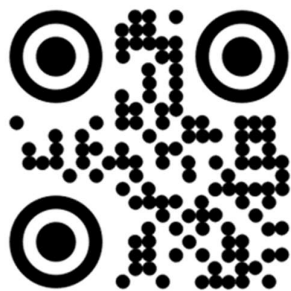


CRYO

CRYOGEN SCIENCE
TOKEN



CRYOGEN WHITE PAPER

1 Introduction

From time immemorial, mankind has endured irreversible and inevitable cessation of biological activity, for which medicine still has no remedy.

The CryoGen project, as described herein, has the objective of improving and maintaining the functional integrity of any living organism by means of cryopreservation, which cannot yet reverse death, but stabilizes the condition in the meantime.

Cryonics (from the Greek κρύος – cold, frost) is a technology for the long-term preservation of tissues, organs, human beings and animals in a state of deep cooling with the intention of their restoration at some future time. This is a longitudinal study (a long-term study) which is carried out in the ongoing practice of cryonics and storage of organs and organism at extremely low temperatures. Its prime objective is to develop a technology for the reversible freezing which will give an opportunity to bring cryonics patients back to normal life in the near future.

2 Mission statement

Our mission is to give people the opportunity to extend their lives by means of advanced technologies, such as cryonics. A crypto-economic leap forward now provides an opportunity to advance breakthroughs in science that will benefit all humanity, by radically improving longevity and quality of life for people around the world.

3 Problem statement

Biologically irreversible process

Every day around the world more than 150 000 people will die, some from currently incurable diseases, some by mishap from external causation, but most from the one hundred percent fatal pandemic degenerative condition simply known as ageing.

Low life expectancy

Today, modern medicine doesn't have a cure for any disease. Only 50% of people having cancer recover from it. The mortality rate related to strokes and cardiovascular diseases is also high. Besides, because of the extremely limited storage period of donor organs only one in four people waiting on the recipient lists ever receives a compatible donor organ in time.

Space travel

Humanity grapples with the challenges of ever longer duration space travel. But clearly, the life support and provisions of space travelers with nutrition during long space voyages related to huge expenses.

4 Solutions

Cryopreservation

Over the last 50 years scientist around the world has been developing and improving the technique of the cryopreservation of tissues, organs, the brain and whole organisms to make the future revival possible.

There are two kinds of cryopreservation:

- Neuropreservation, when only the brain is placed into cryonics storage.
- Whole body preservation, when the entire organism, human or animal is preserved.

Cryonics makes it possible to maintain the human body intact until scientists discover the ideal way to restore and return the patient to life and to full health.

Nowadays, there is a serious theoretical and experimental evidentiary support for the possibility of restoring biological organism and significantly prolonging a patient's life in a relatively near future.

The funds raised under the CryoGen project will be used for the development, testing and implementation of the technology for the reversible freezing of human organs and small vertebrates in 5 or 7 years and amniotes and humans in the near future.

Feasibility is corroborated in experiments with fragments of animal organs. In February 2017, a fragment of a pig's heart was reversibly cryopreserved, perfectly.

When this technology is fully developed, an ideal biological recovery of the body after freezing and the continuation of its vital activity will become possible.

Also, the CryoGen team has the intention of developing and implementation of:

1. Vitrification (deep cooling which solidifies tissues without ice formation). We are planning to perform vitrification by means of ultra-fast cooling using cold gas blown through the whole body;
2. Ultra-fast and even rewarming with the use of cryoprotectants with nanoparticles;
3. New nontoxic cryoprotectants based on inert gases.

Space Travel

Cryonics is our chance to get to remote planets and star systems. Human life will inevitably spread beyond the Earth to inhabit the space.

The CryoGen project has all chances to become a leading project which provides services for space ana-biosis; soon our technologies can be used for space flights over long distances. So, the first step toward it has already been made.

Thus, maintaining the current pace of scientific and technological progress, the restoration of the brain and body of the cryopreserved person will become possible by the middle of the 21st century. Therefore, cryonics technologies give a real chance for a radical extension of people's lives.

In conditions of rapidly developing information space, the CryoGen project combines two new revolutionary convergent technologies: blockchain and cryonics.

