Telomere Lengthening Coin

Defytime
Telomere Lengthening
Solution

WHITE PAPER V.1 2021

TABLE OF CONTENTS

01

Mission And Vision

Mission And Vision

The purpose of our company is to diagnose 'aging as a disease' and insist on 'telomere prolongation' as a treatment mechanism, and by providing continuous service to those who have selected the results of the research, helping customers stay young and stop the aging. It is to maximize positive social contribution to an aging society with low birth rates.

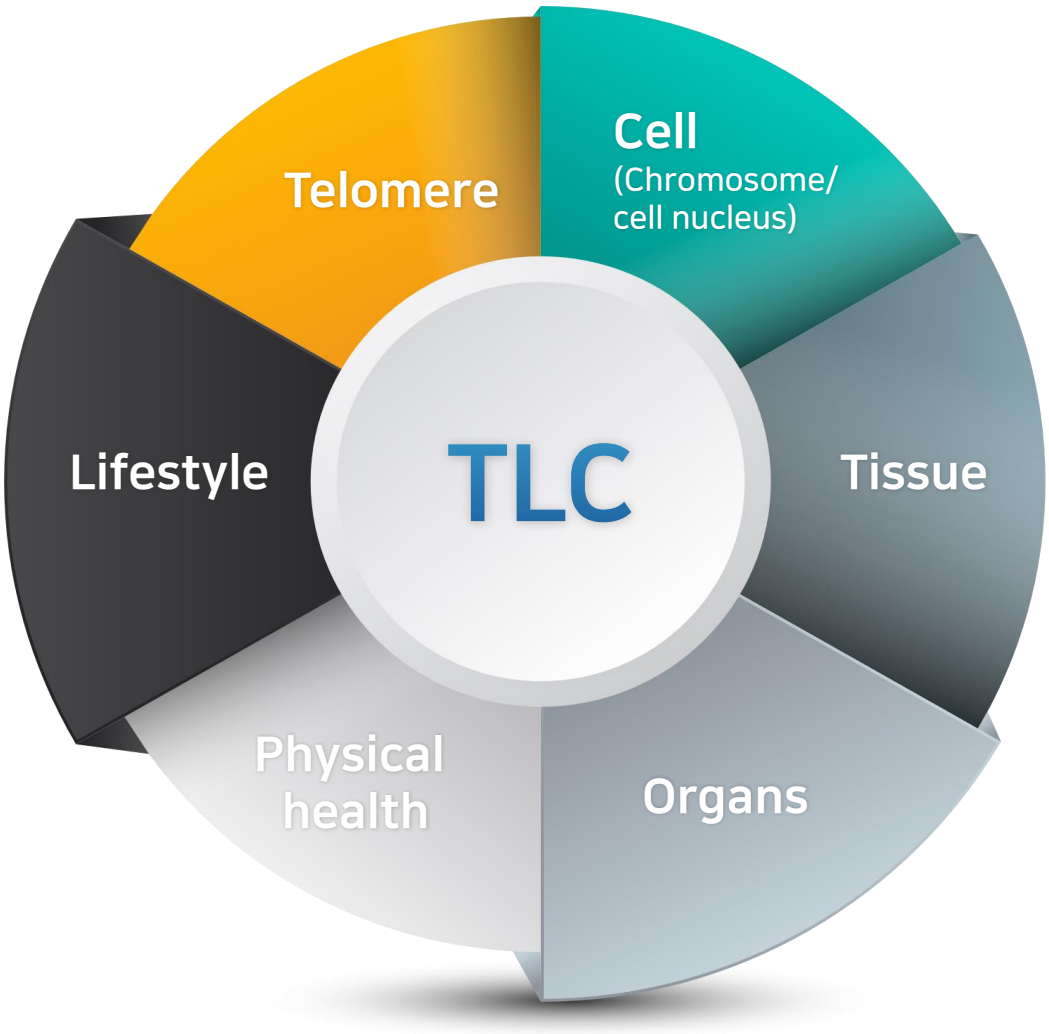
02

INTRODUCTION

INTRODUCTION

What is “real health”

Physical health



Telomere Biological Core Site

Health is the condition in which all tissues and organs in the body are functioning normally.
The brain, organs, bones and blood vessels are essential parts of the human body.
These tissues and organs are made up of the smallest unit of the human body, “cells”.

So what is a normal cell?

Each cell's nucleus contains a chromosome, and telomeres are located at the ends of the chromosomes.

Telomere length is a barometer of cellular health.

Cells divide when our body needs to grow or heal.
Whenever a cell divides, the telomere at the end of the DNA in the cell's nucleus becomes shorter.
When telomeres pass through the aging point and reach the critical point, the cells stop dividing and die.
Therefore, if you keep the length of telomeres long, it can be the secret to health as well as healthy longevity.

For the first time in history Molecular biologist Dr. Bill Andrews, he discovered an enzyme called **"human telomerase.”**

This opens the way for humans to remain young for a long time.

Telomere Total Solutions will provide healthy life extension services to the chosen ones!

1. **Block Chain**
   (safety)
2. **Health & Beauty**
3. **Precise diagnosis**
   (A.I)
4. **Telomere Lengthening Service**


Defytime USA
Telomere Institute
Sierra Science
Telomere Total Solution Business Promotion
Defytime Singapore
Telomere Beauty Therapeutics
Libella Beauty Therapeutics
Defytime TAM Product
Defytime Limited
Telomere Analysis Technology
Life Length
DEFYTIME Vanuatu

03

MARKET OVER VIEW

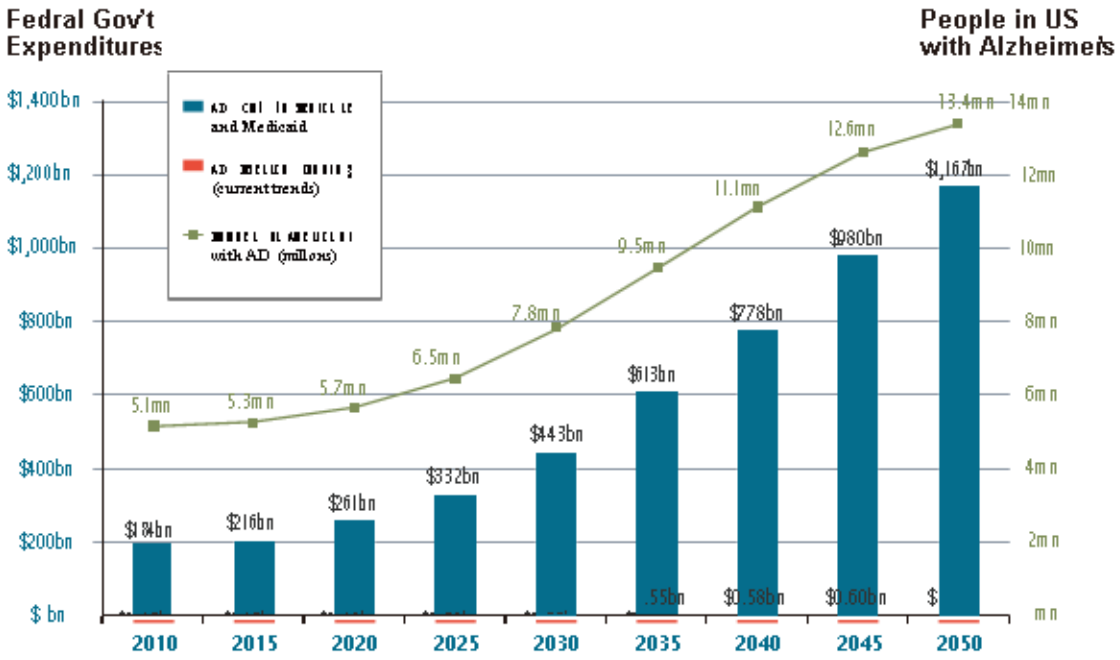
By 2050, 40% of Japan's population will be 65 or older.

