

WHITEPAPER 1.0

GENE BLOCKCHAIN PLATFORM

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1 Abstract

The 21st century is the century of life sciences. Human cognition has entered the deepest secret of gene sequence. The 23 pairs of chromosomes, made of 3 billion base pairs, created our colorful and brilliant human civilization. These gene sequences encode us from birth to death, and all the varieties among us. For instance, in health care area, we have begun to move towards personalized, precise medicine. It also shows that human beings truly realize that the future will be personalized civilization based on the gene difference among all human beings.

However, the current gene data is highly fragmented, lack of uniform standards, and unable to be applied to use. Our team aims to build a standardized, digital global gene blockchain platform. On this platform, ordinary people can correctly understand, use and enjoy the benefit and fundamental changes brought by the application of genetic data.

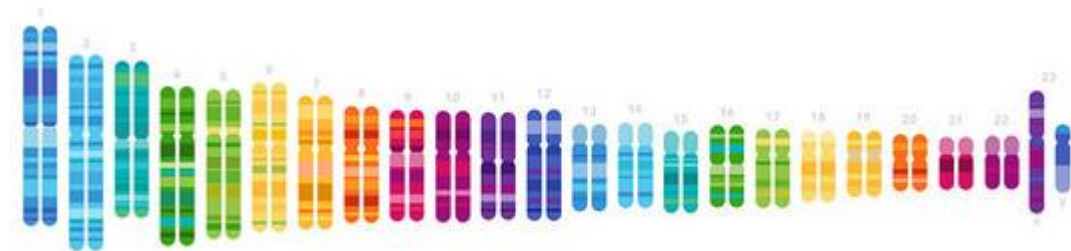
New blockchain technology / Distributed Ledger Technology(DLT) offers an ideal solution for our gene blockchain platform. Since blockchain holds an immutable ledger and assured contracts, it can easily accommodate the recording and storing of life cycle events of all gene blockchain based product, usage of gene data, verify patient identification, assure payments, and more. Gene Blockchain seeks to create a crypto-token built on smart contracts on blockchain specifically for the worldwide gene blockchain platform. This can solve the largest problem of gene data, that is, how to standardize gene information and price. The Gene Block Chain is the first community in the world dedicated to leveraging smart contracts on blockchain to create and facilitate the standardization of big gene data and pricing correctly. In this platform, genetic data is no longer government or institutional privilege. It will help ordinary people to correctly understand the importance of genetic data and trade, receive medical treatment, enjoy entertainment, make friends and etc. on this personalized gene blockchain platform.

2 Background Introduction

2.1 Background of Human Genome Project

The Human Genome Project, which is jointly organized by USA, England, German, France China and Japan's scientists, is the "Human Genome Project", with the Manhattan Atomic Program and the Apollo Moon Plan, known as the "Three Plan" in the history of natural sciences. The impact of "HGP" will be far more than the other two programs. Commonly known as DNA, the human genome contains approximately three billion chemical base pairs., distributed in the nucleus of 23 pairs of chromosomes. The core heart of "Human Genome Project" is the construction of DNA sequence diagram, that is analysis the order of base pairs of human genomic DNA molecules and drawn into a sequence diagram. 3 billion is an astronomical figure, this plan can also be said to read the book of life. All top scientists from the United States, Britain, Japan, China, Germany and France participate in the program.

The ultimate goal of this program is to determine the human genome of 3 billion basic chemical composition (called base pairs or nucleotides), and then reveal the secret behind the tens of thousands of gene which are related to human from birth to death.



The Importance of Human Genome Project and Its Impact on Bio - economy and Human Life

The Human Genome Project, together with the Manhattan Atomic Bomb Program and the Apollo Moon Plan, is known as the three major scientific projects of the twentieth century. During the turn of the century, the Human Genome Project, which is broader and more influential, will be the greatest scientific project and run through the 21st century. The Human Genome Project is a plan for human beings to recognize itself, bringing mankind into a new era. From the perspective of life sciences, this era is based on DNA sequences, bioinformatics-led bioscience and biotechnology in a new era.

The Human Genome Project aims to solve the problem of human health and to promote the development of the bioinformatics industry. The human genome project interprets the human genome bible, which has led to the rapid development of medical science, medicine and health industry, brought the fundamental change of life sciences and biology industry, led to the sequencing of technological innovation, accelerated the scientific discovery and industrial transformation, achieve the breakthrough among a large data-oriented science industry, forming a super "Moore's Law."

For the completion of the human genome project, its impact to the development of the biological economy is enormous. For example, in the United States, since the start of the human genome project, the US federal government's investment on the human genome project-related industries is equivalent to each US Citizens invested \$ 2 a year, however, it generates about \$ 1 trillion in economic benefits. If only the federal government's total investment in HGP was taken into account, HGP had a return on investment of 178: 1; if subsequent investments were taken into account, the return on investment is 65: 1, that is, each investment of \$ 1 on the human genome project and related genomics research from the federal government can bring \$ 65 economic benefits, which will enhance public health, create jobs and promote the fundamental change of health care industry.

The human genome project reveals the framework of the human genome, which is far more than the gene itself, and has great potential in the fields of medicine, agriculture, industry, environment, and energy, triggering new technological revolutions and possible to fundamentally solve the world population, food, environment, energy and other major problems affecting the survival and development of mankind. In the medical field, a huge breakthrough in innovation has been foreseen. Based on the breakthrough of core technologies such as genetic engineering, cell engineering and biochip, the widespread application of emerging biotechnology in the medical field not only greatly transforms the traditional pharmaceutical industry, but also makes the medical technology from disease treatment to gene diagnosis and prevention, opening the future of personalized medical care, precision medical door.

Following the Human Genome Project, human genetic research has begun to develop in the direction of genetic testing of diseases associated with human reproductive health, personalized cancer treatment, pathogenic microorganisms, hereditary diseases, and blood diseases. In the future, medical technology will move from the disease treatment to the gene diagnosis, disease prevention, personalized medical and precision medical care. Human beings will provide more effective and targeted treatment through the use of genetic testing techniques to predict the risk of potential diseases through personalized diagnosis, to prevent the occurrence of a disease.

We will rely on the world's leading genomics technologies and help tens of millions of families away from hereditary birth defects, early detection and diagnosis of tumors and can be panoramic, regular monitoring of personal health dynamics. We hope everyone is able to know their own genes and can control of their own health. In the first phase, our research will mainly focus on hereditary birth defects, cancer, cardiovascular and cerebrovascular diseases, precision medical and so on.

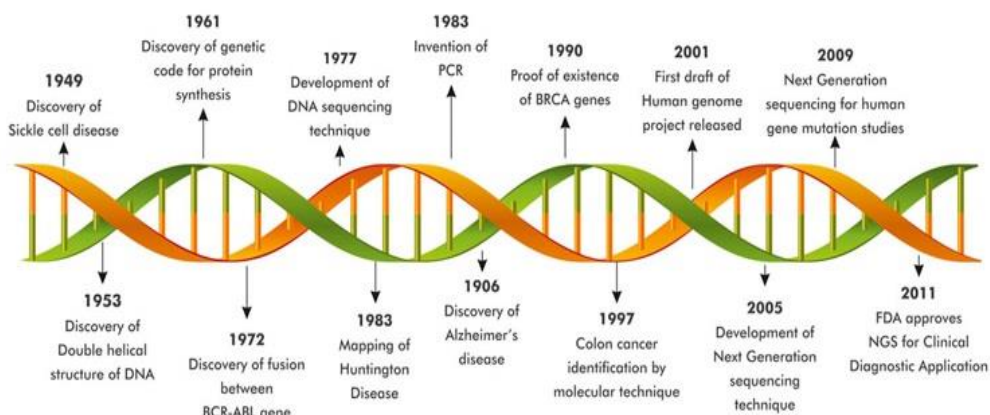
2.2 The Development of Gene Sequencing Technologies

With the advancement of the human genome project, gene sequencing technology is also rapid development. Gene sequencing is no longer a mystery technology. It is gradually walk into the lives of civilians. In the latest decades, several giant sequencing companies grow up, such as Roche, Illumina and ABI.