5 Origins and development of CryoGen

In 2014, the management of KrioRus, at the invitation of the Government of Switzerland, visited six cantons and presented its project to open the first cryonics centre in this progressive country with the aim of incorporating the company CryoGen under Swiss jurisdiction.

The Ministries of Economy of three cantons became interested in the possibility of building a cryonics centre in Switzerland and offered mutually beneficial terms of cooperation.

Today, we enter the last stage of coordination of the creation of a European cryonics provider headquartered in Switzerland, vital to the development of cryonics in Europe, along with DNA preservation, organ cryobanking, the inauguration of a genetic archive, and more.

In Switzerland, we are joined by many like-minded people and colleagues. We have thoroughly studied the commercial real estate market in Switzerland and plan to acquire the best price and quality location for a cryonics centre, for example, a decommissioned military base in the Alps.

We own several small cryonics storage facilities in Russia, where we have tested the installation and transfer of Dewars and cryostats (up to 1.8 tons in empty weight). In the same locations, we have completely established the entire process of cryonics storage for human and animal cryonics patients and DNA samples.

Throughout the CryoGen project implementation, a multidisciplinary approach is planned, involving cryonics supporters from all over the world, as well as cryobiologists, medics, economists and specialists from many other fields, in order to realize the supranational and truly humanistic values of cryonics in the information society of the near future.

KrioRus is the only company outside of the United States that produces cryostats of large volume for the preservation of patients' bodies. We are of that. For the preservation and storage of small animals industrial Dewars will suffice, but for the preservation of the human body it is necessary to use special designed Dewars that are currently produced only in the US or special cryostats, like our own cryostat "Anabiosis" which is produced only in Russia.

We have representative offices in New York City, USA, In Mirandola, Italy, and in St. Petersburg, Russia, with arrangements with funerary service providers in Riga (Latvia), London (UK), Kiev (Ukraine), Chelyabinsk, Izhevsk, doctors and hospitals in Minsk (Republic of Belarus), Volgograd, Samara and other cities.

We have mastered all cryonics technologies and are successfully practicing them. Cryonicists from around the world flock to Moscow in order to come and study at KrioRus. There are 54 cryonics patients and 21 preserved animals in cryonics storage at KrioRus. To date, more than 400 contracts have been concluded for the future cryopreservation of humans and animals.

KrioRus is the only cryonics provider in Europe and Asia that has its own cryonics storage for conservation and long-term storage of cryonics patients, with specialized scientific laboratories and qualified staff.

6 Justification of Token

The Cryotoken is a utility token, accepted for purchase of all available services at CryoGen. Each Cryotoken is equivalent to one dollar (ICO price).

The issue of tokens will amount to 100,000,000 electronic coins.

Token CryoGen is the first token of Science token family, which implies the possibility of acquiring Science Shares. Please find more information about Science Shares in the annex to the document.

CryoMarket

Currently, Cryptokens may be redeemed for the purchase of:

- DNA preservation: 1,000 CRYO;
- Science Shares
- Human neuropreservation: 18,000 CRYO
- Transportation: 3,000—10,000 CRYO
- Whole body cryopreservation: 36,000 CRYO;
- Animal cryopreservation: 10,000—36,000 CRYO, depending upon size and weight;
- Standby services: 50,000—100,000 CRYO;
- Launching neuropatients into orbit: 200,000 CRYO.

Potential of CRYO token

1. Limited issue
The number of tokens is limited. No further token will be issued.
2. Payment with CRYO only
Payments for some cryonics services, digitization services, science shares for participation in research or purchases on cryonics market will be possible only with tokens.
3. Affiliate network
As the project develops, we will connect all new companies to our network, which means that it will be possible to pay for tokens from outside CryoGen.

4. Benefits of payment with tokens
The cost of any services token will be significantly lower than the payment by conventional currency.
5. Instalment plan
There is no need to purchase a complete product all at once, the purchase will be possible by accumulating a certain number of tokens within a set time frame.
6. Ease of acquisition
Any new user will be able to purchase tokens directly online at the current exchange rate.