The aging population has become part of anxiety in many countries, and how to support the elderly and replace the working population is a rising issue. Among them, the most serious country is Japan. According to a new analysis by the U.S. Census, about 40% of the population will be 65 years or older by 2050.

Japan's aging problem is already serious, making it more difficult to find a solution. There is no alternative to 27% of the population aged 65 or older, with the total population expected to decrease from 127 million in 2015 to 127 million in 2050.

Whatever positive solutions and failed plans, what human governments and private companies have devised to combat this trend, other countries will be closely watched. Among the developed countries, the U.S. population is expected to increase from 132 million last year to 328 million by 2050. Over the same period, the population over 65 will increase from 14% to 22%. This problem will be exacerbated in Germany, France and Italy.

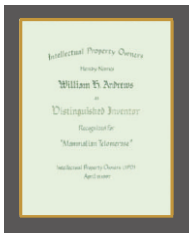
The share of the aging population is not very high, but China is facing the same problem. China's population last year was 1.36 billion and is expected to reach 1.3 billion by 2050. The share of the population aged 65 and over will increase from the current 10% to 27%.



Sources: Alzheimer's Study Group, *A National Alzheimer's Strategic Plan: The Report of the Alzheimer's Study Group* (March 2009), Alzheimer's Association 2009 *Alzheimer's Disease Facts and Figures* (March 2009); National Institutes of Health Office of the Budget

04

RESEARCH AND DEVELOPMENT



2nd Place as
"National Inventor of the Year Award" in 1997

Bill Andrews, Ph.D

In Molecular and Population Genetics
at the University of Georgia in 1981

Hi. I am Dr. Bill Andrews.

I've been researching Life Airport for the past 40 years, and over the past 30 years, I've researched how to create a healthy life by preventing and combating aging in humans.

My lab, Sierra Sciences, has done a lot of research on the relationship between telomeres and telomerase. As a result, many telomerase activating molecules (TAMs) were discovered.

TAM is a substance that slows the shortening of telomeres to keep you young for a long time, and by extending the length of short telomeres, it slows down the aging process of cells or helps them to become longer or younger.TAM C0314818 is the most potent and effective of all existing telomerase activating molecules.

I hope that more people can live a younger and healthier life through research on TAM. wish.

We want many people to regain health and happiness through our research and Defytime products.

21/01/2021
DR. Bill Andrews

12/1/2020

Dr. Bill Andrews has been working in cancer-related biotechnology for more than 40 years, and for the past 30 years, he has focused on finding ways to extend human lifespan by extending the telomeres of human cells.

Dr. Bill Andrews earned a PhD in Molecular and Population Genetics from the University of Georgia in 1981. He is a senior scientist at Armos Corporation and codon Corporation,

He was Director of Molecular Biology at Codon, Director of Geron Corporation, and Director of Technology Development at EOS Biosciences.

Dr. Bill Andrews, Director of Molecular Biology at Geron Corporation from 1992 to 1997, is a major discoverer of the RNA and protein components of human telomerase, and was awarded the "National Inventor of the Year" in 1997 as an inventor.

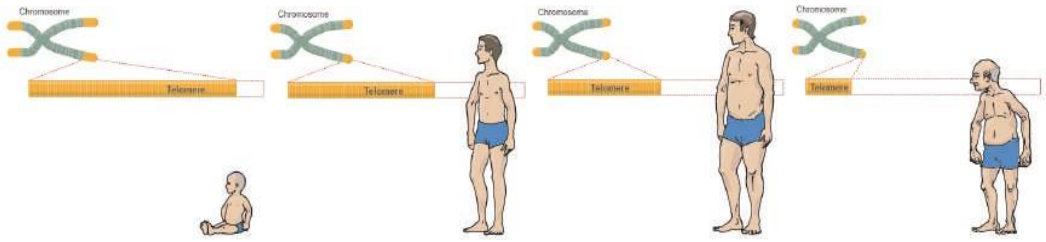
He is currently an inventor with more than 50 US patents related to telomerase and telomeres.

05

ABOUT TELOMERE

Human Aging and Telomeres

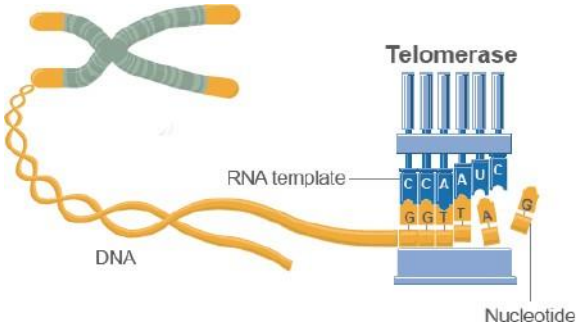
Human aging is a collective term for changes in one direction that occur over time, including physical and mental changes.
While knowledge and wisdom are acquired, body reaction times can slow down with age.
Aging is one of the leading risk factors for most human diseases, and about two-thirds of the approximately 150,000 people who die worldwide each day die from age-related causes.

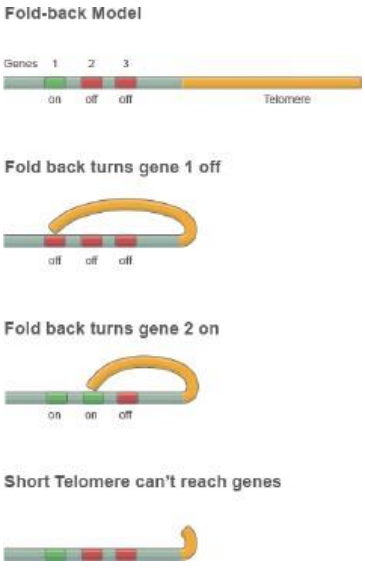


Telomerase

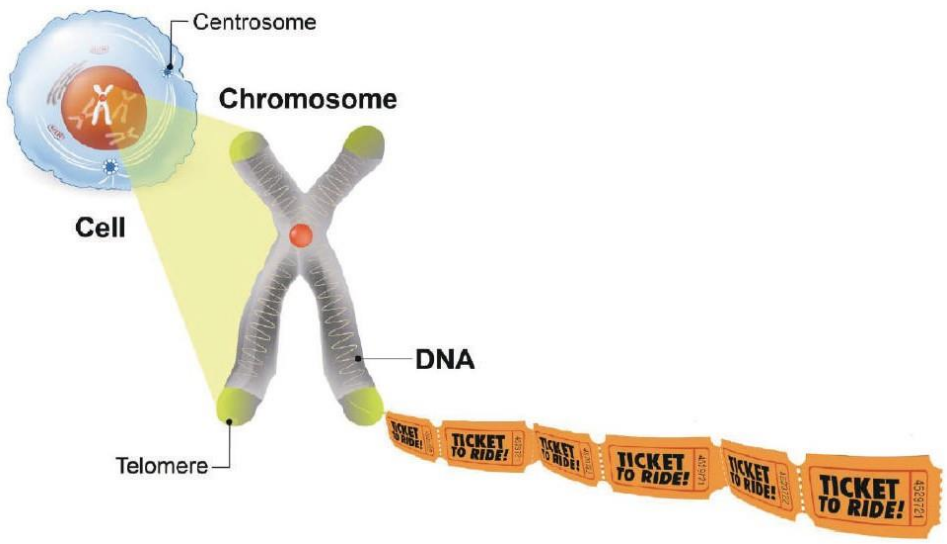
Also known as telomere reverse transcriptase, it is a ribonucleic protein that adds the polynucleotide “TTAGGG” from the end of eukaryote to the end of telomere.