At the same time, the cost of gene sequencing is also rapidly declining, breaking the Moore's Law, which is the basis of our project operation. According to NIH statistics, in 2001, the whole genome sequencing needed to cost up to 100 million US dollars; in 2011, after the successful launch of the second generation of sequencing technology, the whole genome sequencing price has dropped to 10,000 US dollars; 2014, with the launch of Illumina X Ten, the price once again largely reduced to 1 thousand dollars. In January 2017, at the JP Morgan Health Conference, Illumina NovaSeq 6000 stand out in the biotech gene sequencing market. Illumina's president said: "The launch of NovaSeq is one of the most important turning points in Illumina's innovation history. As we released HiSeq X for the first time in 2014, the instrument reduced the cost of each genome to \$ 1,000 through the HiSeq® architecture, and we believe that the system developed today by the NovaSeq architecture will one day reduce the price of a single genome to \$ 100. "

Figure 1 The development of genome sequencing



3 Our Vision

Based on current blockchain technology, we are building human genome blockchain, aiming to organize a new platform for exploration, application, contribution and equal sharing. It will bring fortune to every participates. genetic data is no longer government or institutional privilege. It will

help ordinary people to correctly understand the importance of genetic data and enjoy the benefit brought from big gene data.

The genetic background data is the gene mark since our birth, and the 3 billion base pairs encode us from birth to death. At the same time, our living habits, the choice of spouse and the choice of work are all related to our inner gene sequences. To deepen the understanding of the human gene sequence will help us to better understand ourselves, to avoid trouble.

The Gene Blockchain Platform committed to be:

1. We dedicate to deepen the understanding of gene sequence: establish the most abundant and standardized gene functional databases. It will lay a foundation for all of our activities, such as health plan, living activities and social network, in our platform.
2. We support the gene blockchain community. We will try to use as much GeneBTC tokens and as little fiat currencies as possible while implementing our ideas.
3. We are standardizing and unifying a fragmented industry. We will build blockchain smart contract solutions for many of the industry's weaknesses. The industry needs help with lab testing, supply chain, ID verification, compliance, etc. All these respond well to smart contracts.
4. We seek to create an open and equal platform for all participates. More participates will bring more ideas and value.
5. We are transparent. Funds will be escrowed and our books will be audited by reputable companies, such as Deloitte, Grant Thornton, or other well-recognized, international accounting firms experienced with the nascent blockchain industry.
6. We are responsible. We limit our own benefits, putting the cause first. This is our passion. We are committed to the legalization efforts and the community.
7. We give our members a voice. Pitch your ideas, help others, get funded, support other ideas, and decide our future through a voting system.
8. We are groundbreaking. We will take advantage of the media's interest in the hot topics of gene applications. We will become the first and largest platform for standardized genetic data and its application.

Gene blockchain platform stand in the edge of the new century. Gene Blockchain's passion, committed community, strong technology, and experienced leadership make this cryptocurrency the natural choice for the genome industry.

4 Business model

We started Gene Blockchain to resolve many issues currently faced by the gene data industry. Blockchain-built smart contract technology is ideally suited to organize, systematize, and bring verification and stability to a traditionally unchecked industry. For example, genomic data is now highly fragmented and non-standardized. Pricing of genomic data is also a key problem. Now only the government and large companies have the gene data, ordinary people are lack of understanding, and completely deprived of ownership and use rights of genome data.

Gene blockchain will use blockchain smart contracts to:

- Create an immutable ledger for all industry related data via GeneChain
- Offer payment for industry related services and supplies through GeneBTC
- Establish advanced labs for human genome data analysis via GeneLab
- Organize and unite global platform for health, entertainment, social network and etc. through GeneNetwork

The Gene Blockchain model starts with a crypto-token and blockchain technology. We will create an open, equal, shared gene community (GeneNetwork). In this community, members can explore the meaning of genetic data, share genetic data resources, develop personalized products, create disease treatment options or health programs. This will solve the problem of gene data standardization, large data analysis, how to apply, how to promote and so on.

On the GeneNetwork, participants can also quickly find personalized products of various types. Such as personalized disease treatment products, personalized health management methods, suitable entertainment experience, more matching dating patterns and so on.

Ultimately, all products and services are personalized on GeneNetwork.

4.1 Gene Blockchain Smart Contracts

Using Blockchain Smart Contracts to Innovate the Gene Data Industry.

Gene Blockchain takes advantage of the digital and verifiable nature of blockchain to solve the fragmentation, un-standardization and non-correct pricing of the genetic data industry. Blockchain smart contracts are ideal for recording and facilitating the exchange of value, goods, services, and private data. Putting genome data and transactions on blockchain smart contracts will also increase the speed of service and save hundreds of thousands in reduced paperwork.

The Gene Blockchain smart contracts can immediately serve a number of businesses within the genome data industry. With legal changes, increased community regulations and acceptance, other business opportunities may emerge. Blockchain smart contracts can instantly and accurately register and record these events:

- Blockchain based smart contracts provide accountability in a way no other technology can offer.
- Provides an immutable ledger that offers permanent verification of every past transaction, so it builds trust
- Stores all product lifecycle events forever in an easy-to-retrieve system
- Lets multiple apps simultaneously interact with any piece of information stored in blockchain
- Offers anonymous patient identification
- Facilitates peer-to-peer transactions across the globe

The combination of decentralized encryption, anonymity, immutability, and global scale turns Gene Blockchain into the ultimate online community for the legalization of genome data across borders.

Gene Blockchain is built with smart contracts on the Ethereum blockchain. It is an advanced, open

and completely decentralized application platform. Ethereum uses all the strengths of Bitcoin's original technology. Blockchain was first established as a digital currency for use in financial systems, but the second generation blockchain and its associated smart contract technology can be used for so much more.

Ethereum builds on Bitcoin to offer contracts and other kinds of verified transactions. Gene Blockchain adds another layer to Ethereum, letting it focus on solving problems unique to genome data growers, dispensaries, labs, doctors, and customers. Gene Blockchain builds on the strength of a well-established system to offer applications, perform financial services, create a new cryptocurrency, and form a messaging system.

As such, Gene Blockchain provides not only the groundbreaking Ethereum based crypto-currency called Gene BTC (GBC) but also a powerful, modular toolset to build applications that can track shipments, verify potency, identify medical patients and their prescriptions, and a host of applications not yet imagined. Ethereum gives users complete freedom to create their own applications on the Gene Blockchain platform.

4.2 Gene BTC

GeneBTC (GBC) can create a global ecosystem where businesses and consumers can quickly and easily verifiably transfer funds — business to business, business to consumer, and/or consumer to consumer. A cryptocurrency correctly implemented is the logical solution to an ongoing issue with an unregulated marketplace. It readily solves the most major impediment to standardization and pricing of genome data, which lay a foundation to the industry.

Gene Blockchain Distribution and Supply

Gene Blockchain will be the digital token that powers and incentivizes the Gene Blockchain user community and content platform. This digital token can be exchanged for fiat currency (dollars, euros, yen), in jurisdictions where such exchange is legal, or other cryptocurrency (e.g., Bitcoin, Ether) on various cryptocurrency exchanges after the initial ICO. The projected value is expected to be about USD \$1.00 per GBC (fiat currency price throughout this White Paper is provided for illustrative purposes only; no fiat currency will be accepted during the GBC token crowdsale, only cryptocurrencies such as BTC, ETH, LTC IOTA and others).