7 Opportunities for financial participation

Participation in ICO CryoGen will remain open throughout all three stages:

1. Private Placement, during which, interested parties can purchase the service of the company under special conditions. Dates: October 17 – November 6. Interested parties should email cryogenico2017@gmail.com or fill out an application through the personal account of the user.
2. Pre-ICO, during which tokens will be provided with a 30% discount. The pre-ICO begins on November 7, 2017 to November 21, 2017. 500,000 tokens will be issued at this stage. We will increase the number of tokens for sale in case of increased interest.
3. ICO-stage, during which the price of tokens will vary from 85% to 100% of cover price. The exact dates are to be determined by the results of pre-ICO sales in December or January.

8 Legal

The CryoGen project team is committed to the creation of an unprecedented value and progress for the cryonics. We wish everyone who wishes to take part in our innovative project, reasonable freedom from doubt that their investments are secure.

Tokens CRYO is issued by the nonprofit organization CryoGen, which will operate under the jurisdiction of Switzerland and will be managed by the world renown cryonics provider, KrioRus.

A principle activity of KrioRus is the practice of cryonics for cryonics patients, as well as scientific research and development in the field of natural and technical sciences. KrioRus provides clients with cryonics storage of tissues, organs, DNA, humans and animals, as well as conducting research in the field of reversible cryonics.

A principal activity of KrioRus is research and development in the field of natural and technical sciences.

The main activity of KrioRus LLC is research and development in the field of natural and technical sciences. The company has been providing cryopreservation services for people and animals for customers around the world for 12 years.

The founders of KrioRus LLC are individuals whose ownership is established under tax records of the Russian Federation.

The nonprofit Swiss organization CryoGen has an agreement with KrioRus LLC that CryoGen pays out ICO-reserved funds on behalf of Cryotoken bearers for cryogenic storage in a facility in Switzerland, and performs research towards reversible freezing for Cryotokens bearers.

9 Justification of the business model

Throughout the world, more than 20 million people die of incurable diseases every year. But everyone more fortunate than that is doomed to die from old age. Using the results of scientific research on the life extension and our own experimental development, we can give everyone a chance to preserve their body at extremely low temperatures until the time when medicine makes a breakthrough in relation to aging and can cure premature aging and any diseases.

Prerequisites for growth in demand

Nowadays, people and the market are ready to accept cryonics. This is facilitated by current leaps and strides in the development of bio, nano- and medical technologies. The desire for longevity motivates

ongoing scientific discovery and development in the technological sector, inspiring in the masses, a deeper understanding of the value of life, and of what should be done now that we can. According to the Levada Center, more than 18% of respondents indeed “want to live forever”.

Increasing popularity of cryonics is promoted by scientific and technological progress and the Internet. Our potential customers like to stay abreast of the latest research in the field of cryobiology, organ cultivation, prosthetics, nanorobots, etc. Almost every month, new studies appear that one way or another reinforce the very concept of cryonics.

Development of cryonics in the world

Cryonics is a growing industry.

Before the inception of KrioRus 11 years ago, the United States was the unchallenged leader in cryonics in the world. Since the 1970s, two large organizations, the Alcor Life Extension Foundation and the Cryonics Institute, sprang up. But with the advent of KrioRus, the monopoly has been broken, and in the last few years, new cryonics providers have taken root not only in the US but in Australia and China.

In Europe and Eurasia KrioRus is the only cryonics provider with its own cryonics repository.

Why Switzerland?

In Europe, cryonics is familiar even despite the absence of any European cryonics providers. There is a tremendous unmet demand. 25% of our contracts were concluded with clients from Europe. Switzerland is situated in the centre of Europe and has no prohibition on euthanasia, thus making possible the best quality cryonics services at the moment.

The inception of cryopreservation in Switzerland will resolve the doubts of many potential customers who do not want to be cryopreserved in Russia or on another continent (USA).

Technical storage volumes

KrioRus and the CryoGen project are capable to cryopreserve the minimum of 300 full body patients and the same number of neuropreserved patients annually. In 5 years we will be able to keep more than 3,000 full body patients and the same number of neuropreserved patients annually. If necessary, the growth rate of Dewar production for the storage of cryonics patients can be increased.