Telomerase is a reverse transcriptase that carries its own RNA molecule (“CCCAAUCCC” pattern in vertebrates) that is used as a template to add new bases to the ends of the telomeres. This can replace the telomeres lost in each cell division. Because of this, telomere at the end of the chromosome is not shortened.





“Telomere is like a so-called amusement park entry ticket and It decreases with each division.”



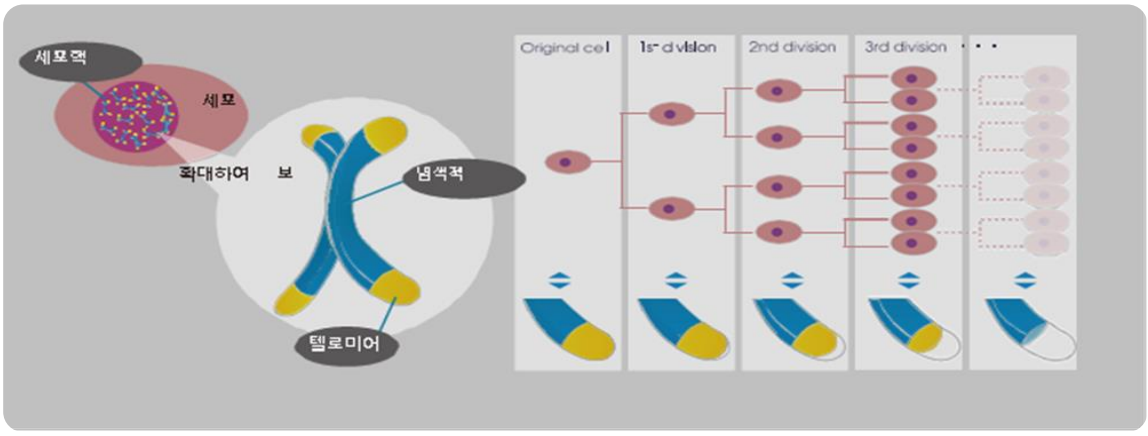
Telomeres are the ends of chromosomes that shorten every time a human cell divides. Every time a cell divides and a chromosome replicates, the telomeres shorten. As we live, telomeres continue to shrink, and when we reach an average of about 5,000 nucleotides, the cells reach a point of aging and a critical point where they can no longer divide, and they become senile.

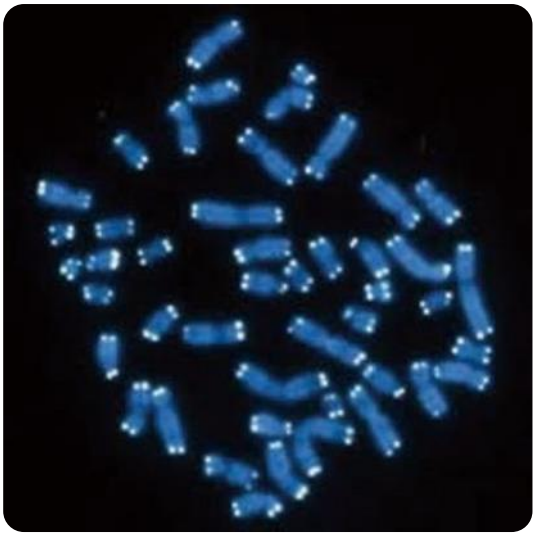
This problem is due to TEDS, which affects all of us. This problem is due to telomerase enzyme deficiency syndrome (TEDS), which affects all of us. If you are not deficient in this enzyme, telomeres can stay long and healthy. An individual's telomere length is closely related to biological age, and studies have shown that controlling telomere length can treat many age-related diseases.

Advanced science over the past 30 years has made progress in understanding the fundamental question of why we age and how we can prevent aging.

These findings are not yet widely known, so most people don't see aging as a disease and don't even know what can be cured or prevented.

“Telomere”, the cause of aging





However, telomeres are required for the separation of normal chromosomes.

When the cell division time is shortened or the telomeres become shorter than a certain length (aging point, critical point), cell viability can destabilize chromosomal loss, leading to various aging phenomena in the body.

In short, telomeres are one of the underlying causes associated with human aging.

Diseases caused by telomere shortening

Disease name	Abbreviation
Cardiovascular disease	CVD
Cancer	Cancer
Chronic obstructive pulmonary disease	COPD
Degenerative disc disease	DDD
Alzheimer's disease	AD
Degenerative arthritis	OA
Rheumatoid arthritis	RA
Osteoporosis	Osteonecrosis
General immunodeficiency	General Immunodeficiency
Skin aging	Skin aging
Macular Degeneration	AMD
Cirrhosis	Liver Cirrhosis
Muscular dystrophy	Muscular Dystrophy
Cell and tissue transplantation	Cell & Tissue Transplants
Acquired immunodeficiency syndrome (AIDS)	AIDS
Hutchinson Guilford Progeria Syndrome	HGPS
Congenital empathy syndrome	DC
Idiopathic pulmonary fibrosis	IPF
Cat crying syndrome	Cri-du-Chat Syndrome
Fanconi anemia	FA
Nodular sclerosis	TS
Werner syndrome	Werner’s Syndrome
Senescence	Aging

Problems and solutions in an aging society

Problem: Expansion of medical and nursing expenses

Elderly increase ▶ age-related diseases Patient increase ▶ Medical and nursing Expenses increase

In Japan in an aging society, the "national medical expenses + nursing benefits" in 2014 exceeded 50 trillion yen, Eventually, it reached 10% of GDP.

Challenge: Reduction of medical and nursing expenses

Medical and nursing Costs controled ▶ Age related Disease prevention ▶ Increases the number of healthy seniors

The solution is to expand "providing a healthy life, youth".

