BOOKS & ARTS

The woman behind HeLa

Steve Silberman enjoys a moving account that probes racial and ethical issues in medicine through the story of the young mother whose death from cancer led to the first immortal cell line.

The Immortal Life of Henrietta Lacks

by Rebecca Skloot

Crown: 2010. 320 pp. \$26

One day in 1951, a young woman named Henrietta Lacks noticed blood on her underwear. She had been feeling pains for months that were not relieved by the birth of her fifth child, a boy. Finding what she described as a “knot” on her womb, Lacks was told by her physician to see a specialist.

Because Lacks was black, the nearest clinic that would admit her was 30 kilometres away. There, in the segregated ward of Johns Hopkins University hospital in Baltimore, Maryland, a gynaecologist discovered a lesion on Lacks’s cervix that was “as big as a 25-cent piece ... raised, smooth, glistening, and very purple.” The chairman of the hospital gynaecology department, Richard TeLinde, thought that such lesions were a harbinger of invasive cervical cancer. He was right. Lacks’s knot was an adenocarcinoma of formidable metastatic power. Eight months later she was dead.

In a strange twist of fate, Lacks’s cancer has lived on to this day — as HeLa, the first mass-produced human cell line. In an impressive non-fiction debut, science writer Rebecca Skloot weaves the travails of the Lacks family with the endeavours of the researchers who created HeLa. A real-life detective story, *The Immortal Life of Henrietta Lacks* probes deeply into racial and ethical issues in medicine.

‘Immortal’ cells such as HeLa can proliferate indefinitely because they do not have the mechanisms that limit the number of times a cell can divide before disintegrating. Key medical

advances — including the development of vaccines for polio and the human papillomavirus — were made by experimenting on HeLa cells. In recent years, they have been used to develop chemotherapy drugs, to study monoclonal antibodies and to examine the effects of exposing human tissue to nanomaterials. The plump, sticky cells have been frozen, cloned,

bombarded with γ -rays, infused with mouse DNA and launched into space. Yet many HeLa researchers know little about the woman behind them.

The one previous book-length account of HeLa history, Michael Gold’s *A Conspiracy of Cells* (SUNY Press, 1986), largely ignored Lacks to focus on Walter Nelson-Rees, the cytogeneticist who published lists of cell lines that had been contaminated by aggressive HeLa strains. By bringing the Lacks family out of HeLa’s shadow, Skloot reveals the societal forces and human passions at work in a scientific advance that has saved millions of lives.

The architects of Lacks’s virtual immortality were TeLinde along with George and Margaret Gey, pioneering cell culturists who had tried for years to invent a method of sustaining human cells *in vitro*. They succeeded when they immersed a portion of Lacks’s tissue in their home-made nutrient broth. Within days, “Henrietta’s cells weren’t merely surviving — they were growing with mythological intensity,” writes Skloot, “doubling their numbers every twenty-four hours, stacking hundreds on top of hundreds, accumulating by the millions.”

The Geys became HeLa evangelists, mailing out free vials of cells to labs worldwide. To furnish Jonas Salk with a way of testing his polio vaccine, other researchers scaled up the Geys’s methods. The biotechnology firms now known as Invitrogen and BioReliance each got their start by marketing HeLa cells in industrial quantities. Meanwhile, Lacks’s five children were living in Baltimore, too poor to afford health insurance and unaware that their

mother’s cells had taken on a life of their own. The notion of requiring informed consent before taking a tissue sample — particularly from a black patient on a public ward — was foreign to the medical establishment of the time.

The emotional impact of Skloot’s tale is intensified by its skilfully orchestrated counterpoint between two worlds: the

Henrietta Lacks: Twenty years after her death, her family learned that her cells lived on in a lab.

heady pioneer days of cell research, and the hard existence of the Lacks family, beset by poverty, disease and a succession of people — including a professional con man — who tried to turn Henrietta’s legacy to their own advantage.

The author forged a particularly tight bond with Lacks’s feisty daughter Deborah, who learned from journalists in the 1970s that part of her mother was still alive. Half a century after Henrietta first walked into the segregated ward at Johns Hopkins, the two worlds of Skloot’s book came together in a lab at the university when Deborah saw her mother’s cells under a microscope for the first time. “They’re beautiful,” she whispered. ■

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‘Immortal’ HeLa cells just keep on dividing.