

# Tuskegee HeLa Cell Recognition Project

District 6880  
**Rotary**  
 Tuskegee HeLa Cell Recognition Project



## **TUSKEGEE HELA CELL RECOGNITION PROJECT**

While polio patients from across the Southeast were being ushered through essential treatment and rehabilitation programs at the Tuskegee Infantile Paralysis Center, across campus Tuskegee scientists were conducting outstanding research in the Carver Research Foundation building. This building, partially constructed from the life savings of Dr. Carver, was also home to the labs of two of Tuskegee's premier scientists, Drs. Russell Brown and James Henderson. Few, including these two scientists, had the premonition that this building would be transformed into a state-of-the-art cell culture factory to cultivate and distribute the cells that would be instrumental in the evaluation of the polio vaccine.

# Introduction

**Develop, design, and implement a proposal of a monument for the Tuskegee Institute HeLa Cell Recognition Project.**

## Proposal:

Five granite markers (Double Sided) – Black Polished Granite Laser Etched

Center piece of Henrietta Lacks with inscriptions below figure.

Other granite markers with bust pictures of honorees and inscriptions.

- Henrietta Lacks
- Charles Bynum
- George Washington Carver
- Dr. Russell Brown
- Four Technicians
- Basil O'Connor
- Jimmy Henderson
- Norma Gaillard
- Franklin D. Roosevelt
- NFIP



# Tuskegee HeLa Cell Recognition Project

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**Rotary**

Tuskegee HeLa Cell Recognition  
Project



The total eradication of polio is the number one priority of Rotary. Rotary has been working to eradicate polio for more than 35 years. Our goal of ridding the world of this disease is closer than ever.

As a founding partner of the [Global Polio Eradication Initiative](#), we've reduced polio cases by 99.9 percent since our first project to vaccinate children in the Philippines in 1979.

Rotary members have contributed more than \$2.1 billion and countless volunteer hours to protect nearly 3 billion children in 122 countries from this paralyzing disease. Rotary's advocacy efforts have played a role in decisions by governments to contribute more than \$10 billion to the effort.

# Tuskegee HeLa Cell Recognition Project

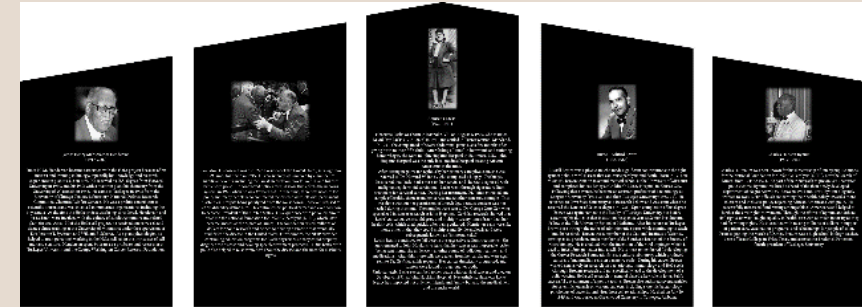
Today, polio remains endemic only in Afghanistan and Pakistan. But it's crucial to continue working to keep other countries polio-free. If all eradication efforts stopped today, within 10 years, polio could paralyze as many as 200,000 children each year.

The history at Tuskegee Institute in the treatment of polio patients and research is absolutely amazing.

**The purpose of The Tuskegee Institute HeLa Cell Recognition Project is to recognize the individuals involved and the research conducted at Tuskegee Institute regarding the HeLa research.**



# Tuskegee HeLa Cell Recognition Project



Dimensions of combined monument stones = 21 feet X 1 foot

Combined weight of monument stones = 13,136 pounds

All granite markers will be on black polished granite laid on grey granite.