Name: GeneBTC

Ticker: GBC

Based on: Ethereum

Technical data:

- A total of 200,000,000 GBC will be generated. There will be no further production of tokens so, over time, the tokens in circulation shall reduce in number and increase in demand.
- Desktop wallets for Mac OS, Windows, and Linux keep cryptocurrency safe while allowing for easy transfers, balance viewing, and simple use.
- Tokens are created with an ERC20 token smart contract. The integrity of the system is built on the self-interest of token owners. Owners of more tokens may have more say in the Gene Blockchain community and the direction Gene Blockchain takes.

- Fast network speeds with transactions settling in a minute or so.
- Ethereum backed voting feature: Gene Blockchain uses blockchain-based voting for a true democracy.
- Expanded notary and/or oracle service is possible on Ethereum blockchain with GeneBTC.
- Multi-signature accounts can be implemented in just two clicks.
- Fixed fees make it easy to know your costs. You don't need to calculate how much each transaction will cost.
- Best Application Program Interface (API) and smart contract documentation available on blockchain.
- User-friendly Graphic User Interface (GUI) makes it easy to go from idea to implementation without a lot of tech skills or developers needed.

Token distribution is an important part of a token crowdsale. The distributed value and frequency of token production influence token price. 200,000,000 total tokens will be generated. These tokens will be introduced in two ways. Token crowdsale will be conducted as follows.

- 100,000,000 tokens for sale valued at \$1.00 USD each at stage 1
- 50,000,000 tokens for sale at stage 2 - no sooner than 2022, at market price (not the initial \$1 of the first crowdsale)
- 40,000,000 tokens allotted for Gene Blockchain controlled reserve to maintain price support of the Gene Blockchain tokens. Tokens can be bought or sold to keep the tokens circulation stable
- 10,000,000 tokens community-controlled reserve to be used for the best startup ideas as voted on by the community

Gene Blockchain is committed to a fully transparent process even beyond the open source coding. Here are other ways we will work for transparency and community control.

- Engage one of the "Big Four" accounting companies for annual third-party audits.
- Founders and team members who own Gene Blockchain will be prohibited from liquidating that Gene Blockchain at a rate of more than 20% of their position within the first calendar year. This is to prevent dumping and to keep a stable token price. It keeps their interests aligned with the Gene Blockchain community.
- Reserved token crowdsale funds will be inaccessible for any other purpose than future token crowdsale events. The Gene Blockchain price of the second and third token crowdsale events will be determined based on, but not limited to, the Gene Blockchain exchange price prior to the crowdsale event in question.
- Community approval will be used via smart contract voting. The voting may approve coin reserve unlocking, club membership policy changes, and other changes that affect the Gene Blockchain community.
- A minimal threshold amount will be required for a completed token crowdsale. The token offering will have a series of cap levels. If the token crowdsale does not reach its minimum cap of 10 million, any funds received during the token crowdsale will be returned to the original initiating wallets automatically. Assuming the minimum threshold is exceeded, but the maximum cap of 100 million tokens is not met, any unsold tokens will be burned. Any funds received after having reached the maximum cap of 100 million tokens will be

automatically returned to the senders' wallet.

- Third-party recognized escrow agent will ensure tokens deposited for a token crowdsale are kept secure until the token crowdsale is finalized and the tokens generated.
- Each token crowdsale will be designed to reduce the number of large buyers (whales) who may want to dump tokens. Instead, the token crowdsale will favor smaller investors who are committed to the genome data cause and plan on participating in the community.

How to Get Gene BTC

The initial token crowdsale will take place between September 18, 2017 and October 17, 2017, and can be accessed via our website: <http://www.geneblockchain.org>. Please register for the token crowdsale so you are notified of the opening of the event. Recent token crowdsales (also commonly referred to as ICOs) have sold out in minutes. Be sure to take advantage of notification and prior registration so you do not miss out.

After the initial token crowdsale, opening a coin account with Gene Blockchain will be easy and free using existing Ethereum wallets. Because Gene Blockchain is truly decentralized, it uses peer-to-peer technology to operate with no central authority. The network collectively carries out the issuing of Gene BTC. It works everywhere, anytime, so business can be transacted 24/7 in any part of the world.

Post-crowdsale, interested people will also be able to purchase and sell Gene Blockchain on exchanges, subject to applicable regulations in their country of residence.

All transactions will be secured with state-of-the art cryptography, and the blockchain integrity will be protected by CPU-efficient, ASIC-resistant proof of stake. This unique model will allow us to speed transactions and satisfy banking needs for gene data businesses. In particular, it will offer genome data businesses and consumers a legal alternative to the current regulatory restrictions.

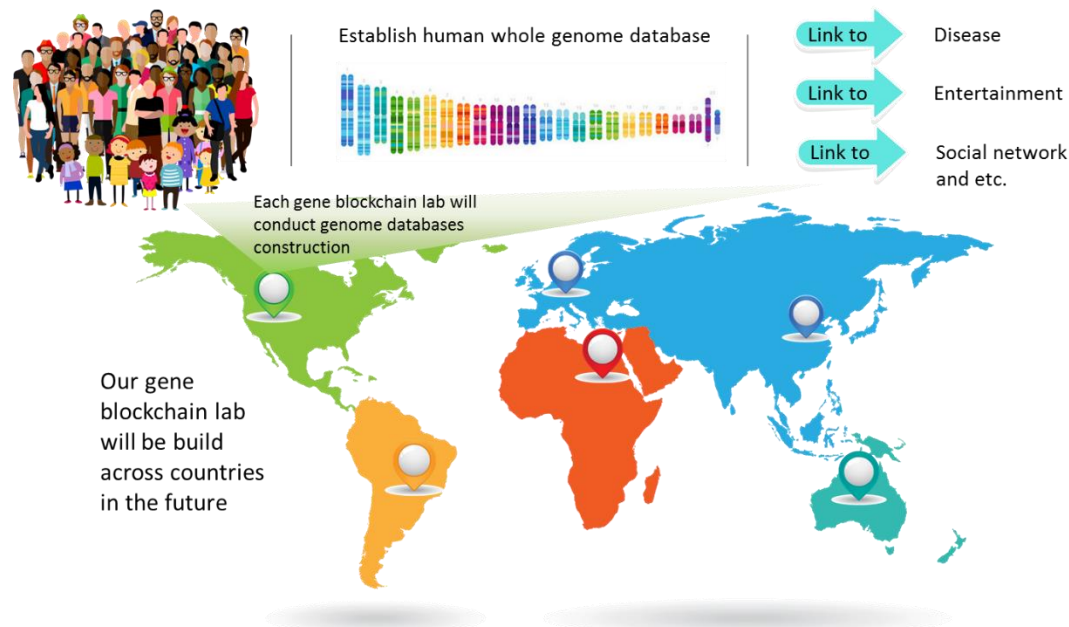
Gene Blockchain is committed to the cryptocurrency community. We want to keep the value of Gene Blockchain strong and growing. We also do not want our token crowdsale to affect the Bitcoin price. To that end, we will be very careful as we convert the token crowdsale proceedings to fiat currency to pay for expenses. We will stage the conversion of the token crowdsale proceeds over time and through multiple cryptocurrencies and exchanges. This will dilute any impact that volume might make on either Gene Blockchain or other cryptocurrencies.

4.3 GeneLab

We are creating high-tech advanced gene sequencing analysis laboratories. Part of the work of these labs are constant accumulation and refinement of the human genome database. Based on the genome data from the users, volunteers, paid anonymous and etc., we aim to establish the world's largest human genome database. The sample distribution will be in accordance with the proportion of population coverage of the global region. These will be our core data. This part of the work will continue to improve in the next five years, and ultimately reach 10 million copies of human whole genome data. The second part of the work is to explore these human genome data

in depth. Our knowledge on genomic data is very limited. The genetic information carried by each person, the disease, habit, hobby, height, looks, etc. are closely related. We will be in the laboratory to gradually establish and improve mining work on these.