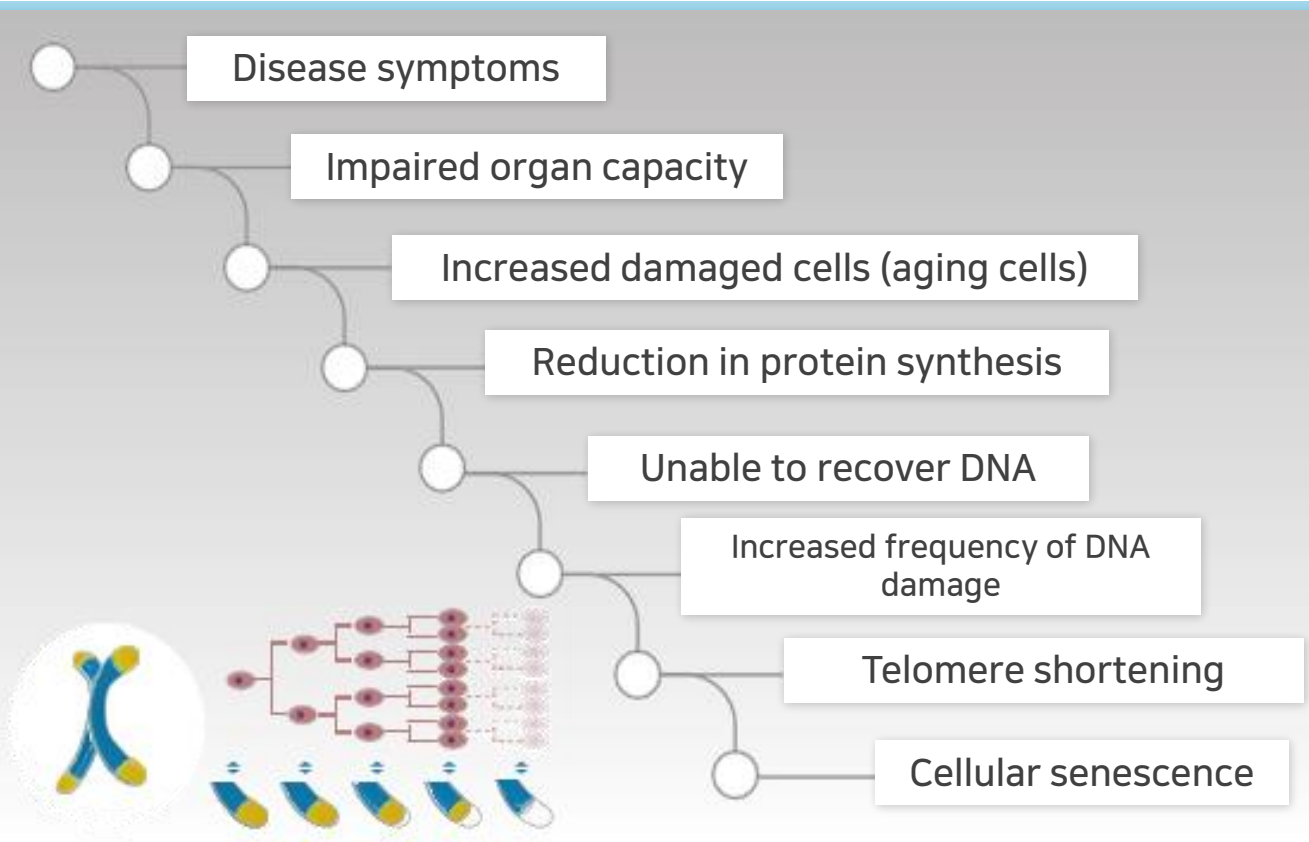
Medical = diagnostic care + therapeutic care + preventive care

The methodology for preventive medicine does not appear to be fully developed compared to the other two.In other words, there is a problem that is not yet clear about the scientific validity of which objects, what types of objects, and how to prevent diseases.

It is important to reaffirm the concept of "non-disease" in preventive medicine.

Chiba University Preventive Medicine Center WEB site interview special feature,
Excerpt from Professor Nagamori, Chiba University Preventive Medicine Center

Think of the beginning of 'illness'.



Before the symptoms of the disease appear…

With cell aging, the frequency of DNA damage exceeds the rate of DNA repair,
Damage accumulates without DNA repair. As a result, protein synthesis is reduced.
When proteins in a cell are consumed to sustain life, the cells themselves gradually become damaged and eventually die. When many cells reach such a condition in each organ of the body, the organ itself weakens and gradually develops disease symptoms.

Normal cell aging

Cell divisions in each organ and tissue that make up humans divide and die only for a limited number of times. The limit of division is called the “haflick limit”, and cells that have reached the haflick limit and stop dividing are in a “cell aging” state.
Empirical evidence suggests that the Haflick limit is at the end of the DNA strand. It shows that due to replication problems, the telomeres at the ends of the chromosomes shorten at each new cell division and continue to shrink until they reach a critical length (aging point, critical point). At this point, a scientific signal is sent and the cell stops dividing and dies.