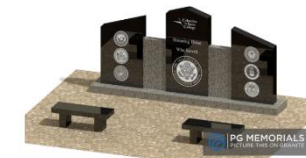
Granite markers will be set on a granite base with:

Option 1: Sod surrounding monument and benches

4 Granite Benches – Two on each side of monument

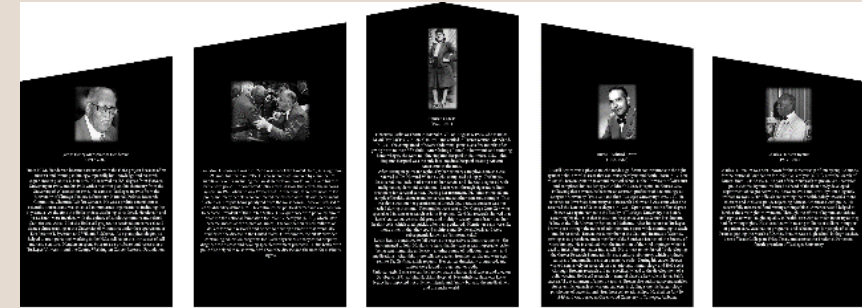
Inscriptions / Pictures

- Dana provided pictures and inscriptions for each stone
  1. Stone pictures and inscriptions provided in separate document.
- Dana identified location of monument (Carver Research Foundation Building)



Sample

# Tuskegee HeLa Cell Recognition Project



## Final Draft design of monument

- Price Quote for granite work – Southside Granite \$78,000.00
- Price Quote for concrete work – Big Ben Construction \$17,874.00
- Price Quote for site preparation and Sod Grass - \$6,979.00
- Dana produced engineering design for concrete base for monument

### ***Funding:***

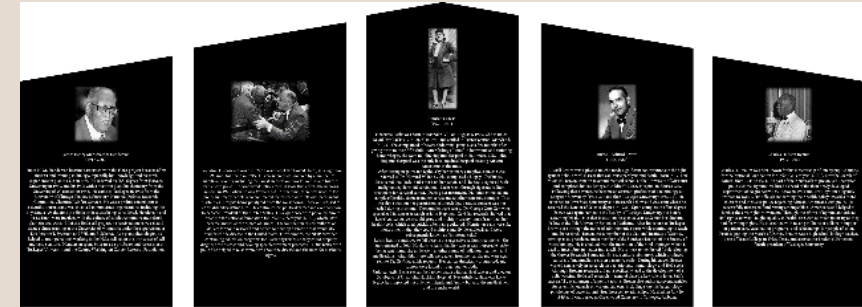
- *Balance in local Rotary account \$7,000.00*
- *Balance in Tuskegee Polio Recognition Account \$37,000.00*
- *State Funding presently requested \$20,000.00*
- *State Funding available October 1<sup>st</sup> \$20,000.00*

Total Project Cost: \$102,853.00

Funds available or committed: \$84,000.00

**Funding to be raised: \$18,853.00 (As of August 20<sup>th</sup>)**

# Tuskegee HeLa Cell Recognition Project




## *Moving Forward:*

- Seek Funding Support
- Project plans approved by Dana Chandler and reviewed by others.
- Project plans submitted to Tuskegee University President.
- Receive written letter of approval from University President
- Submit work order for concrete work to Big Ben Construction
- Submit work order for granite work to Southside Granite
- Submit work order for site preparation and area sodding.
- Celebrate

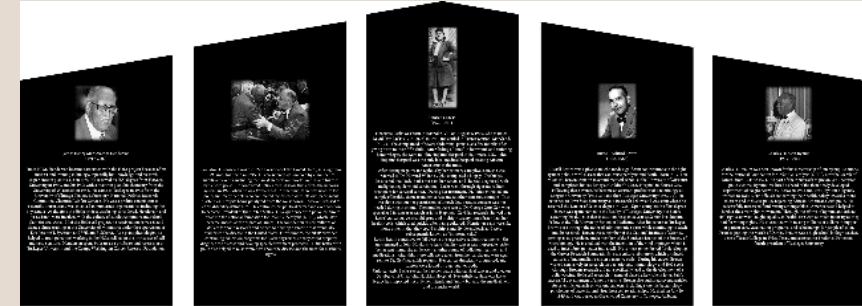


# Tuskegee HeLa Cell Recognition Project



Franklin D. Roosevelt

Franklin D. Roosevelt was the 32nd President of the United States, serving from 1933 until his death in 1945. His presidency was marked by a number of significant events, including the Great Depression, World War II, and his own battle with polio. He contracted polio, a viral disease that affects the nervous system, in 1921 when he was 39 years old. At the time, there was no cure for polio, and many people who contracted the disease were left with permanent disabilities. Despite being paralyzed from the waist down, Roosevelt refused to let his disability define him. He continued his political career and even went on to become President of the United States. His experience with polio led him to establish the national foundation for infantile paralysis (NFIP), which later became known as the March of Dimes. The foundation raised millions of dollars for polio research and helped to develop a vaccine that eventually eradicated the disease in the United States. Furthermore, the NFIP provided continuing education programs for Black physicians so they could properly diagnose the disease and develop specific treatment protocols. FDR's battle with polio also helped to raise awareness about the disease and the need for disability rights.