Figure 2 Business model of GeneLab



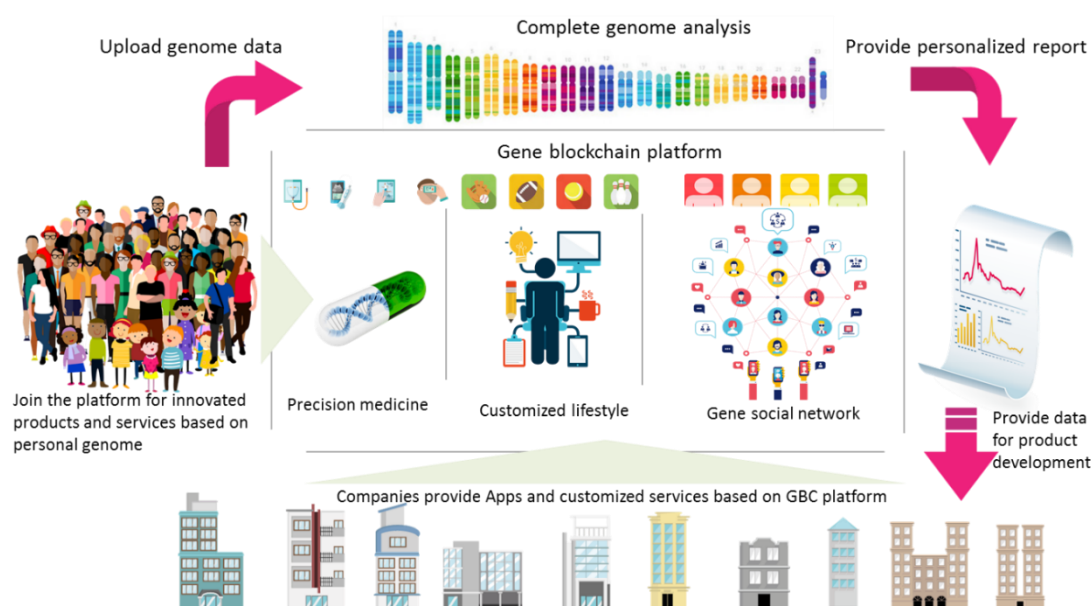
4.4 GeneNetwork

We will build a gene blockchain platform based on the human genome database. As a gene coin owner, by uploading their own genomic data, you can get a detailed personalized report, and are able to real-time access to the latest personalized products and services. At the same time, various companies based on anonymous genomic data analysis, are able to develop personalized product solutions and services. Specifically, for example:

1. To achieve real precision medicine. In the medical field, pharmaceutical companies can provide personalized disease treatment drugs and products according to the characteristics of genetic information, and users in our platform can obtain real-time information about their own drugs or products. On the one hand can prevent the occurrence of some potential diseases, and for the existing disease can get the most effective treatment;
2. In the field of health, users can choose their own healthiest way of life according to their genetic background. And these personalized health programs are also developed by a variety of health companies based on genetic data analysis;
3. Moreover, in the entertainment and social needs, users can also get their customized entertainment and dating products;

Our gene block chain platform will best understand our users themselves. And all the activities on this platform will be done through our Gene BTC to complete the trade and payment of products and services.

Figure 3 Business model of GeneNetwork



5 Our Technology

5.1 Advanced genome sequencing technology

We will work with the world's strongest gene sequencing company and use the most advanced gene sequencing technology to rapid accumulation of human genetic data and complete the first phase of the human gene database construction.

The most powerful sequencer HiSeq X Ten will be our basic stand of platform for human genome database construction. This sequencing system consists of 10 HiSeq X sequencers, suitable for mass-scale sequencing projects. HiSeq X Ten uses the world's most advanced design features to produce ultra-high throughput. A flow cell containing billions of nanopores, and a new cluster generation reagent significantly increase the density of the data. With the most advanced optics and faster reagents, HiSeq X Ten can be sequenced faster than ever before. Each HiSeq X instrument can generate 1.8Tb of data for three days, ie 600Gb per day. If you run 10 instruments at the same time, people can be sequenced every year more than 18,000 human genome.

Figure 4 The most advanced whole genome sequencing platform



At the same time, the most important thing is that HiSeq X Ten makes the human genome sequencing costs from the beginning of the \$ 1 billion, down to the current \$ 1,000. This allows us to sequence thousands or even millions of genomes. It lay a solid foundation for the establishment of human genome database, in-depth understanding of genes on our habits, diseases and other issues. At the same time, our genome sequencing platform is the world's largest sequencing technology platform.

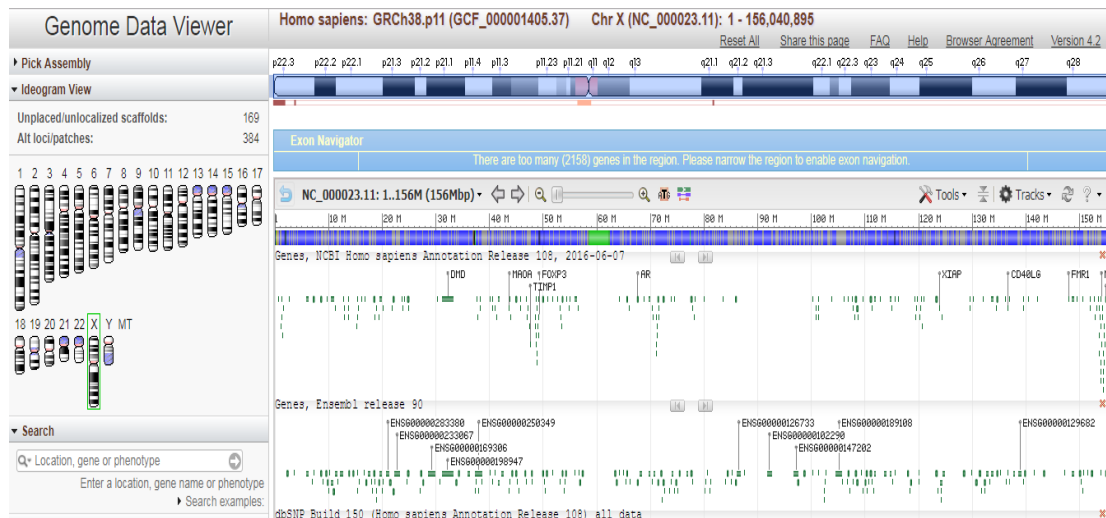
Figure 5 Develop the most appropriate scheme for human whole genome sequencing



5.2 Powerful cloud analysis platform for gene data

We have initially developed a series of software for the human genome data analysis, construction, and the data module for the future product analysis. At the same time, we also work with the US National Institutes of Health NCBI data platform, to establish a patented genetic analysis algorithm to for the human genome data analysis. We will establish a complete data for all sample genome of human 23 pairs of chromosome, each chromosome above the sequence will be genotyped analysis, corresponding to the body shape, disease, habits and so on specific characterization.