10 Road Map

2018

The opening of non-profit organization CryoGen under Swiss jurisdiction.

Purchase of two adjacent building in Tver for the new cryonics centre in Russia.

Completion of the reconstruction project of Building 1.

Renovation of building 2 as a location for a palliative care centre that will serve anyone who needs of ongoing pain management, including the dying with cryonics services, pre-cryo hospice palliative care centre and cryobiological laboratories.

The inception of mass-scale PR company in Russia and Eurasia, for the build-up to the occasion of the opening of a large cryonics centre in Russia offering the highest quality cryonics.

Expansion of laboratory staff.

Testing different nanoparticles in order to determine the most cost-effective option with all of the required properties. (Currently available methods are exorbitant, even as much as \$100,000 for just one experiment).

Reproduction of the basic experiment on reversible freezing of a fragment of the pig's heart with nanoparticle perfusion, and the creation of a detailed research plan on reversible freezing of animal organs with the involvement of leading scientists around the world.

Real estate search for suitable premises for the planned Swiss cryogenic storage facility.

Buying a suitable building or empty plot in Switzerland.

Cooperation with Swiss euthanasia-providing organizations in order to provide the best quality cryopreservation for our clients from Europe and from the whole world.

Completion of the project for the construction of a Swiss cryogenic storage facility or the reconstruction of a building for it.

2019

The opening of the palliative care centre in Building 2, will facilitate amortization in the recovery of investments in Tver.

Completion of renovation for the Tver Cryonics Center building with a smart home system.

Construction of anti-ageing medical centre in the Tver Cryonics Center building.

The inception of a large PR company in Europe and Asia to attract customers to the Swiss cryogenic storage facility with the promotion of 2 major conferences of cryonics supporters in Europe.

Application for the first R&D grants for the reversible freezing of fabrics and small samples in Europe and in Russia.

Massive R&D on reversible cryopreservation of animal organs under nanoparticle perfusion, plus other related experiments.

Upon the completion of construction for the Swiss cryonics storage facility, full-scale service will begin.

Modernization of the Dewar manufacturing facility to increase production, and sales to emerging cryonics companies in Asia, South America and Africa.

2020

The Tver Cryonics Center having recovered all expenses of real estate purchase and renovation will begin showing a profit. Likewise, the palliative care centre, because hospice is profitable with quick returns, in Russia.

The Swiss cryonics storage facility will become the centre of European cryonics, and cryonics legislation will advance in Switzerland.

The commercial euthanasia technology for "mercy freezing" will be refined and applied. Contracts sales will increase.

The anti-ageing centre will begin receiving grants for the study of ageing and expand activities. Clients of the anti-ageing centre eventually contract as CryoGen patients.

Reliable and safe reversible cryopreservation of the first organ of a large animal such as a pig will be achieved.

2021

With the Tver Cryonics Center and the Swiss cryonics storage facility operating at full capacity, cryonics will develop in other regions, so that there will arise a need to expand the cryonics storage network.

With the technology of reliable and safe reversible cryopreservation of most organs of various large animals achieved, experiments will begin on cadaverous human organs.

2022

The technology of reversible cryopreservation of the first human organ will be obtained.

Initiation of clinical trials.

11 Distribution of funds

Building of cryonics centres and international scaling of CryoGen: 30%

Technology development: 25%

Marketing, PR/GR: 20%

Project management (including legal and administrative expenses): 15%

Strategic partners: 5%

Reserve fund: 5%

12 Team

Our team has more than 200 people. The key team members are:

Valeria Udalova

Co-founder and CEO of KrioRus, the Russian cryonics company

<https://www.linkedin.com/in/valerija-pride-13a22a5a/>

<https://www.facebook.com/valerija.pride>

Valeria graduated from the Moscow Institute of Physics and Technology, the most prestigious university in the USSR. She has Physics and Marketing degrees. Valeria was at the very beginning of cryonics in Russia. Valeria is a Co-founder of KrioRus. She has been a CEO of the company for 8 years. In many ways due to her work and persistence, a whole cryonics industry has been created in Russia and KrioRus demonstrates extremely rapid growth rate. Valeria is one of the leaders of Russian transhumanists. She is a popularizer of cryonics.

