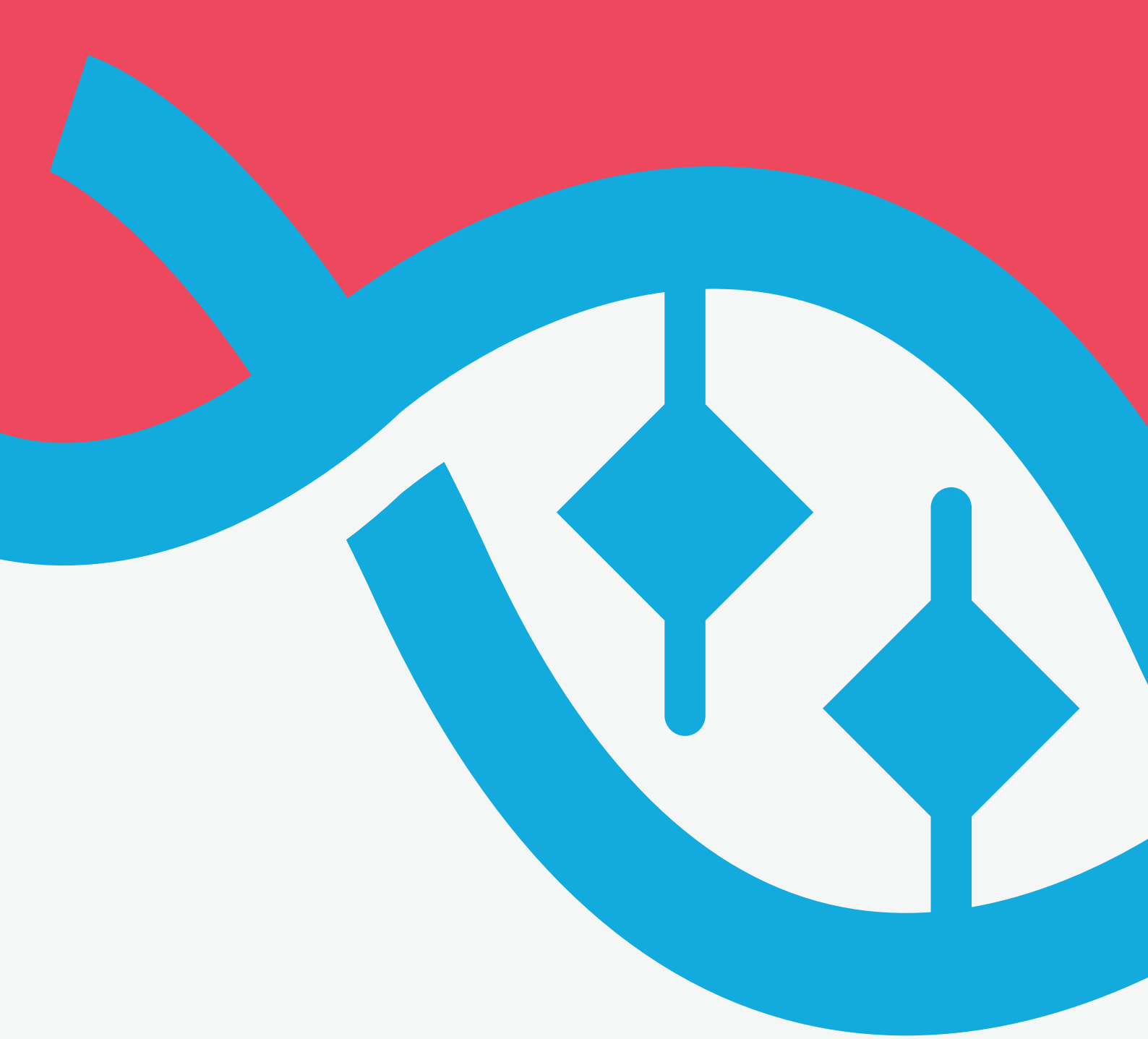

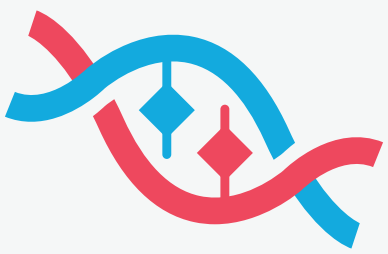

TimiDNA

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ABSTRACT

What does your DNA say about you and your health? TimiDNA provides genetic services directly to you while securely storing your genomics on the blockchain. This is the first people-powered platform where you share health data, advance science and take part in the value created. You maintain control of your health data while also monetizing your DNA genomics, all on the blockchain.