Figure 6 Genome Data Viewer



We have more than one hundred thousand gene analysis data, there are dozens of analytic software and platform. These software are able to conduct a comprehensive analysis and evaluation of the human genome within a week. E.g:

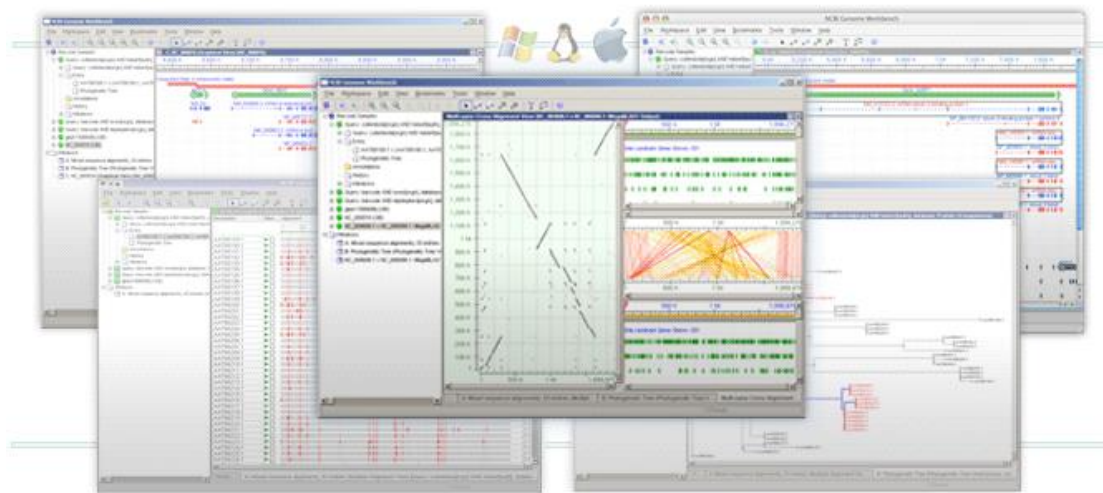
1. BLAST software can compare and analysis the genetic sequencing of the original data, complete the construction of the human genome and eliminate errors, repeat the sequence.

Figure 7 BLAST-gene data comparative analysis

The screenshot shows the BLAST RefSeqGene Nucleotide BLAST interface. The interface includes a search bar, a text area for entering query sequence(s), and a section for uploading files. The interface is designed for comparing a query sequence against a database of RefSeqGene sequences.

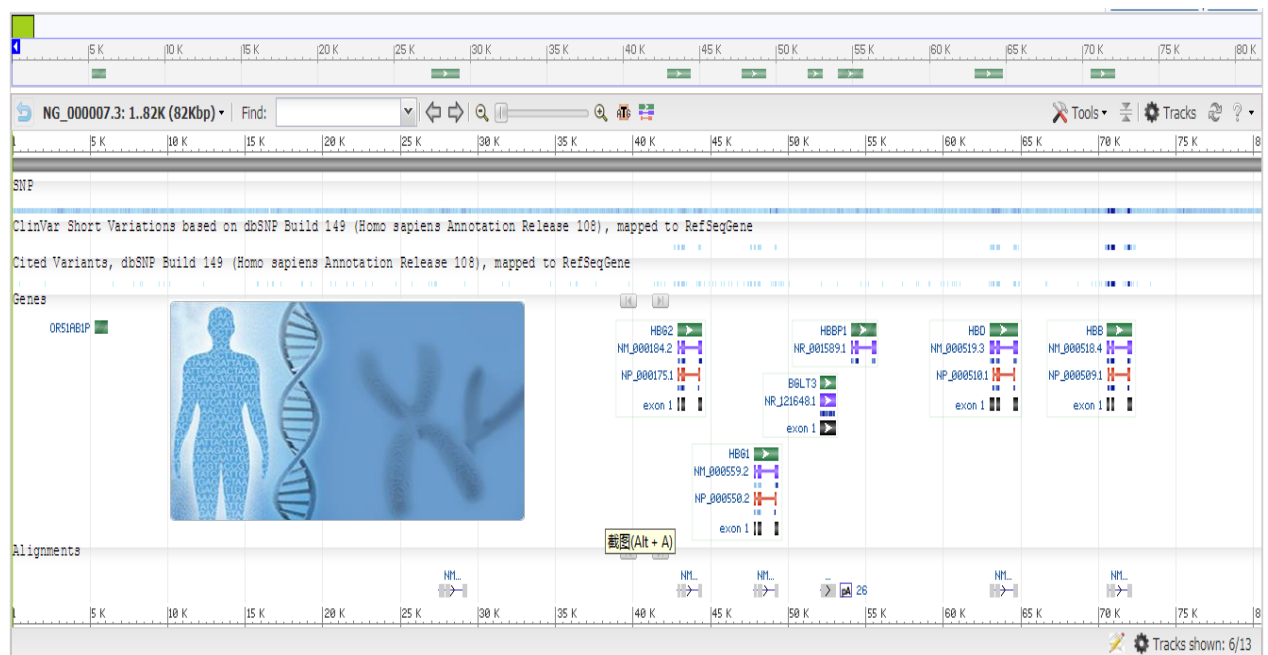
2. Genome Workbench software can conduct a preliminary analysis of human genome data. The software can integrate, view and analyze gene sequences. At the same time can use the public gene data and information to complete integration analysis of human genome data, which is greatly speed up the analysis. Genome Workbench is a toolkit built on the C ++ language that allows you to view and consolidate data across platforms. It can be used for Window, MacOS and various versions of the Linux system.

Figure 8 Genome Workbench – across platform genome analysis



- Genome ProtMap software can complete the genetic analysis of each individual's signs, such as appearance, height, genetic disease, lifestyle, physical fitness and so on. The foundation of the study is that we can link the gene data to the protein. Protein is the basic component of our body and is the characterization of all structures and behaviors. Understanding the gene expression map is the key step of completing our gene database.

图 9 Genome ProtMap – disease related analysis



Then we will use ProSplin, Genome Remapping, gene tree, VecScreen and a series of software to help complete accurate analysis of all sequenced genomes. The final completion of each person's genome mapping will include all information from gene sequence to the gene, to the gene tree, then to the related protein.

5.3 Elliptic curve cryptography

Elliptic curve cryptography (ECC) is an approach to public-key cryptography based on the algebraic structure of elliptic curves over finite fields. ECC requires smaller keys compared to non-ECC cryptography (based on plain Galois fields) to provide equivalent security. Elliptic curves are applicable for key agreement, digital signatures, pseudo-random generators and other tasks. Indirectly, they can be used for encryption by combining the key agreement with a symmetric encryption scheme. They are also used in several integer factorization algorithms based on elliptic curves that have applications in cryptography, such as Lenstra elliptic curve factorization.



6 Our products

6.1 Digital genome distributed data warehouse

All future product modules are based on this core databases. And the second part is digitalizing genome data by issuing gene blockchain currency. Each gene currency will represent an anonymous human whole genome data, including its all 3 billion pairs in 23 chromosomes. The owner has all rights to the profits generated from any person, organization, institute or enterprise by using these genome data.

Digital Human Genome Database is our core product. This product is divided into two parts. The first part is the genome-wide data that will include 10 million samples of human genome, and each person's genome includes information of all 3 billion pairs of base sequences, which will be completed several phases. The basic data will adopt compression – encryption and fast storage technology. For re-designing distributed storage, each block contains SHA256 hash value in the first part, polymorphic labels, fixed length of the base pairs, and polymorphism contribution signatures. All future product models are built on these core data. In the second part, we will focus on the digital asset for genetic polymorphism. Digital gene currency will represent all genome data fortune in our databases. During our currency issuing, each gene currency represents one copy of anonymous human genome from our 10 million of human genome database. Each copy includes all sequence information of 23 pairs of human chromosomes. This is the reward as its distributed storage.

