



Solomon Carter Fuller, MD

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Dr Solomon Carter Fuller was a progressive, ground-breaking, resilient, persistent, academic clinician, pathologist, neurologist, psychiatrist and scholar.

Dr Fuller's life and career broke many barriers and overcame many hurdles. The foundation of his strengths and abilities clearly lay with his parents and grand-parents (his paternal grandfather John Lewis Fuller and grandmother had been slaves in Virginia) who overcame great hardship both in the USA and Liberia. Rejecting "Jim Crow" and other punitive laws designed to impede the advancement of Black people in the USA, the family launched on the formidable effort to recraft their free lives in West Africa. Their work and sacrifice enabled Dr Fuller to pursue a dream of formal medical education in the USA while combating institutionalized racism at every step.

Mary Kaplan's biography¹ is a fascinating description of the Fuller's family drive to succeed, while navigating great odds, both physical and emotional. The majority of the information summarized and written below was drawn from her excellent biography which is cited. It brings to light that Dr Fuller's first appointment upon graduation from the Boston University

School of Medicine was that of an intern in pathology at the Westborough State Hospital (WSH) in July 1897, initially known as the Westboro Insane Hospital, under the tutelage of Dr E.L. Mellis. Dr Fuller developed skills in histopathologic techniques, post-mortem pathology by performing autopsies, as well as laboratory based blood and bodily fluid analysis and specimen archiving – now termed biobanking. The focus of his work was to begin to understand the pathophysiology of neurological diseases. Neuropathology was a relatively new discipline in the USA. Dr Fuller was guided by mentors that this was an opportunity to excel in a new field, that might help him breach the barriers that were in place for his career advancement, due to his race. Dr. Fuller’s career accelerated when Dr Mellis left WSH to participate in the newly formed Johns Hopkins Medical School and Dr. Fuller was appointed as the hospital Pathologist after 6 months of training. He had to fight for a fair salary increase to maintain parity with his white colleagues and was eventually rewarded with both salary, title and recognition by the hospital Board. The WSH recognizing his talent and research contributions by funding his research and his state-of-the-art work in photomicrography. He was already demonstrating skills as a research scientist by publishing his findings. His work in neuropathology gained him recognition and in 1899 he was named the Director of the Clinical Society Commission of Massachusetts, a year after earning his medical license, and was appointed to the BUSM faculty as an Instructor in Pathology, where he taught for many years. Famously, he continued his pursuit of self-education and took a leave of absence in 1900 to expand his studies, expertise and knowledge at the Bellevue Hospital Medical College, under the mentorship of the Professor of Pathology, Dr Edward K. Dunham. This initiative shown by Dr Fuller led to the unique opportunities afforded to him later in his career.

Upon his return to WSH he began rounding on the clinical wards and *“introduced the inclusion of laboratory tests as an integral component in the treatment of mental illness”*¹ indicative of his vision as an innovative Laboratorian. Clearly as a result of his leadership, the funding (\$5,000) and building of a new Pathology Laboratory at WSH in 1901 was approved by the Board.

In 1904, again questing to develop his skills and knowledge, he decided to travel to the University of Munich to pursue advanced skills in neuropathology and research under Professor Emile Kraepelin at the Munich Psychiatric Hospital, affiliated to a research institute later known

as the Max Planck Institute, where among numerous leading neuroscientists, the eponymous Dr Alois Alzheimer worked. Aided by his working knowledge of the German language, Dr Fuller blended clinical research with participation in autopsies and attended lectures at the University of Munich's Pathological Institute. The director of the histopathological institute was none other than Dr Alzheimer. Dr Fuller petitioned to become one of five selected students to work with Dr Alzheimer and due to his diligence and experience, along with his initiative to seek out training in NYC, he was admitted into the class. He described Dr Alzheimer as a "*very kindly..., wonderful man*". It was during this time period that a case was worked up and ultimately presented as representative of Alzheimer's disease, describing the classic neurofibrillary tangles. Dr Fuller's direct contributions to the work are unknown, but given his elite and select position in the laboratory it is highly likely he contributed to the work in some way.

On leaving Germany, Dr Fuller connected with Dr. William T. Councilman at the Harvard Medical School and Chief of Pathology at Boston City Hospital (BCH), by agreeing to bring research mice across the Atlantic. Dr Councilman was a mentor to Dr Frank Burr Mallory who succeeded him at BCH in 1908. Sadly, on return to Boston, the relatively enlightened treatment he received in Germany as a "*Herr Doctor*", where he was not judged by the color of his skin but by the content of his character (to paraphrase Dr Martin Luther King), could not be replicated. He did however continue his important work much enhanced by his experiences in Germany and occupied the newly built pathology laboratories at WSH. Of note, his reputation had grown and when physicians sought out training and particularly in neuropathology, Dr Mallory would refer them to Dr Fuller at WSH. He also wrote in his notes that Dr Mallory willingly collaborated with him, though in a "*reserveddignified manner*". Dr Fuller in fact published the first English description of a case series of 11 patients with Alzheimer's disease in the US in 1907. He continued to publish and in 1912 wrote an extensive clinical and neuropathologic review of Alzheimer's cases². Dr Fuller though still wrote in his personal journals of the oppression of racism in his daily life, including dismissive treatment in the Harvard Medical School Pathology Laboratory and in his personal life when he built a home in Framingham. He met and married his first wife Meta Vaux Warrick, a noted artist from a wealthy family in 1909.

In the period from 1909 to 1911, Dr Carter Fuller began to transition his talents into the fields of neurology and psychiatry, where his foundational knowledge of anatomy and neuropathology stood him in good stead in these developing fields.

Dr Solomon Carter Fuller's significant contributions as a histopathologist, pathologist and neuropathologist, while faculty at BUSM, need to be championed and recognized in the present day. To that end Dr Fuller's core contributions to this field will now be included in the syllabus of foundational medical and graduate education in pathology, as well as recognizing him with a framed photograph and plaque in the department of Pathology & Laboratory Medicine at BUSM.

1. "Solomon Carter Fuller: Where my caravan has rested", Mary Kaplan, MSW University Press 2005.
2. S.C. Fuller, "Alzheimer's disease. The report of a case and review of published cases". Journal of Nervous and Mental Disease, 1912 36:44 pp440-55 & 536-57