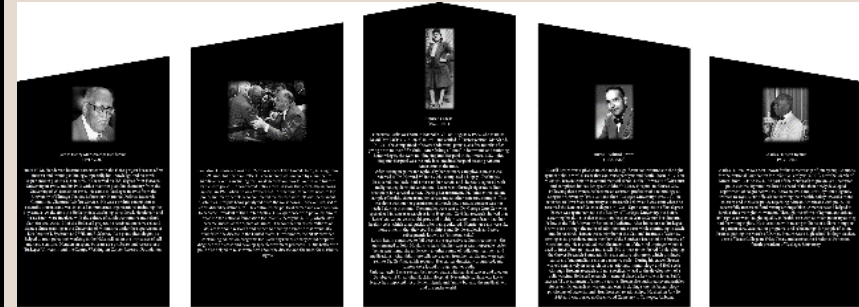


# Tuskegee HeLa Cell Recognition Project




James Henry Meriweather Henderson  
(1917-2009)

James H. M. Henderson became associated with the HeLa project because of his interest and training in biology, especially his knowledge and research experience in plant tissue culture. He received his B.S. degree from Howard University in 1939, and his PhD with a major in plant biochemistry from the University of Wisconsin in 1943. He came to Tuskegee in 1945 from the University of Chicago Toxicity Laboratory, National Defense Research Committee, Chemical Warfare Service. He was a prolific contributor to scientific journals and was involved in numerous organizations, including the boy scouts. At the time the HeLa project was being considered, Henderson and his assistant were involved with the culture of sunflower tumors and related plant tissues. As co-PI of the HeLa cell project, he received intensive cell and tissue culture training at the University of Minnesota under the supervision of Drs. Jerome T. Syverton and William F. Scherer. As a plant physiologist, he helped to train personnel working in the HeLa cell lab in the intricacies of cell and tissue culture. Henderson spent 54 years as a professor and researcher at Tuskegee University and the George Washington Carver Research Foundation.



# Tuskegee HeLa Cell Recognition Project



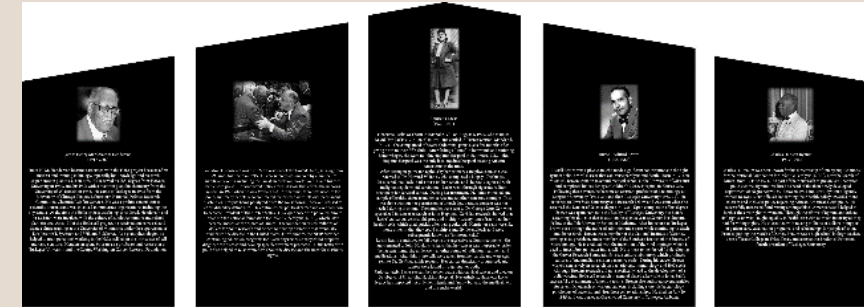
Henrietta Lacks  
(1920-1951)

Henrietta Lacks was born in Roanoke, VA, on August 1, 1920. She married David Day Lacks (1915-2002) in 1941 and settled in Turner Station, Maryland. In 1951, she complained of severe abdominal pains just a few months after giving birth to their fifth child. After feeling a "knot" in her womb and suffering hemorrhages, she went to John Hopkins Hospital in Baltimore, MD. John Hopkins Hospital was the only local medical hospital treating African Americans at the time.

