KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

UNIA EUROPEJSKA
EUROPEJSKI
FUNDUSZ SPOŁECZNY

"PWP: Uniwersytet Jutra. Umiędzynarodowienie kształcenia w Uniwersytecie Gdańskim poprzez współpracę z Uniwersytetem Houston-Downtown"
Projekt współfinansowany ze środków Unii Europejskiej w ramach Europejskiego Funduszu Społecznego

Introduction to Human Genetics

Module 5 Human genomics

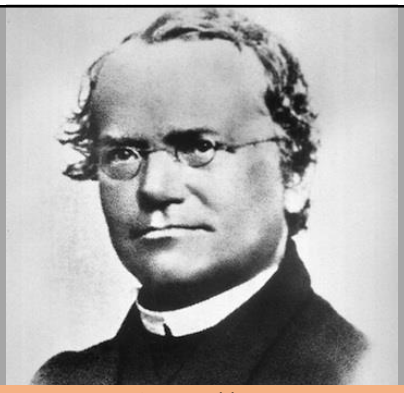
History of genomics

UNIWERSYTET GDAŃSKI

Dr Ewa Piotrowska
Department of Molecular Biology

KBM
KATEDRA BIOLOGII MOLEKULARNEJ

1865



Gregor Mendel
discovers laws of genetics

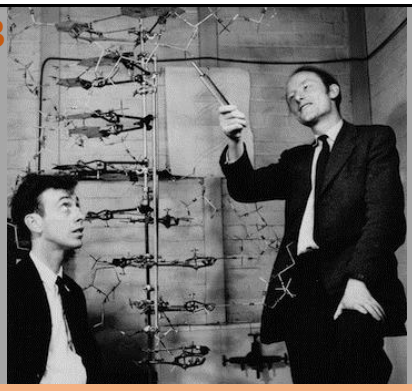
1869

Friedrich Miescher
identifies the presence of 'nuclein' (DNA)

1952

Rosalind Franklin
creates Photo 51, showing a distinctive pattern that indicates the helical shape of DNA

1953



James Watson and Francis Crick
discover the double helix structure of DNA

1968

Marshall Nirenberg, Har Gobind Khorana and Robert Holley
receive the Nobel Prize for their work in cracking the genetic code

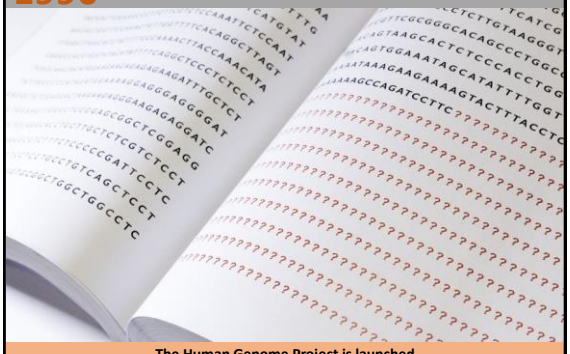
1977

Frederick Sanger
determines the sequence of the first DNA-based genome

1983

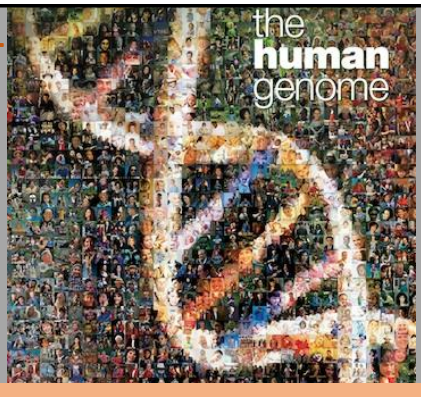
Kary Mullis
develops the polymerase chain reaction (PCR)

1990



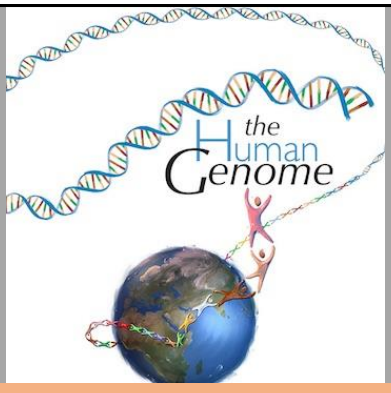
The Human Genome Project is launched
It aims to sequence all 3 billion letters of a human genome in 15 years

2001



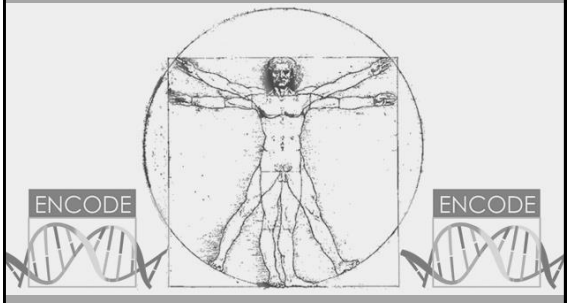
First draft of the human genome released

2003



Human Genome Project completion announced

2003



The **ENCODE** project
is launched and aims to identify and characterise all the genes in the human genome

2008

1,000 Genomes Project
is launched and aims to sequence the whole genomes of 2500 people

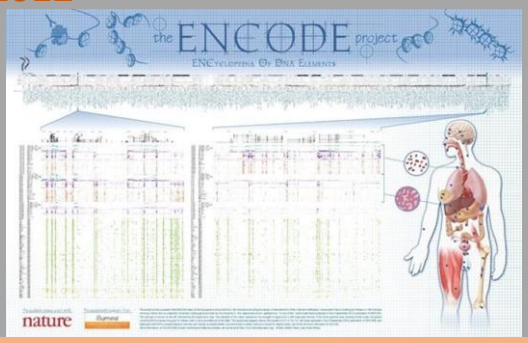
2010

Wellcome Trust launches **UK10K**
aiming to compare 10,000 human genomes to uncover disease-causing variants

2012

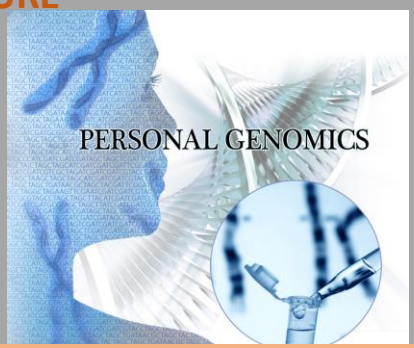
The UK Department of Health set up the **100,000 Genomes Project**
aiming to offer genomic medicine as part of routine care for patients

2012



ENCODE study publishes descriptions of the human genome active regions
THE HUMAN GENOME CONTAINS 20,687 PROTEIN-CODING GENES

FUTURE



PERSONAL GENOMICS is believed to become
one of the essential tools used to tailor an individual's medical care

Resources:

- https://unlockinglifescode.org/timeline
- http://www.yourgenome.org/stories/the-discovery-of-dna
- http://www.yourgenome.org/facts/timeline-history-of-genomics
- http://profiles.nlm.nih.gov/ps/retrieve/ResourceMetadata/JJBBCR
- http://qsouto-digitalteacher.blogspot.com/2013/07/rosalind-franklins-doodle-girls-in.html
- http://www.genomicsengland.co.uk/
- http://personalgenomics.org/index.php/Personal_Genomics_Free_Images