Yuri Pichugin, PhD (USA)

Director of Science

<https://www.facebook.com/pichugin.yuri>

Yuri was born in Siberia, but left for St. Petersburg after graduating from the institute to create the technology of anabiosis (cryonics) and has since worked in the field of cryobiology. He has 40 years of priceless international experience in the field of cryobiology. Yuri has created a technology of vitrification for the Cryonics Institute, the legendary cryonics organization in the USA. He has a lot of know-how, which needs to be implemented as soon as possible. He has written more than 80 scientific papers.

Igor Artyukhov

Research and Development Director

<https://www.facebook.com/igor.artyuhov>

Igor is a Co-founder of KrioRus. He is a biophysicist, cryobiologist, futurist and active evangelist of new technologies. It seems that Igor was the first professor of nanotechnology in Russia. He is one of the founders of the Russian transhumanist movement. In 2003, Igor performed the cryopreservation of the very first Russian cryonics patient. He is the author of significant scientific works and designs of many special devices for cryonics. Employees in the laboratory under his supervision have cooled animals to +2 C for several hours and then rewarmed them without any consequences. He has been popularizing breakthrough technologies on the Internet since the days of FidoNet.

Tatiana Shifrina

Chief Design Officer

<https://www.facebook.com/shifrinat>

Tatiana was a ballerina, but after she suffered an injury, she decided to change her career and became the owner and director of the communication group Brand's Territory Group in 2004. She works with leading enterprises in Russia and Europe. Tatiana has been awarded for the best advertising in the field of energy in Europe, got the gold medal at Bytchimexpo Exhibition, etc. She is very dedicated to our project. Tatiana has been engaged in publishing of Gentl's, a premium magazine for investors, for 5 years. She likes publishing articles on new technologies, cryonics and interviewing famous people.

Anastasia Shin

Leading Marketer

<https://www.facebook.com/Anastasia.Shin>

Tatyana Shifrina's friend and Co-publisher of Gentl's magazine. She has been a leading marketer of Brand's Territory Groups for many years and also advised KrioRus on the marketing of cryonics. Anastasia is a very methodical specialist and an analyst who has worked and is working with such companies as ROSNO, Paris Commune, the Ministry of Sport of Russian Federation, etc. There is literally no project of a huge scale that could scare her. Anastasia is the author of the marketing plan and the member of the group responsible for the architectural sketch of the Cryonics Center in Tver.

Elena Serebryannikova (Switzerland)

Financial Adviser

<https://www.facebook.com/elena.serebryannikova>

Elena has a Marketing degree and has worked as a Deputy Director of the Swiss financial company "Crédit Privé de Placement et d'Intermediation" (<https://www.creditpriv.ch/home-eng>). for more than 10 years. She works with large clients. Elena knows how to sell cryonics services perfectly well. She supports our project in Switzerland at the cantonal and federal levels.

Denis Rysev

Technical Expert of the Project

<https://www.facebook.com/rysev>

Denis is a dedicated supporter of life extension. He was a team member of the well-known ICO SONM project. The project raised 42 million dollars. He is also a Technical Director of RuNeuro, a project of the development of the neurocomputer interface, a blockchain expert and the developer of computer games. Denis is a Delegate of the VOICE blockchain project.

Yuri Matveev

Surgeon and Perfusionist

<https://www.facebook.com/profile.php?id=100001827728813>

He has a unique experience in the field of cryonics. Yuri has performed numerous cryopreservations of people and animals, including the cryopreservation of a chinchilla. He is constantly inventing new methods of perfusion and various devices for this. Yuri also works in the genetics laboratory of Moscow Regional Research and Clinical Institute (MONIKI). A born teacher with an amazing sense of humour, he trains new cryonics specialists. Hobby: struggle against ageing and gerontology.