After testing negative for syphilis by her primary care physician, she was referred to Dr. Howard W. Jones, who completed a biopsy. The biopsy discovered that Lacks had a mass on her cervix, and she was diagnosed with malignant epidermoid carcinoma. Lacks went through rigorous radium treatment for cervical cancer. During her treatment, Dr. Jones extracted one sample of healthy tissue from her cervix and another cancerous sample. This was done without her permission or knowledge, because consent was not needed during this time. The samples were sent to Dr. George Otto Gey, who specialized in cancer research at John Hopkins. Gey's lab research showed that Lacks' cancerous cells could grow and multiply twenty times faster than her healthy cells, which died quickly after being cultured. Henrietta's cells were like none other in that they could multiply and divide endlessly and were subsequently known as "immortal cells."

Lacks' health continued to fail despite the aggressive radium treatments. She later returned to John Hopkins to learn that her cancer was inoperable. After being sent home, she underwent another round of radiation treatment and medications. After this, more cells were taken from her cervix and were again sent to Dr. Gey's lab at his request. Her cancer drastically progressed, and tumors were found throughout her body.

Unfortunately, Lacks succumbed to her battle with cervical cancer and died on October 4, 1951, at John Hopkins Hospital. Nevertheless, Henrietta Lacks' legacy has impacted not only her friends and family, but also the medical field and the entire world.

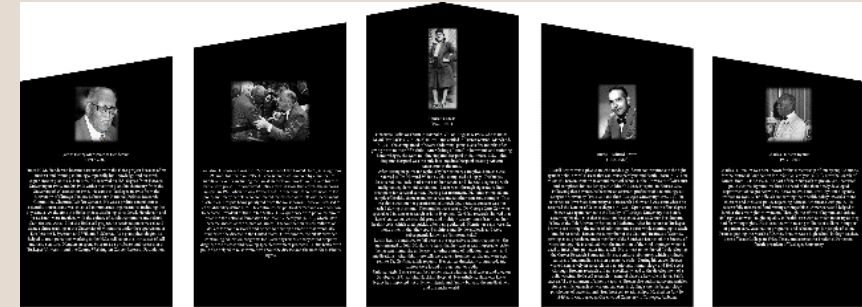


# Tuskegee HeLa Cell Recognition Project



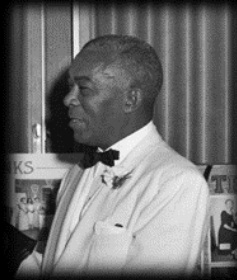
Russell Wilifrid Brown  
(1905-1985)

Russell Brown was a physician who made significant contributions to the fight against polio, a viral disease that can cause paralysis and death. Born in 1916 in Missouri, Brown went on to attend medical school at the University of Missouri and completed his residency at Children's Mercy Hospital in Kansas City. Following these events, he became an assistant professor of Bacteriology at Langston University (1932-33) and then Tuskegee University (1933-34). He returned to Iowa State University as a Research Fellow and Assistant where he received the Doctor of Science degree in 1936. Upon completion of his degree, Brown was again named to the faculty of Tuskegee University, but before assuming his duties at that institution he spent a year as Senior Postdoctoral Fellow at the Yale University School of Medicine. After his return to Tuskegee, Brown rose through the ranks of administrative posts while continuing to teach and do research. Brown was a member of the National Institute of Science, serving as its president, and a member of the Southern Branch of the Society of Microbiology. He is credited with the invention of the viral impinger, which is used to inject foreign matter into a cell. He is most remembered for developing the Carver Research Foundation's tissue culture laboratory, which produced cultures of mammalian cells on a massive scale. During his career, Brown worked extensively in research on bacteriology, immunology, and HeLa cells. Although Brown's research did not specifically lead to the development of a polio vaccine, HeLa cell research in general played a key role in Jonas Salk's successful development of a polio vaccine. Brown also authored several articles for scientific journals on various subjects, including systemic bacteriology, physiology of bacteria, and virus-host cell relationships. He died on July 29, 1985, and was buried at Greenwood Cemetery in Tuskegee, Alabama.