06

TELOMERE TOTAL SOLUTION

Business Model : 4 Categories

TAT

Telomere Analysis Technology
By artificial intelligence robot

TAM

Telomerase Active Molecule

TLT

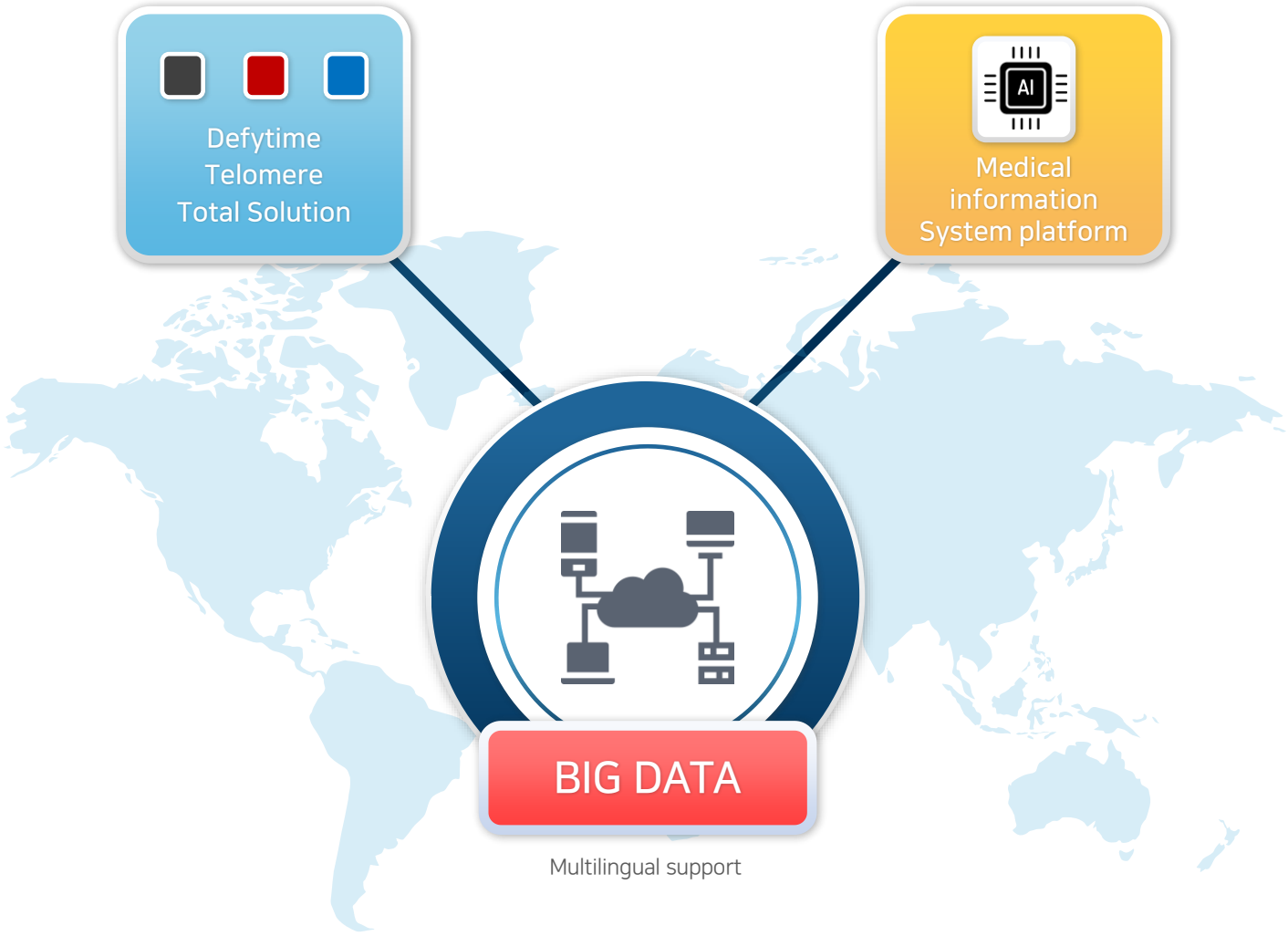
Telomere Lengthening Therapy

NBS

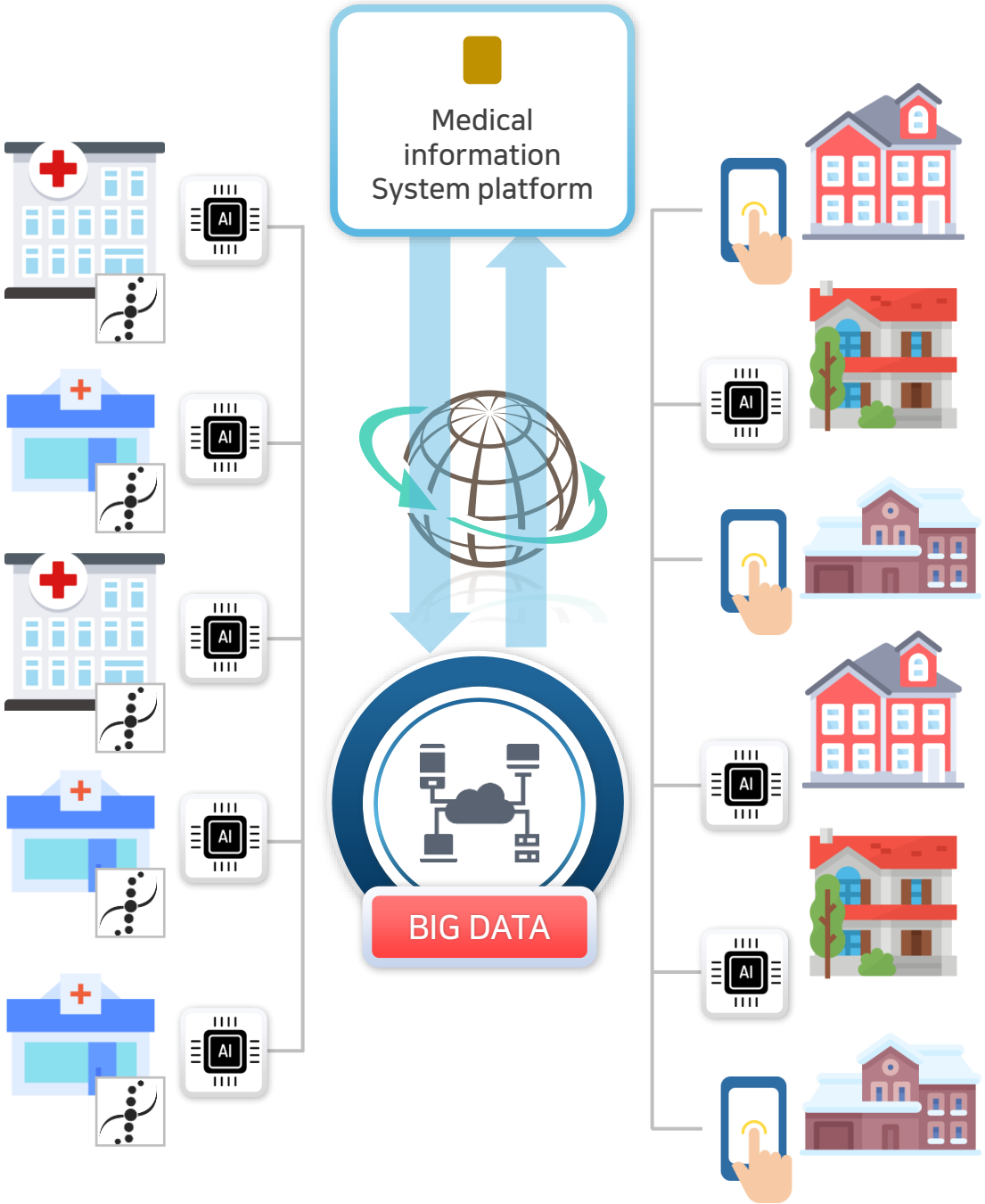
Nano Bubble Service

Telomere Analysis Technology

Telomere Analysis Technology
By Medical AI solution



Telomere Analysis Technology
By Medical AI solution



Telomere Analysis Technology

Attention in the world!

Telomere analysis by**"blood test"**

Medical institution

Blood collection
at a medical institution

Deliver by the collection kit
For White Blood Cells

Analysis Center

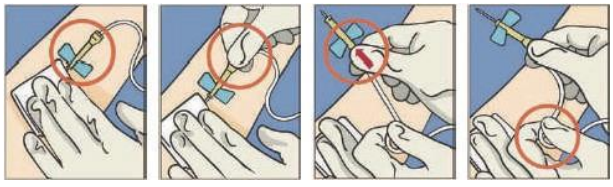
Leukocyte
Telomere analysis

Analysis center feedback

Explanation of the results
of the analysis by the doctor

the collection kit

Blood collection



Telomere Analysis Technology

Telomere Analysis Technology

Results report

Sample code: ESLL008083 | 14-07-2017

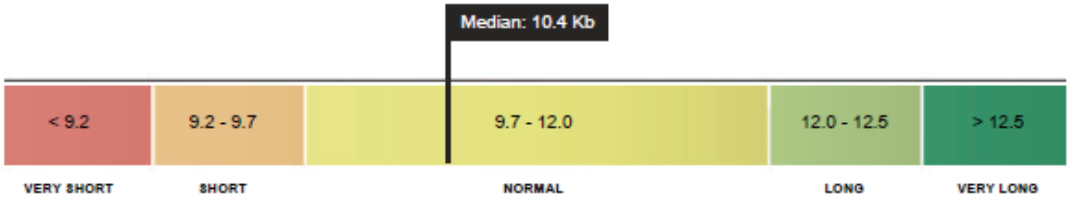
Questions?
Contact your physician for further interpretation.