1. The first part, 10 million copies of genome-wide data: Our goal is to build an encyclopedia of human genomes. In addition to building genomic maps, we also developed a method to describe genomic content in sequence level, including sequence variation and other description of the function and phenotype. Our human genome database provide genomic data in a tabular format, including gene units, PCR loci, cytogenetic markers, EST, Contig, repeat fragments and etc.; the genomic map, including cytogenetic maps, Linkage map, radiation hybridization map, cascade group diagram, transcription diagram, etc .; and polymorphism database like the allelic genes. In addition, the database also includes hypertext links to other network information resources such as the GenBank and EMBL, the Genetic Disease Database OMIM, the Document Summary Database MedLine, and other nucleic acid sequence databases. All these data are distributed in blockchain.

Figure 10 Construction of human genome core database

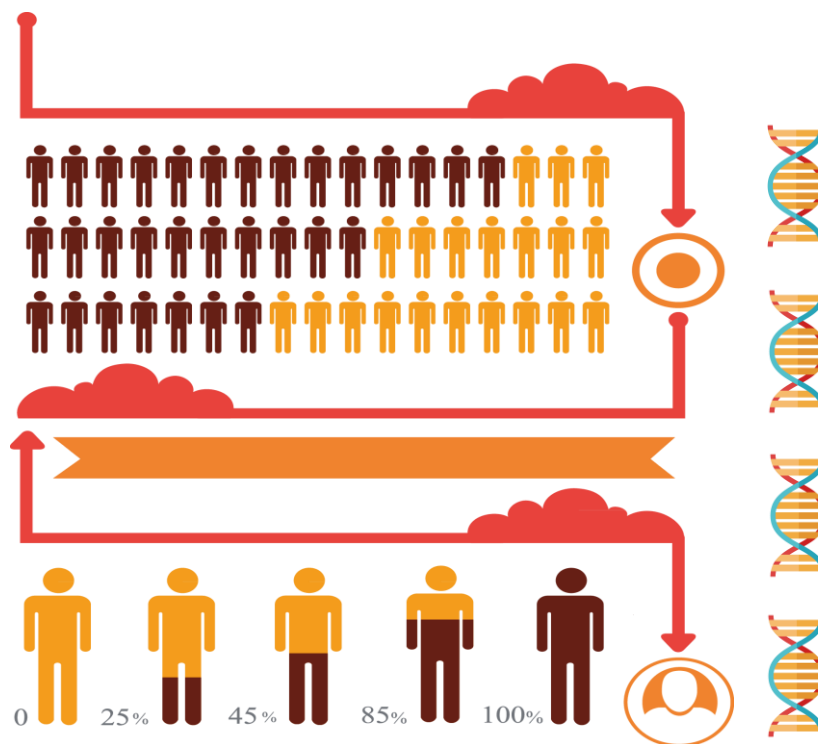


Figure 11 Genome Core Database - Gene sequence data model

Chromosome 1: 17,368,270-55,414,768

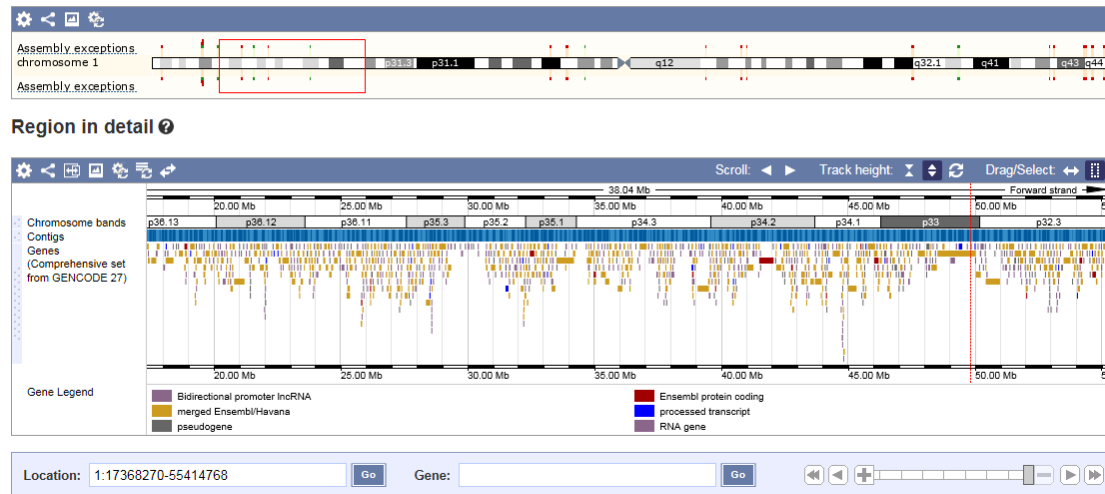


Figure 12 Genome Core Databases – gene and protein analysis database

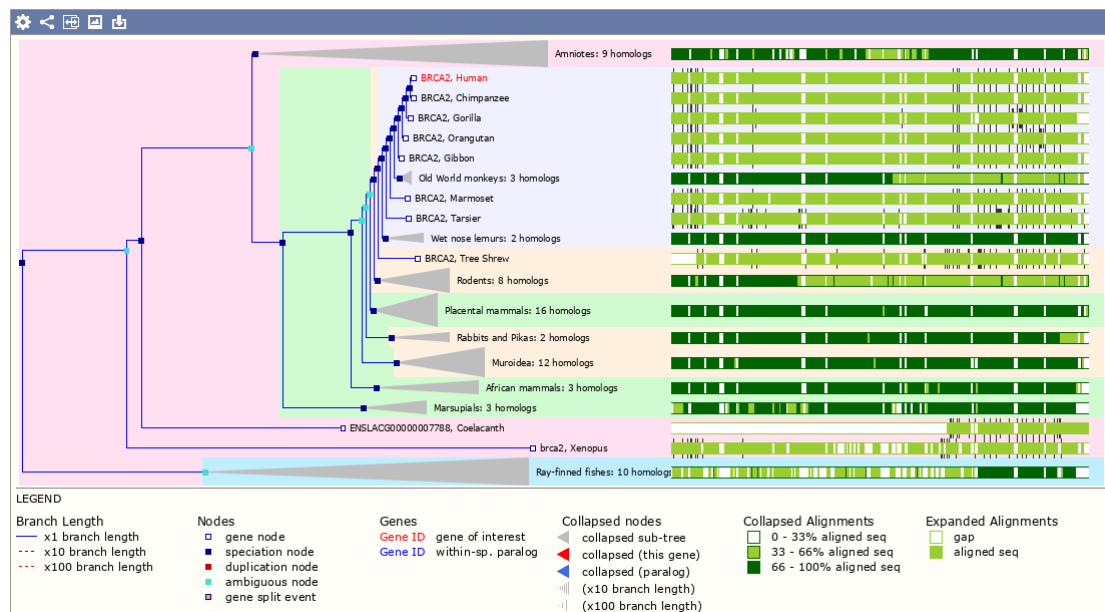
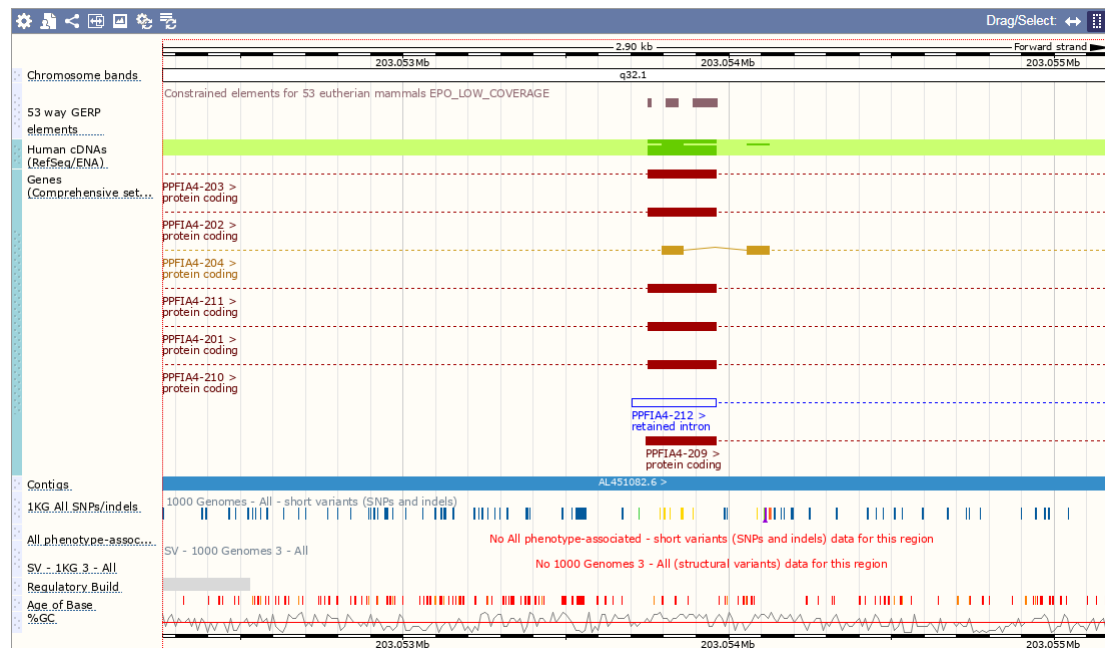