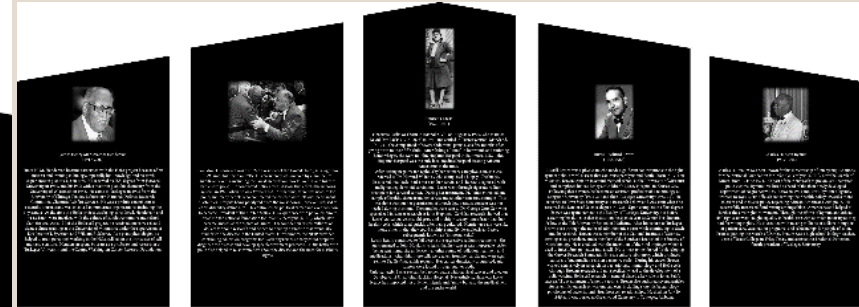


# Tuskegee HeLa Cell Recognition Project




Charles Hudson Bynum  
(1905-1996)

Charles H. Bynum was best known for his directorship of Intergroup Relations for the National Foundation for Infantile Paralysis (NFIP), now the March of Dimes, from 1944 to 1971. As part of their outreach to previously unassisted polio victims, Bynum was hired as head of the then newly developed department of Negro Activities. Between 1944 and 1954, Bynum diligently worked to sway NFIP officials concerning their health policy toward a more tolerant and inclusive policy regarding African Americans with polio. He successfully increased fund raising amongst black Americans and helped to further the civil rights movement. Through the efforts of Bynum and others, civil rights activists sought equality in health care with as much intensity as they had for voting rights. He is credited with raising millions of dollars in support of patient care, vaccination programs, and scholarships for people of color. Prior to joining the March of Dimes, Bynum was a high school biology teacher, dean of Texas College in Tyler, Texas, and assistant to Frederick Patterson, fourth president of Tuskegee University.



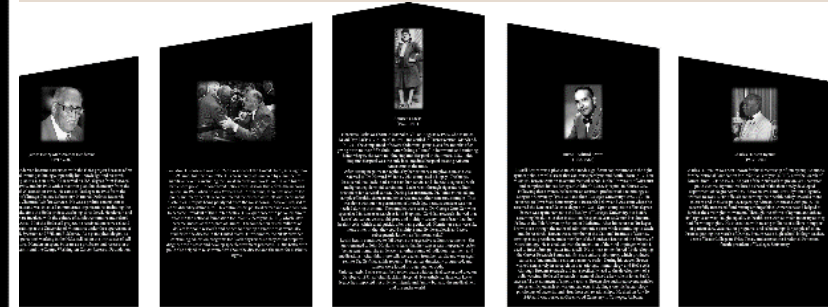


# Tuskegee HeLa Cell Recognition Project




Daniel Basil O'Conner  
(1892-1972)

The NFIP was founded, in 1938, through the efforts of President Franklin D. Roosevelt and his law partner and close confidant Daniel Basil O'Conner. O'Conner served as a member and chairman of Tuskegee University's Board of Trustees from 1943-1968. He helped to develop the not-for-profit organization in order to increase perception of polio in America. Using revolutionary fund-raising techniques, including the "march of dimes" campaign, they mobilized the public to raise hundreds of millions of dollars to create the largest research and rehabilitation network in the history of medicine. He also ensured support for the research of Dr. Jonas Salk, the discoverer of the polio vaccine. As Chairman of the Board of Trustees at Tuskegee University, O'Conner was a vocal proponent of Tuskegee researchers and helped to procure the Infantile Paralysis Center on campus.



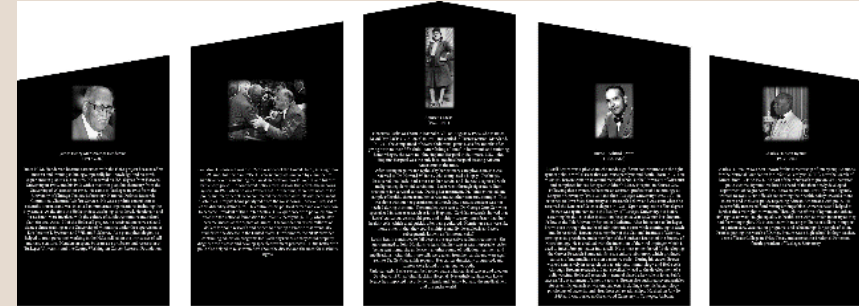
# Tuskegee HeLa Cell Recognition Project