Please record your report code for future measurements. Code: ESLL008083

1. Your telomere length

Median Telomere Length: 10.4 Kb

Your median telomere length is estimated to be normal compared to Life Length's database population.

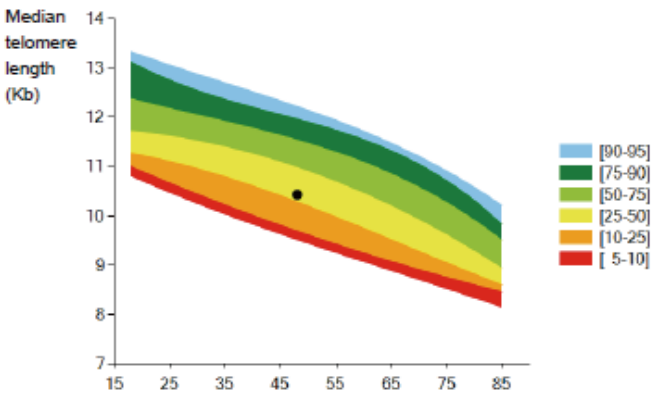


Median Telomere Length (MTL) = 10.4 ± 0.2 Kb

Average Telomere Length = 12.0 Kb

The ranges on this graph are dynamic and based on your age.

2. Median telomere length – Comparison by age band and percentiles



The black dot above shows your result.

This graph shows how your median telomere length compares with other people your age.

Each color band represents a range of percentiles of the control database. It is therefore best if your result falls into one of the upper bands.

According to your result, you fall into the 31 percentile, meaning that 31% of people your age have a shorter median telomere length.

3. Your estimated biological age

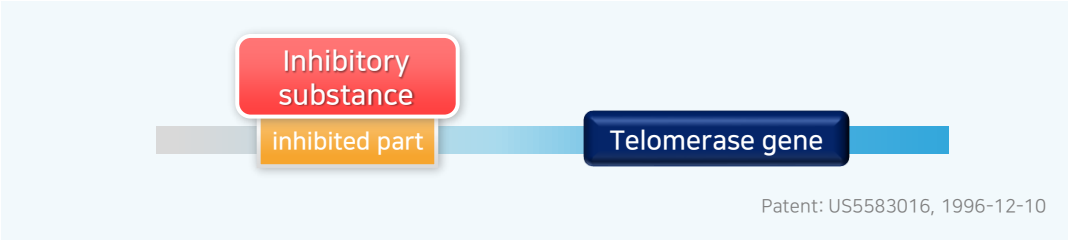
Estimated Biological Age: 50.7 years old

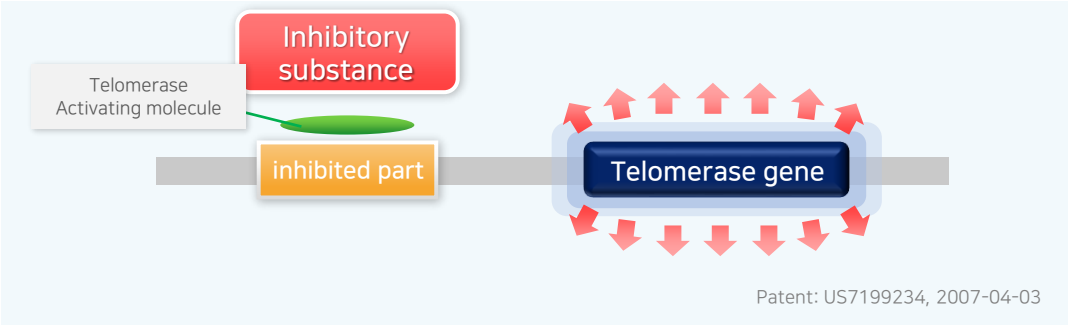
Chronological Age: 48.5 years old

www.lifelength.com | info@lifelength.com

Telomere Activating Molecule

“TAM” : Dr. Bill Andrews'
Great inventions and related theories





“C0314818”, developed by Dr. Bill Andrews (Sierra Science LLC.) in 2014, is an advanced material that prevents telomere shortening. We started our research in 1999, and after examining nearly 500,000 chemicals, we finally discovered the first chemicals with medical properties in 2007.

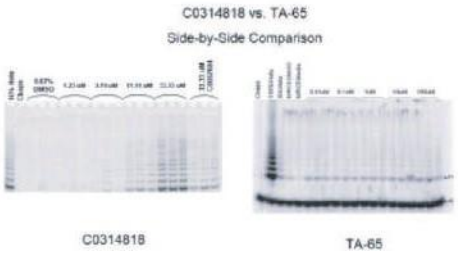
We went through additional verifications and found C0314818 after about 400,000 verifications.
This is a substance that has proven its mechanism in scientific terms and has also been patented.

It is TAM [Telomerase Activation Molecule] that induces and activates telomeres.
In fact, in the comparison test between “C0314818” and “TA-65” discovered at this time, “C0314818” showed 80-300 times stronger telomere expression effect than “TA-65”.

Telomere Activating Molecule

It produces **80-300 times more powerful telomerase** than TA-65.

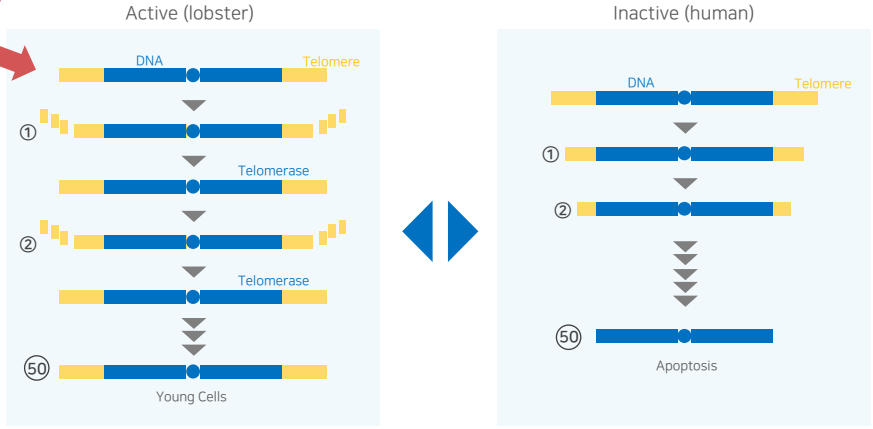
TAM C0314818



Attached document is Sierra's test,
ESERT and TRAP demonstrate.
The documentation explains what these tests mean.
There are also tests comparing the C0314818 to the TA-65.
TAM C0314818 was found to be 200 times stronger.

