Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 3, Issue 1, Jan, 2022

HISTORY OF DNA DISCOVERY AND STAGES OF ITS DEVELOPMENT

Murodov Bakhtiyor Bahodirovich
Head of the Department of "Preliminary investigation and criminology" of Academy of Ministry of Internal Affairs of the Republic of Uzbekistan, Doctor of Law, Professor

Abduraximov Mukhtor Khodjiakbarovich
Deputy Head of the Legal Support Adminstration of the Organizational Department of the Ministry of Internal Affairs of the Republic of Uzbekistan

Annotation
This article presents the initial views of scientists such as Darwin and Mendel on genetics, the emergence and development of the eugenic movement based on the results of these studies, the emergence of negative trends in the eugenic movement, obtaining the first X-ray photo of DNA and discovering its structure, sequencing (reading) the complete sequence of the "human genome" and its impact on human life.

Basic concepts: human genome, biological material, information about the genome, sequencing, state registration of the genome.

Introduction

One of the discoveries that has made a huge contribution to human development is undoubtedly the discovery by scientists of information about the human genome. If we take a look at the history of this discovery, we can see that many scientists have dedicated their lives to research in this area.
In particular, the British scientist Charles Darwin's observations and research during his scientific expedition, which began in 1831, concluded that only those that are best adapted to the environment can survive, reproduce, and pass on their genetic characteristics from generation to generation. described in detail.
In 1866, Gregory Mendel, who conducted scientific research on how the genome is passed down from generation to generation, was the first to shed light on how such information is passed down from generation to generation. G. Mendel stated that when yellow pea plant and green pea plant are mixed together, their offspring will always be yellow, however, in the next generation of plants, green pea will return in a 3: 1 ratio, using the terms “recessive” and “dominant” to describe this condition. used.
Hence, in the above example, the green trait was recessive and the yellow trait was dominant, i.e., dominant. In his article published in 1866, G. Mendel predicted the movement of “invisible” factors in providing visible features. The "invisible" traits he identified are now referred to in science as "genes." Mendel's conclusions about hereditary traits have conditionally served as the basis for the next stage of research in this field.

Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 3, Issue 1, Jan, 2022

By the 1900s, Francis Dalton had studied the changes and inherited traits of human genetics in his research, and in 1883 he was the first to introduce the concept of eugenics to science, which was recognized as the science of heredity. Describing the results of his research in his book Hereditary genius (Hereditary Genius-Hereditary genius - the author), F. Dalton concluded that the chances of a smart man giving birth to a smart son are greater than the chances of giving birth to a smart boy than an ordinary man. However, in addition to the positive aspects of the eugenics movement, the negative aspects also began to emerge due to its ideas aimed at controlling human reproduction. He began to create his own scientific "racism" by advancing the theory that only individuals with the best genes could reproduce, and the rest should not. They wanted to convince people that some members of one race had an advantage over others in terms of intelligence and purity of race.

In our opinion, the assessment of people's (intellectual) thinking ability, potential and their propensity to commit crimes in this way is incorrect and unscientific. Regardless of one's race, one's level of thinking depends on one's lifelong efforts, reading, seeking knowledge, developing one's mental abilities, and working tirelessly. The fact that a person, without any scientifically proven grounds, mistakenly considers himself a member of a "superior race" and does not work or has harmful habits does not give him an advantage over members of other races.

As a result of the above conflicting scientific views of the Eugenic movement, this movement began to slowly fade from the middle of the first quarter of the twentieth century. This was due to the continuation of scientific research and the emergence of the trend of behaviorism. Behaviorism believes that how people and animals behave depends on their reflexes, their reaction to the events around them, their individual history, including the system of support and punishment, the motivational status of the individual and motivational control. After the formation of the first views on the nature of DNA, a number of scientists began to try to study its composition in more depth. In particular, in 1944, Erwin Chargaff conducted a study based on the conclusion that DNA was the substance responsible for transmission from generation to generation, and in 1950 he presented his two main conclusions on the chemistry of nucleic acids to the scientific community. His first conclusion was that the number of guanine units in any double-stranded DNA was equal to the number of cytosine units, the number of adenine units was equal to the number of thymine units, and the second conclusion was that the DNA composition of each species was different. These two conclusions are now recognized by scholars as the "Chargaff rules." According to the American scientist Jonathan Watson and the British Frank Francis Cavendish plane uravanisha, Dr. Ura-Copan zanullib, R. Franklinning rays of photosynthesis foidalangan bronchi burlib DNA formation of Jining street it was attached to the surface of ailanuvchi ikkita spiraldan frazatligini anianlar and 1953 yilda study natijalini” Nature" journalists announced kilganlar.

Listening to the trip DNA-hooking cruzilish the format of the opening of the two-kilometer-fork scientist (genetic code nucleotidlar ketma-amino acidlar (ouxillar) - ketli-Gamil (hamilarma-ketlig-oilanuvchi- ketalar) Anato-Anato-cowborangiga from-khorasangiga from-for Horas-khorasangiga (genetics).

Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 3, Issue 1, Jan, 2022

1957 yilda de witt Stetenning laboratory olib borgan Marshall Nirenberg researcher Heinrich Mattei bilan Dnning code, James "hiet code" Research Institute to discover these goals egozining research nuclein acidic and okilskilarni singilishga bagizan Hamda 1961 yilda M. Nyrenberg and G. Mattai tomiltkazilgan taghibalinasida uracilning repeat janjiri bitta repeat amino acid, phenylalindane consisting of Okil zangirini derived Cyrillicini experiences anticlangane. Buss's "life code" Research Institute may be Delaware resolution Bergan.

Ushbu oproslar natijacida olingan conclusion based on DNA from Ustida Yangi researcher Amlar Amirila Bashlangan. 1970 yillarning boslaiga kelib molecular biologist geneticist code decoding kulib, oxides.

In particular, the British scientist A. on the possibility of identification of a person using information on the human genome. Jeffris proposed using DNA in his article entitled “individual-spesefic fingerprints of human DNA “. The A. Djeffris continue his research, partner P. In his article, published in partnership with Gill, he gave reason to the possibility of identification of an individual through the analysis of human DNA chromosomes and put forward the idea of forming a DNA data base, which was one of the first.

In 1988 year, the US National Research Council proposed to draw up a map of the “human genome”. The tasks of the” Human Genome " Project are to create a map of the human genome, to fully identify the existing 3 billion 200 million Capitals, to sequenirovanie the genome of other organisms, to develop technologies that analyze DNA, and to study the legal, social and moral consequences of the results of Human Genome Research.

As a result of the complete discovery of the human genome, studies in this direction have gone further. In particular, in 2013, the company DNA Worldwide conducted a study together with its partner laboratory Eurofins Forensic, which proved that there would be a difference in the genomes of single-ovary twins. Before that, there was a hypothesis that there would be no difference in the DNA of single-ovary twins.

Recently, studies are being conducted in the direction of epigenetics. This direction is aimed at the research of biological markers that influence the state of deviation from the laws of DNA sequence (order). Studies have proven that there are many such molecular genes that affect the activity of genes, the experience and way of life of a person can directly affect the functioning of these molecular genes and thereby change the expression of genes. Each of the above-mentioned studies was of great importance in its time and ultimately served as the stages of activities aimed at obtaining genome information.

Each scientist managed to solve problems at different stages of a general-purpose work in the period in which he lived, through his own research. In the light of the above, it is wrong in my opinion to associate the study of the human genome with the name of a particular scientist, the study of the human genome will be exactly correct if we say that the research carried out by a group of scientists in different periods.

ISSN: 2776-1010 Volume 3, Issue 1, Jan, 2022

Literature

1. Чарльз Дарвин: джентльмен-натуралист. Биографический очерк Джона ван Вайе Электрон манба: http://darwin-online.org.uk/darwin.html
2. В.И.Иванов, Н.В.Барышникова, Дж.С.Билева. Генетика / Под ред. В. И.Иванова. - М.: Академкнига, 2007. - 638 с.
3. Самый знаменитый горох в мире: история Грегора Менделя, открывшего законы наследственности. Электрон манба: https://mel.fm/zhizn/istorii/945816-samy-znamenity-gorokh-v-mire-istoriya-gregora-mendelya-otkryvshego-zakony-nasledstvennosti
4. Саркисянц М. Английский корни немецкого фавшизма. От Британской к австробаварской “расе господ” Спб. Академический проект, 2003 С.400
5. Дж.Уотсон, Э.Берри, К.Дэвис, “ДНК. История генетической революции”, Спб, “Питер”, 2017 С.26
6. Бихевиоризм. Электрон манба: https://ru.wikipedia.org/wiki/Бихевиоризм
7. Chargaff, E., R. Lipshitz, C. Green and M. E. Hodes The composition of the deoxyribonucleic acid of salmon sperm Journal of Biological Chemistry (1951) Vol. 192. p. 223-230.
8. Франклин Розалинд. https://ru.wikipedia.org/wiki/Франклин,_Розалинд
9. Nirenberg M., The Genetic Code in Les Prix Nobel in 1968, Nobel Foundation, Stockholm, P.A. Norstedt and So ner, pp. 221—241 (1969)
10. Sanger F, Air GM, Barrell BG, Brown NL, Coulson AR, Fiddes CA, Hutchison CA, Slocombe PM, Smith M., Nucleotide sequence of bacteriophage phi X174 DNA, Nature. 1977 Feb 24;265(5596):687-95
11. Jeffreys A.J., Wilson V., Thein S.L. Individual-specific “fingerprints” of human DNA. Nature, 1985, vol.316, p. 76-79
12. Gill P., Jeffreys A.J., Werrett D.J. Forensic application of DNA “Fingerprints”. Nature, 1985, vol.318, p. 577-579
13. Проект «Геном человека» - Википедия. Электрон манба: https://ru.wikipedia.org/wiki/Проект_«Геном человека»
14. Новое открытие - однояйцевые близнецы не имеют идентичной ДНК. Электрон манба: https://www.dna-worldwide.com/blog/194/new-discovery-identical-twins-dont-have-identical-dna