George Washington Carver  
(1864-1943)

George Washington Carver was born into slavery near Diamond Grove, Missouri. After receiving his bachelor's and master's degrees from Iowa State University, he came to Tuskegee University in 1896 as the school's Director of Agriculture. Carver's fame as an agricultural scientist soon spread. Working with a variety of plants, primarily sweet potatoes and peanuts, he began concentrating his efforts on how each of these could best benefit local black farmers. Publishing his work in agriculture bulletins, his ideas soon spread beyond Tuskegee and Macon County. He was further thrust into national attention when, in 1921, his work with the peanut resulted in his appearance before the House Ways and Means Committee as an expert witness on behalf of the peanut industry. Through his work, he believed that oil made from the peanut had healing properties, especially when applied to those with polio. The oil was administered with vigorous massaging, which seemed to give polio patients some relief. After a 1933 Associated Press story about Carver's alleged successes with his treatments, people journeyed to Tuskegee to receive his massages. His work appeared to allow patients to regain at least some use of their paralyzed limbs. Interestingly, Carver never received any payments for his work with polio patients.



# Tuskegee HeLa Cell Recognition Project



**FIGHT POLIO!**

prevention  
treatment

Join the **MARCH OF DIMES**

The National Foundation for Infantile Paralysis

**National Foundation for Infantile Paralysis (NFIP)**

Founded January 3, 1938, by Franklin D. Roosevelt (1882-1945) and his former law partner Basil O'Connor (1892-1972), the not-for-profit, National Foundation of Infantile Paralysis (NFIP), now called the March of Dimes, revolutionized fundraising and the perception of polio in America. They used a variety of techniques, including "poster children" and the "march of dimes" campaign, in which they mobilized the public to raise hundreds of millions of dollars to create the largest research and rehabilitation network in the history of medicine. With the implementation of the first of the NFIP's two main goals, the treatment of victims of infantile paralysis, they focused on the search for an effective vaccine. The emphasis on prevention was due to the increased number of polio cases which had begun to rise, both in numbers and severity, from 2000 cases in 1940 to 58,000 in 1952. Most of these cases were children; thus, the search became more critical. The Infantile Paralysis Center at Tuskegee was the first in the United States to offer state-of-the-art treatment for African American victims of polio, many were children who had no other treatment option in the South. Under director John Chenault, the faculty was constructed and furnished with funding from the NFIP.

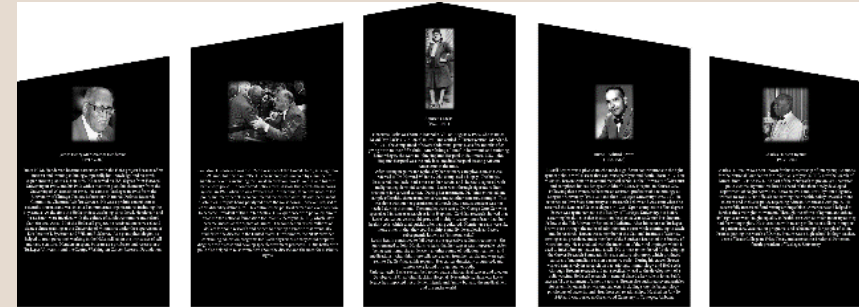


# Tuskegee HeLa Cell Recognition Project



HeLa Cell Culture Technicians

The first employee hired for the HeLa Cell Production Laboratory was Norma Gaillard, a graduate of North Carolina Central University. She came to Tuskegee in pursuit of her Master's degree in organic chemistry, graduating in 1948. Gaillard was instructed in basic cell and tissue culture techniques. Following Gaillard, and with her assistance, four additional scientist graduates, Evelyn Carmon, Gloria Maxwell, George C. Busby and Angela G. Dubose, were hired and trained as cell culture technicians. In addition, undergraduate students from well-known schools, who were also residents of Tuskegee and home for summer vacation, were likewise trained and employed, including Joan Brown, Ann Dibble, and Robert Dibble. The HeLa production laboratory accommodated ten cell culture technicians and a laboratory supervisor. Formal training resulted in personnel thoroughly indoctrinated in cell culture procedures specific to strain HeLa and the shipping of cultures to grantees. They were further trained in security measures essential to avoid contamination and other operational difficulties. Likewise, auxiliary personnel were given similar instructions with particular emphasis on precautions necessary of this endeavor and the fact that it had never been attempted on such a scale, it was critical for procedures to be standardized for consistency and reliability. Feeding of the cultures included proper solution formulas (or recipes), amounts required, types of containers needed and the regularity of feeding. Due to the location of the laboratory in south central Alabama, heat and humidity were always a major concern. Also, contamination was an ever-present issue. In the Spring of 1953, the main production laboratory, located in Armstrong Hall, was completed and work began.



