Matthew Howard Kaufman (1942-2013) [1]

By: Villarreal, Lance  Keywords: Stem cells [2] Mouse development [3]

Matthew Kaufman was a professor of anatomy at the University of Edinburgh [4], in Edinburgh, UK, who specialized in mouse [5] anatomy, development, and embryology [6] during the late twentieth century. According to the The Herald, he was the first, alongside his colleague Martin Evans, to isolate and culture embryonic stem cells [7]. Researchers initially called those cells Evans-Kaufman cells. In 1992, Kaufman published The Atlas of Mouse Development, a book that included photographs of mice development and mice organs over time. Kaufman also wrote books about UK medical history, phrenology, or the study of craniums as an indicator of character or mental ability, and medical teaching in the eighteenth and nineteenth centuries. Kaufman’s anatomical records and experiments in mouse [5] development contributed to genetic engineering, embryology [6], and anatomy.

Kaufman was born on 29 September 1942 to an orthodox Jewish family in London. Kaufman’s parents expected him to become a scribe because he rewrote the Torah, the holy texts of the Jewish religion, in Hebrew on parchment. Kaufman graduated from Westminster City Grammar School, a secondary school, in City of Westminster, London, UK. Then, Kaufman studied medicine at the University of Edinburgh [4] in Edinburgh, Scotland. While studying medicine, Kaufman became the honorary librarian of the Royal Medical Society, headquartered in Edinburgh, Scotland. In 1967, Kaufman received his Bachelor of Medicine, Bachelor of Surgery at the University of Edinburgh [4]. After graduation, he specialized in obstetrics, a branch of medicine concerned with human pregnancy [8] and birth, at the Simpson Memorial Maternity Pavilion in Edinburgh, Scotland. In 1970, Kaufman moved to Cambridge, UK, for his PhD and studied parthenogenesis under the supervision of Colin Austin in the Marshall Laboratory at the Cambridge University [9] Department of Physiology in Cambridge, UK. Parthenogenesis is a form of non-sexual reproduction in which an egg [10] develops into an embryo without fertilization [11]. In 1973, Kaufman received his PhD in physiology.

In 1981, Kaufman and his colleague Martin Evans published an article titled ?Establishment in Culture of Pluripotential Cells from Mouse Embryos? which details how they isolated embryonic cells from mice and created cell lines that other researchers could use for future experiments. Cell lines are populations of cells taken from a multicellular organism that researchers isolate in laboratory conditions to allow the population to persist and grow indefinitely. To find pluripotent cells, or cells that have the potential to develop into multiple different cell types, Kaufman dissected developing mice blastocysts, the cellular structures that eventually develop into mice embryos. Kaufman and Evans named the pluripotent cells they found inside the mice blastocysts Evans-Kaufman cells.

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