DNA sequencing has been prohibitively expensive in the past and the technological evolution has taken over 15 years to obtain its current state. Furthermore, HIPAA regulation requirements have prohibited a cohesive relationship between the patient and their health data. Regulation requires patient health data to be de-identified and private unless authority is granted by the patient. Blockchain technology has brought a technological revolution to healthcare data. Blockchain provides an optimized environment where health data is structured and secured, leading to better data utility and improved patient outcome. Improved data integrity, reduced transaction costs, decentralization and disintermediation of trust, allows patients to take control of their health data.

The TimiDNA Platform allows users to store their full genomic sequences and enable users to take ownership of their DNA data. Clinical Settings, Laboratories, and Researchers will be able to store and propagate DNA analytics using artificial intelligence, deep learning and blockchain technology. More importantly, the platform provides a secure environment for better patient health outcomes, DNA research, and medical breakthroughs in the human genome space.

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DEOXYRIBONUCLEIC ACID (DNA)

Deoxyribonucleic acid (DNA), the carrier of genetic information, is a self-replicating material found in all living organisms. The distinctive characteristics or qualities of an individual are encoded in the chromosomes an individual carries in their DNA. The chromosomes contain genetic instructions that regulate the development, functions, and reproduction cycles. Human DNA molecules contain 23 pairs of chromosomes which contain the sequence codes for genes that generate and store protein.

DNA molecules contain two DNA polynucleotides strands that are composed of nucleotides, each nucleotide contains one of four nitrogen-containing nucleobases: cytosine [C], guanine [G], adenine [A], or thymine [T]. These nucleotides join together to one another in a chain using covalent bonds, attaching between a sugar and a phosphate to form the backbone of the DNA double helix structure.

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DNA SEQUENCING VALUE

The process of DNA sequencing obtains the order of the four nitrogen-containing nucleobases, within the DNA molecule. The first human DNA genome sequencing project cost $2.7 billion and took almost 15 years to complete. Current technology has enabled users to sequence and analyze their DNA genome for less than *$1,000*.

Obtaining a personal DNA genome sequence can bring to light potential genetic risks and conditions. This modern technology serves as a tool for preventive medicine and can save lives if used in conjunction with a physicians medical recommendations.

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Personalized medicine is a type of medical care in which treatment is customized for an individual patient base on the individual patient's specific characteristics including age, gender, height, weight, environment, genetics etc. In personalized medicine, diagnostic testing is often employed for selecting appropriate and optimal therapies based on the context of a patient's genetic content or other molecular or cellular analysis. Only until recently has the advances in technology allowed for this type of medicine to be put into practice due to the previous difficulty and expenses involved in this type of testing.

Personalized genetic based medicine will shift modern medicine as we know it from a reactive medicine to a proactive and predictive medicine. Medical professionals will be able to use predictive tools to design personal health plans for each patient reducing risk and preventing disease. And if the disease were to appear they would be ready with top of the line treatment personalized for this patient.

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HISTORY WITH GENOMIC ANALYTICS

Personalized medicine has now become a real potential option for everyone. Human genome analytics has propelled the medical industry to identify preventable genetic conditions and diseases. Patients are able to identify and make life changing decisions based on their genomic results. Awareness about ancestry examinations has exploded in the last 2 years. Consumers now understand the advantages to understanding one's roots.

- Identifying personal nutritional requirements lead to an improved health outcome with a lifestyle built for longevity.
- Advancements in genetic testing of the human saliva, blood or stool and tests from hospitals or health care centers, will lead to better tools that could decode forensic evidence and therefore facilitate finding the culprit.
- Testing for paternity with comprehensive reports.
- Ancestry Identification

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Genetic testing used to be done by a healthcare professional who would collect your DNA sample and send the data to be analyzed by a lab. Later the patient would meet with a genetic counselor or physician and talk about the results increasing cost, time, and effort for these type of test. Modern medicine, however, has allowed for changes in the process of genetic testing. Patients are now able to purchase a sample collection kit and send the sample (usually saliva or buccal swab) straight to the genetic service provider via their local courier service and receive their results electronically. Direct to consumer genetic testing regulations can vary from country to country and its expansion is still evolving.

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