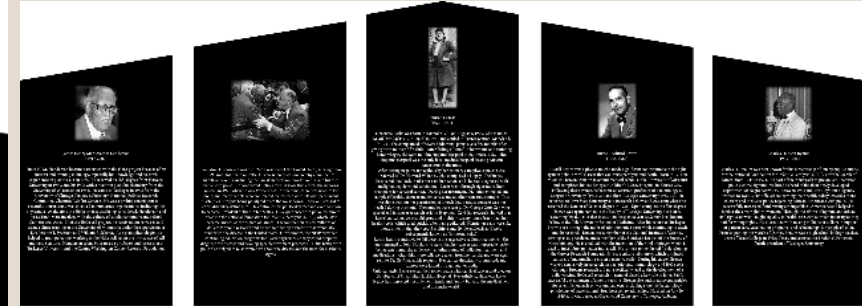


# Tuskegee HeLa Cell Recognition Project



Norma Gaillard  
(1923-1997)

Norma Gaillard was instrumental in developing the HeLa Cells for distribution to several laboratories throughout the country in the scramble to develop a vaccine for polio. Born in Boston, Massachusetts, she was the oldest child of Henry and Hazel Spaulding. She subsequently graduated in 1946 with a B.S. in Chemistry from North Carolina Central University and later came to Tuskegee University as a Carver Research Fellow where in 1948 she received a Master of Science in Chemistry. She also attended American University and Columbia University but did not receive a degree from either school. Her work experience spanned many areas which included Instructor of Chemistry at both Shaw University and St. Augustine College in Raleigh, North Carolina. Her tenure at Tuskegee University included being Director of the Pre-Freshman Program, Director of Special Services, and Instructor of Chemistry. She retired in 1997 as Assistant Professor of Chemistry/Assistant to the Dean of the College of Arts and Sciences. But it is her work as lead laboratory supervisor of the HeLa Project that established her reputation as a first-class scientist. As part of her work, she tested and improved methods of feeding the HeLa cells, as well as maintaining and transporting the cultures to grantee laboratories. She ensured the feeding of the cultures included proper solution formulas (or recipes), amounts required, types of containers needed and the regularity of feeding. Gaillard's accomplishments continued to grow, particularly in politics where she held the position of co-chair of the Tuskegee State Relations Task Force, served on the Mayor's Advisory Committee and was a 1984 delegate to the Democratic National Convention in San Francisco, California. She died on September 19, 1997, and is buried in Greenwood Cemetery, Tuskegee, Alabama.





# Bench Layout for Monument Area



Rotary District 6880  
Rotary Year 2023 - 2024

District Governor Earl Ingram  
RI President Gordan R. McNally



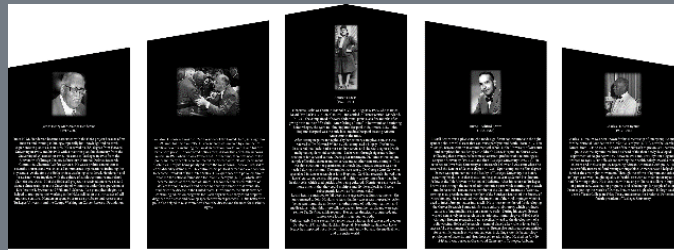
*"Service Above Self"*  
*"One Profits Most Who Serves Best"*

Paul Harris  
Founder Rotary International

# Why the Tuskegee HeLa Cell Recognition Project?

## RECOGNITION

- Bring local, state and national attention to the important work conducted at Tuskegee Institute
- Recognize and honor those individuals who conducted the work and research with the HeLa Cell
- Highlight the important history of Tuskegee University and Tuskegee, Alabama
- Installation of granite monuments to honor the memory and serve as a source of the historical figures at Tuskegee Institute.