Figure 13 Genome Core Databases – gene and diseases analysis databases

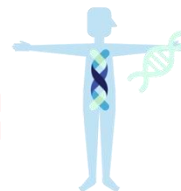
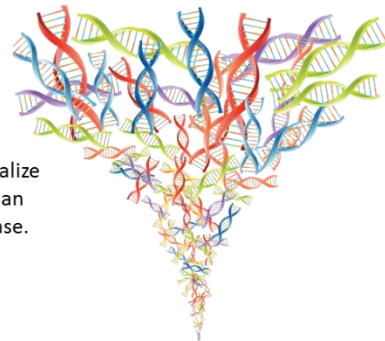


2. Digitize our genome data by GeneBTC

We will issue a gene currency to digitize the human genome data in the database, and each gene currency represent the right of a copy of human genome data and will enjoy the benefits from these genetic data.



Issue gene coin to digitalize our 10 million of human whole genome database.



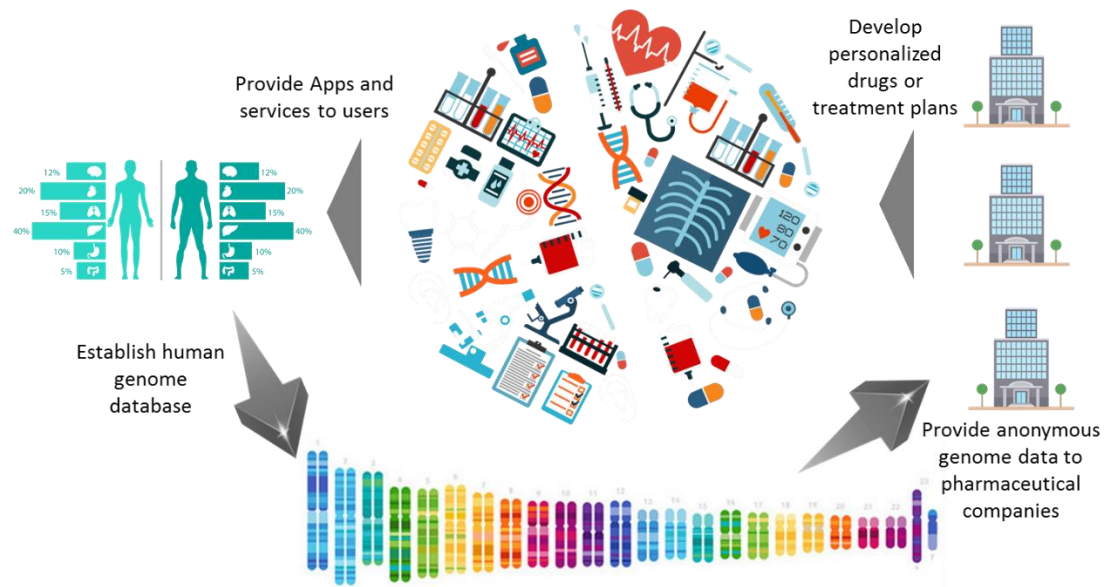
Each Gene BTC represent one copy of a whole genome of one person, including all 23 pairs of his/her chromosome

6.2 Healthcare platform

Personalized medicine and health program are the general direction of historical development. Every person has a unique variation of the human genome. These differences made the difference

treatment and healthcare plans when people get ill or need to maintain health. Based on the above-mentioned human genome database, we will build a platform for disease and health. Because human genes are associated with the health of each of us and all the diseases. Meanwhile, aiming to provide customized treatment plan, pharmaceutical companies and health management companies are eager to collect a large number of human genetic data for the development of drugs and health products.

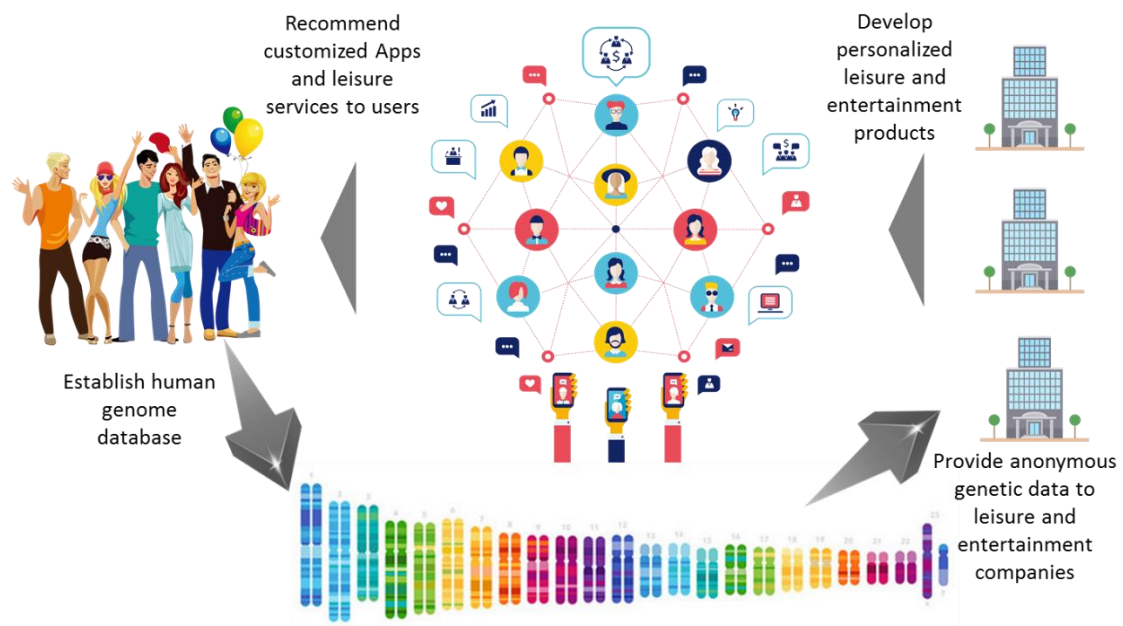
Figure 14 Demonstration of gene healthcare platform



6.3 Gene entertainment platform

With the improvement of living standards, people's demands for leisure and entertainment are getting higher and higher, and began to focus on self-entertainment experience. After we open the health care platform, we will further open the entertainment platform. All kinds of leisure and entertainment companies can use gene data on our platform to develop personalized entertainment products based on the "big data". These products include personalized diet plans, personalized leisure products and so on. At the same time, our platform is also a more refined promotion service. It will be more accurate and effective to reach the target customers.