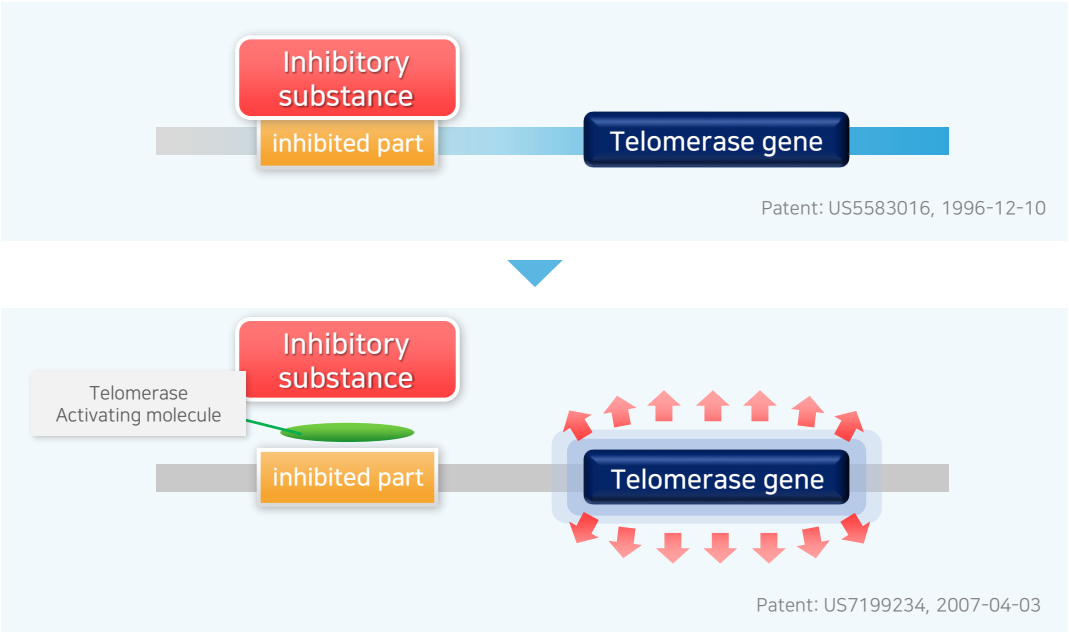
Creatures with mechanisms that do not shorten telomeres?

In lobster cells, telomeres, or enzymes called "telomerases," are produced that expand certain repetitive arrangements of telomeres.
The main function of this enzyme is to add a base to the end of the chromosome as telomere shortens.
In other words, cells that express telomerase are like putting the clock hands back in life, so it can be said that the countdown of lifespan does not proceed.



Telomere Activating Molecule

"TAM Series" is the result of more than 30 years of research by Dr. Bill Andrews, and is the "activator of telomerase reactivation" TAM [Telomerase Activation Molecule] that enables people around the world to realize a healthier and longer-lived society. This is the name of the "TAM" mixed product series from Defytime, which was created to serve a wide variety of genres.
The TAM series products currently available include the latest telomerase-activating activator "TAM", which provides 80-300 times the effectiveness compared to those found in 2001.



Telomerase in human cells, whose production was stopped by an inhibitory substance, activates the telomerase gene by removing the inhibitory substance and at the same time prevents it from binding to DNA, thereby reactivating the telomerase gene in all cells of the body. This material is called "TAM".

Telomere Activating Molecule

Evidence

Biological and Chemical Analysis Toxicology, Research and Services

ABICH S.r.l.
생물학 및 화학 분석 독성학,
연구 및 서비스

Final report (long-term test)

Of cosmetics for 100 applicants in the VIVO test
Evaluation of anti-wrinkle, extraction and processing effectiveness.

Panel characteristics

This study was conducted on 100 healthy female volunteers aged 36 to 65 years, identified in the volunteer database of Abich Clinical and Beauty Testing Center in Italy, and was evaluated as suitable for participation in the study because they do not have skin diseases that require treatment.
Prior to commencement of the study, each applicant read and signed a consent form (Consent to Provide Information, C.I).
Each applicant had the opportunity to ask questions about the content of the study and was able to get detailed answers to them.
Candidates were given a description of the purpose of the test, procedure, and possible risks involved.

Participation in the study was only permitted after signing of informed consent.

The study only included volunteers in good health.

The originals of these prior consents have been kept at the Abich Cosmetics Institute.
All applicants have signed a consent form authorizing the processing of personal data in accordance with Italian law.
D.Lgs 196/2003

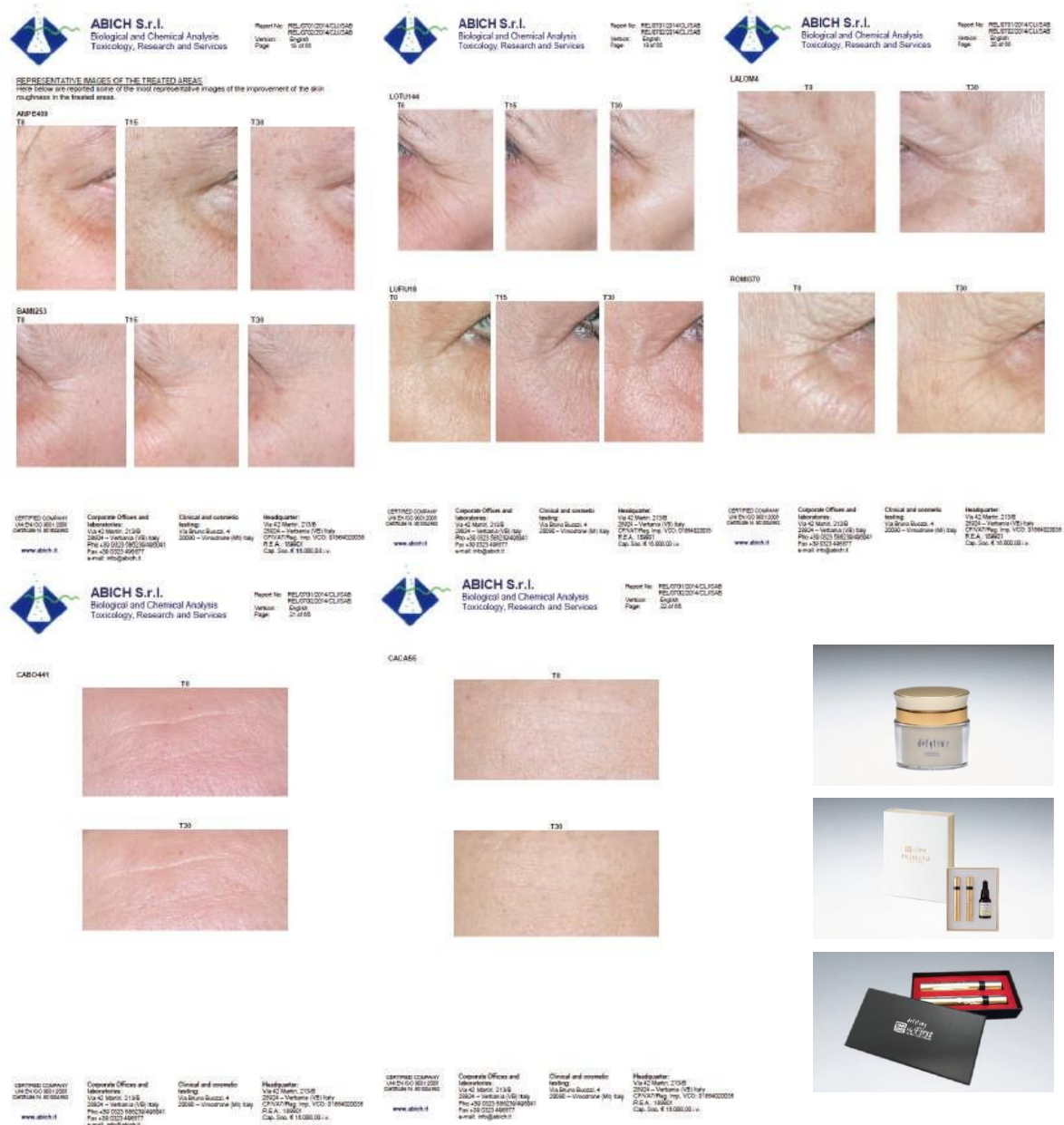
N° Vol.	Vol. Code	Age	N° Vol.	Vol. Code	Age
1	adci526	41	51	lode61	46
2	ancon12	48	52	loma2	51
3	aniz367	50	53	lopo479	63
4	anla484	39	54	lotu144	57
5	anla7	47	55	lual476	54
6	anpan13	48	56	lubel22	56
7	anpe409	52	57	lude228	45
8	anpe440	60	58	ludi5	47
9	ansa120	60	59	lufiu18	59
10	arsu460	54	60	luge86	55
11	bami523	61	61	lupr276	45
12	brti103	57	62	luri265	46
13	cabo441	54	63	lute520	60
14	caca55	58	64	lutuc9	60
15	cama505	41	65	maal258	54
16	caro420	37	66	maap492	45
17	chce155	48	67	maca268	55
18	clbe483	39	68	maca64	45
19	criquat14	56	69	macat1	61
20	crta129	39	70	made135	59
21	dabe206	47	71	malu257	48
22	dalo334	47	72	mama444	46
23	debo349	58	73	mela164	42
24	dima287	48	74	migi167	43
25	dipi365	59	75	miro432	52
26	doca447	53	76	mobe354	53
27	dogi445	45	77	more267	50
28	elca122	40	78	nagr443	51
29	eliv342	55	79	nama501	50
30	eman525	50	80	paba487	36
31	esa8	47	81	pamu418	51
32	fead421	58	82	pavi307	59
33	fibl275	62	83	pivi463	65
34	fipa355	40	84	rast348	54
35	frga90	51	85	ricl480	57
36	frma177	60	86	riia62	65
37	gaam497	53	87	roca128	47
38	gabr259	48	88	roia359	58
39	Gati439	47	89	romi370	65
40	gica434	39	90	rote181	62
41	giga455	51	91	rova262	51
42	gigr222	49	92	saca272	45
43	gima500	58	93	saca38	36
44	gipi527	59	94	sagi270	45
45	giufi20	53	95	sapo213	55
46	kadi493	38	96	sigi469	48
47	lalom4	64	97	tecri3	41
48	lata251	49	98	tiba281	52
49	lili254	59	99	tira309	48
50	liva137	49	100	vidi524	55
MEAN					52