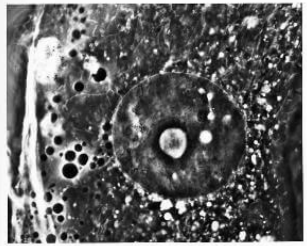
# The Immortal Life of Henrietta Lacks

In 1951, a 30-year-old African-American woman named Henrietta Lacks entered Johns Hopkins Hospital to be treated for cervical cancer. In a matter of months she was dead, overcome by her cancer's malignancy. Her cancer *cells*, however, would prove immortal—and change medicine forever.

*The Immortal Life of Henrietta Lacks* tells the story of Henrietta, her family, and her incredible cells. Tracking both the scientific advances owed to “HeLa” cells and the struggles of Henrietta’s descendants, author Rebecca Skloot leads readers through the history of cell research, the ethical implications of scientific study, and the human story of a poor and ailing family whose matriarch contributed to some of 20th-century science’s greatest achievements.



# The Importance of HeLa Cells



Among the important scientific discoveries of the last century was the first immortal human cell line known as “HeLa” — a remarkably durable and prolific line of cells obtained during the treatment of Henrietta’s cancer by Johns Hopkins researcher Dr. George Gey in 1951.

Although these were the first cells that could be easily shared and multiplied in a lab setting, Johns Hopkins has never sold or profited from the discovery or distribution of HeLa cells and does not own the rights to the HeLa cell line. Rather, Johns Hopkins offered HeLa cells freely and widely for scientific research.

Over the past several decades, this cell line has contributed to many medical breakthroughs, from research on the effects of zero gravity in outer space and the development of polio and COVID-19 vaccines, to the study of leukemia, the AIDS virus and cancer worldwide.

Although many other cell lines are in use today, HeLa cells have supported advances in most fields of medical research in the years since HeLa cells were isolated.

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# Tuskegee HeLa Cell Recognition Project Team



**BRUCE MCNEAL**

Project Chair District  
6880 Vice Governor



**DANA CHANDLER**

Tuskegee University  
Archivist



**GRAHAM CHAMPION**

Rotary Club of  
Montgomery



**EARL INGRAM**

District Governor 6880



# Tuskegee HeLa Cell Recognition Project Team



DR. CHARLOTTE P. MORRIS

President Tuskegee  
University



HENRY DAVIS

Montgomery Rotary  
Club



CHERYL FERGUSON

Tuskegee University



ROBERT GREER

District 6880 Polio Chair

# Tuskegee HeLa Cell Recognition Project Team



**SAM ADAMS**

Montgomery Rotary  
Club



**ROTARY CLUBS**

Of District 6880



**TERRY PIERCE**

Southside Granite



**BENNY CARTER**

Big Ben Construction

# Donations are Tax Deductible

## Donations can be made through PayPal:

[https://www.paypal.com/donate/?hosted\\_button\\_id=HTRB65YUM5XHW&source=qr](https://www.paypal.com/donate/?hosted_button_id=HTRB65YUM5XHW&source=qr)

Need an invoice?: [dgmcneal2022@gmail.com](mailto:dgmcneal2022@gmail.com)



Scan QR Code



# Donations are Tax Deductible

**Donations can be mailed to:**

**Bruce McNeal  
Tuskegee HeLa Recognition  
Project  
601 Royal Parkway  
Dothan, AL 36305**

District 6880

**Rotary**



Tuskegee HeLa Cell Recognition  
Project

# Donations are Tax Deductible

**Your support for this important project is greatly appreciated.**

**Be a part of history in the making.**

**Let's recognize those that help find the vaccine for polio.**

District 6880  
**Rotary**  
Tuskegee HeLa Cell Recognition  
Project





# Thank You For Supporting The Tuskegee HeLa Cell Recognition Project

Bruce McNeal

Past District Governor 21-22

District Vice Governor 23-24

Tuskegee HeLa Cell Recognition Project Chair

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District 6880

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