Figure 15 Demonstration of gene entertainment platform

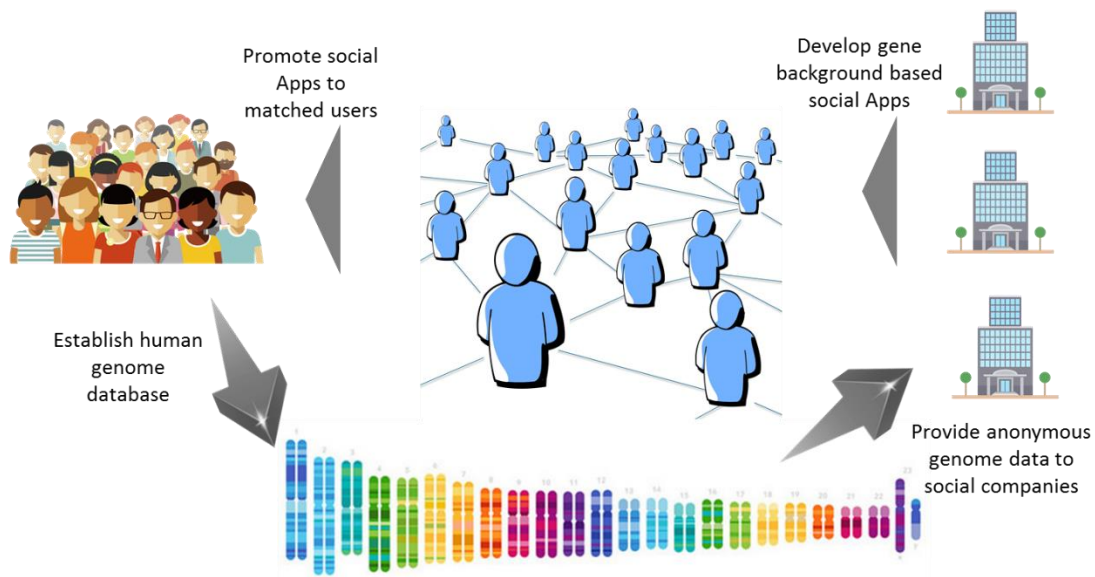


6.4 Gene social platform

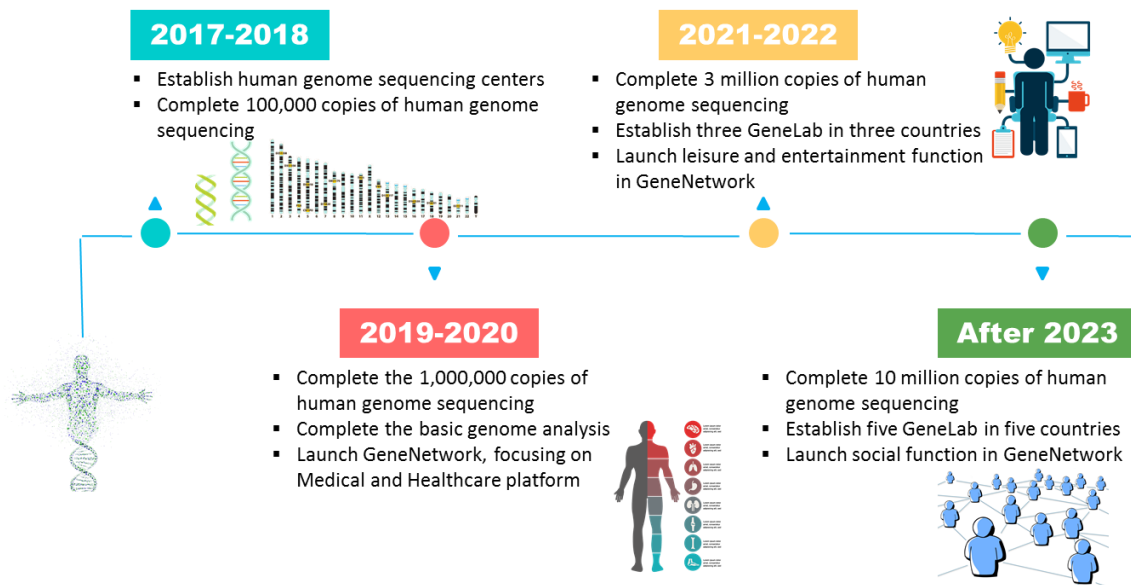
With the progress of society, the connection among people are more close and complex, forming the concept of the world village. But among all these “potential friends”, how to get friends with matched hobbies, temperament and etc., or even find the “date”, is unmet needs for all of us. The gene dating platform, in the future, can solve this problem. Life is too short, with our platform, you can reduce the cost of making friends, identify your own group and find your date in a more fast and efficient way.

After we accumulated enough gene data, we will open such data platform to all types of social networking platform companies. These companies can form a variety of personalized dating software and communities based on massive genetic data. It will be more convenient to let the people meet each other.

Figure 16 Demonstration of gene social network



7 Development plan



8 Team introduction

Andrew Dewar: Founder & CEO, engaged in the medical and health industry more than ten years, has a wealth of experience in the medical industry investment, has successfully invested three medical listed companies, more than 10 medical start-ups, access to more than 150% of the annual investment Return.

Ashley Beleny: Chief Operating Officer of the company, worked in the frontier of medical internet industry for over ten years. She has a very rich experience in the medical Internet, including bioinformatics, medical data construction and so on. Participated in a series of medical information projects, which are initiated by large listed information technology companies. She also worked with lots of finance and insurance companies to develop products for medical services.

Caleb Cody: Chief Technology Officer, experienced in large-scale data collection, analysis and mining of human genome. Operating and Managing genomic centers for years. Has participated in a number of international cooperation projects, such as thousands of human genome, million vertebrates, five thousand insect genomes, global underground mouse research, cucumber genome, "Yanhuang one", panda genome, rhesus genome, ants Genome and other projects, oyster genome, sea snail - seaweed symbiosis and other projects.

Michael Chou: Senior Technology Director, engaged in genomics and bioinformatics research, has been involved in a series of major research projects, including the International Association of thousands of people genome, the Diabetes Genome Project, Human Pan Genome Atlas, Plateau Genome Project, Disease genome plan and so on. Currently focused on bio-information cloud computing and genetic data.

Jeniffer Deasy: Vice president of Business Development, has long been engaged in the development of applications and solutions for medical information industry. Participated in the development of the hospital information system, regional medical information system and public health information system. Familiar with workflow technology, XML technology, database technology, good at system analysis, design and technical architecture. Now focus on cross-regional interoperability EHR platform and hospital information integration Platform design and development work.

ADVISORY BOARD:

Connor Olson: A founding member of the National Human Genome Center, has established the first high-throughput DNA sequencing facility to lead the genomics research. During the study of the Ph.D., he discovered the RIG-E gene, "human cloning new gene". He has published more than 90 academic papers in SCI journals, including Nature, Cell, Nature Genetics, Nature Biotechnology, PNAS and other journals, and has been involved in the compilation of the new edition of "Medical Genetics".

Joshua Mathai: Focused on the human genome and disease, life-related research. Especially in the gene sequence and telomerase changes in the correlation study. Found that the unique repeats on chromosome telomeres are key factors in protecting telomere degradation. Provides a series of theoretical guidance on the genetic research of the human genome associated with aging.

Abner Medina: Engaged in cancer research work. Its research in the field of human genes and cancer related to more than 30 years, discovered a number of cancer-related genes and

pathogenesis. It also found the mechanism of cell destruction, degradation and re-use of the protein. By labeling the target protein, the cell can target the activation of protein degradation pathway, for a large number of cancer development research provides a theoretical basis.

Partners

