Gregory Goodwin Pincus (1903-1967) [1]

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Gregory Goodwin Pincus [4], one of the original researchers responsible for the development of the first oral contraceptive pill [5], was born in Woodbine, New Jersey, on 19 April 1903 to Russian Jewish parents. In 1924 Pincus received his BS degree from Cornell University [6], and in 1927 he received his MS and PhD from Harvard University [7], having studied under William Ernest Castle [8] and William John Crozier [9]. After this, Pincus studied at Cambridge University [10] with Francis Hugh Adam Marshall and John Hammond, both reproductive biologists, and at the Kaiser Wilhelm Institute [11] with Richard Goldschmidt [12], a geneticist.

In 1931 Pincus was appointed assistant professor at Harvard University [7] but lost his tenure due to negative publicity related to his *in vitro* [13] fertilization [14] experiments with rabbits. In 1936 he published *The Eggs of Mammals* [15] and in 1944 founded the Worcester Foundation for Experimental Biology [16] with his colleague, Hudson Hoagland [17].

Pincus participated in many areas of endocrinology [18] and reproductive biology [19] but is best known for developing the birth control [20] pill. In 1951 he and Min Chueh Chang began studies on the effects of progesterone [21] and synthesized progestin [22] in rabbits. This research was promoted by Margaret Sanger, who had conceptualized the idea of a hormonal birth control [20] and approached Pincus about the possibility of creating this technology. In 1953 Katharine Dexter McCormick, a friend of Sanger's, pledged to fund the birth control [20] project to completion.

Through his experiments with rabbits and rats, Pincus found that ovulation [23] could be arrested through the administration of synthetic progesterone [21] (progestin [22]). When it was time to conduct clinical trials with humans [24], Pincus asked John Charles Rock [25], an obstetrician-gynecologist at Harvard University [7] Medical School to collaborate with him because of his prestigious position and his involvement in the Catholic Church. In the US, and particularly in Massachusetts, laws against birth control [20] posed barriers to this research. The first trials were conducted at the Free Hospital for Women [26] under the guise of fertility research and were later moved to Puerto Rico for large scale studies in collaboration with Celso-Ramón Garcia [27].

Pincus died 22 August 1967 in Boston, Massachusetts, from myeloid metaplasia, most likely caused by his work with chemicals. His work, in collaboration with others, is the basis for the creation of the hormonal birth control [20] pill.