestry as well as individuals of other race and ethnicities. Over the past 4 years, Downstate Medical Center (DMC)/ (BHDC) and SUNY Stony Brook University (SBU), two institutions that serve underserved populations and underrepresented minority students (ISUPs), and the NCI designated basic science Cancer Center at Cold Spring Harbor Laboratory (CSHL) have been working together to develop an integrated, interdisciplinary, transformative research agenda focused on advancing GI cancer health equity. The significance of the proposed work relates to the observation that along with community education and outreach programs, this partnership has already improved our ability to collect African American biospecimens linked to rigorously curated clinical metadata. We have taken the forefront in developing human pancreatic cancer organoid models as a novel clinical tool for precision oncology.

We now propose to form a Comprehensive Partnership to Advance GI Cancer Health Equity, where we propose an ambitious Research Program consisting of three Research Projects supported by three interconnected shared resource cores; a Biostatistics and Bioinformatics Core, a GI Clinical Resource Core and an Organoid and Molecular Profiling Core. The results of these studies promise to significantly increase the number of individuals in underrepresented groups in GI cancer Next Gen sequencing datasets linked to clinical metadata available on NCI Genome Data Commons and dbGAP. It will also significantly increase the number of pancreatic cancer and colon cancer organoid models underrepresented groups, further enabling research on GI cancer disparities.