Sergey Evfratov

Lev Leiman

Ideas Seller, Marketer, IT Developer, Blockchain Analyst

Lev has an Energy Engineering degree. He worked on the development of the Smart Home project at the Military University of Bundeswehr in Germany. He returned to Russia to work at INSET as a Leading Specialist in the development of the Innovation Department of the company. In January 2016, he took up entrepreneurial activities related to the development of anti-crisis solutions. Lev participated in the SandCoin project as the Head Marketer. He developed and implemented the advertising strategy of the project. Lev is a real expert of the cryptocurrency market and an analyst of blockchain technology.



13 Advisory Board

C-Yoon Kim (Kyung Sul)

C-Yoon is a Biotechnologist, Neurophysiologist and a Research Professor at the Biomedical Research Center at Konkuk University (Republic of Korea). He is a Technical Director of the cryonics company Human High Tech, Seoul. C-Yoon is a Specialist in the field of splicing the spinal cord of mice during transplantation.

C-Yoon's awards:

- 2016 Korean Association for Laboratory Livestock (KALAS) International Award;
- 2014 Chinese Association of Laboratory Animals (CALAS), International Award for Young Scientists.

Alberto Sarmentero

<https://www.facebook.com/albert.sarbergman>

Alberto is a Bioengineer and the Head of the GIBiomed company, Madrid, Spain. GIBiomed is working on the invention, design and release of new devices in the field of biomedical engineering. The company has developed thermoplastic cryocapsules for organs. It cools, transports and cryopreserves the organs, ensuring the best preservation. The company is also developing capsules for individual cryopreservation of humans.

Zamir Akimov

<https://www.facebook.com/zamirakimov>

Zamir is a Neuromarketer, a specialist in the field of blockchain, the Head of the NeuroDAO cryptofund and the Vice President of RACIB (Russian Association of Cryptocurrency and Blockchain).

Illya Svirin

<https://www.facebook.com/profile.php?id=100009292827441>

Illya is an expert in the field of blockchain and smart contract, the Founder and the Head of the Nordavind Group of Companies, software development for security systems, video surveillance systems and intelligent devices for monitoring human health and diagnosing diseases at an early stage. He is a Co-founder of the PROVER.io project, the blockchain technology for confirmation of the authenticity of video materials.

14 Articles and quotations

1. [Scientific justification of cryonics practice;](#)
2. [Reversible freezing of the body by means of nanoparticles;](#)
3. [Scientists proved that cryopreserved organisms keep their long-term memory intact;](#)
4. [Scientists thawed the brain of a rabbit in a near ideal state.](#)

15 Conclusion

Blockchain technology, which gave rise to a system of p2p mutual settlements, enables super-fast development of science, medicine and technology due to a much easier way of funding. Today, each of us can take part in the evolution that is taking place right now. It will give a chance to achieve even the most ambitious goals.

16 Disclaimer

The purpose of this document is to present the CryoGen project to potential token holders due to the forthcoming launch of the Cryotoken*. The information set out below cannot be exhaustive and does not imply any elements of a contractual relationship. The sole purpose of this document is to provide the necessary and reasonable information to potential token holders so that they can determine whether a thorough analysis is needed to acquire Cryotokens. Nothing in this document can be considered an issue prospectus or an application for investment, nor does it relate to an offer to purchase any securities in any jurisdiction. This document is not drawn up in accordance with the laws or regulations of any jurisdiction that are intended to protect investors and is not subject to these laws. Some statements, estimates and financial information contained in the White Paper represent information concerning the future. Such forecasts are associated with known and unknown risks and uncertainties that could cause actual events or results to differ considerably from the estimates and results implied or expressed in forecast statements. Russian and English versions of the White Paper are the primary official sources of information about the launch of the CryoGen project. The information contained herein may be translated from time to time into other languages or used in a written or oral communication with existing and potential customers, partners, etc. Due to such translation or communication, some of the information contained in this document may be lost or distorted. The accuracy of such alternative messages cannot be guaranteed. In case of any conflicts or inconsistencies arising between translations or messages and this document in Russian, the provisions of this document in Russian shall prevail.

* Cryotoken does not grant potential holders the right to a stake in KrioRus or in any future ventures created under the CryoGen project; this is an exceptionally full-featured utility-token, that is, a cryptocurrency/accounting unit of services that investors or project participants can purchase on special terms.