Telomere Activating Molecule

Evidence

Representative image of the treated area

Below are some of the most representative images of improving the roughness of the skin at the treatment site.



Telomere Activating Molecule

Product line up contains
telomerase-inducing activation substance "TAM"

Telomere Activating Molecule

“TAM” PRICE

(Website)

Telomere Lengthening Therapy

Telomerase Gene Therapy

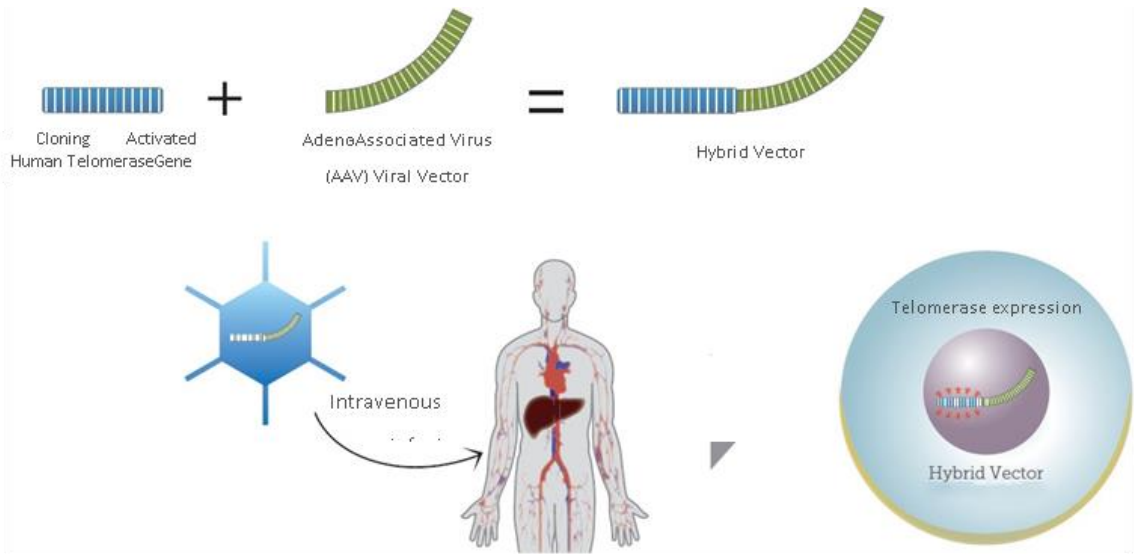
In 1990, for the first time in the world, gene therapy based on technology accumulated over a long period of time was conducted, and after 2011, many success stories began to be reported in succession from around the world, and as a result, the era of gene therapy is approaching.
Gene therapy is defined as “to apply genetic engineering to diseases caused by harmful genes, and to treat and administer genes in/out of the body”.

*Notification : March 27 2002 (Notification 1 for 2002 of the Ministry of Education,
Culture, Sports, Science and Technology/Ministry of Health Labour and Welfare) Complete
Revision : December 28 2004 Partial
Revision : December 1 2008

Telomere Lengthening Therapy

Telomerase induction, Hybrid Vector Solution

In Defytime Telomere Lengthening Therapy, a hybrid vector that combines activated telomerase gene and adeno-associated virus (=AAV) vector is produced and cultured.
Basically, this Hybrid Vector is administered to the jugular vein by drip intravenous injection*, and is transported to the target tissue through blood and introduced into the cells. Hybrid Vector introduced into cells begins to express telomerase and restores shortened telomeres.



Nano Bubble Services

Whole Body Telomere Care

Defytime TAM Nano-bubble Bath

TAM

Our exclusive TAM Nano-bubble Delivery System uses a high concentration telomerase activating nano-bubble solution to provide **whole body telomere care.**

ORDER NOW

07

ABOUT TLC COIN

Technical Specifications

Smart contract

TLC coins are generated according to the ERC20 specification of the Ethereum blockchain.
Exact information about smart contracts will be added soon, and specifics are currently in progress.

User safety

Only the account holder can access the wallet. The password for the account is not stored on the site along with the hash used for fast login. Users can store their wallet password on the platform or delete it for security reasons. In this case, the user must enter the password of the wallet that is not stored on the TLC Coin platform every time they make a transfer or pledge.

Safety of funds

TLC employees cannot access user wallets. Funds raised through campaigns and stored in specific wallets are automatically managed by smart contracts.
When fundraising is complete, all funds are automatically transferred to the wallet designated by the campaign creator.
TLC employees cannot use the wallet as they do not have access to the wallet specified in the campaign.

TLC coins are automatically generated and issued, and are only verified after receiving the donation for the campaign's smart contract (ETH or BTC).

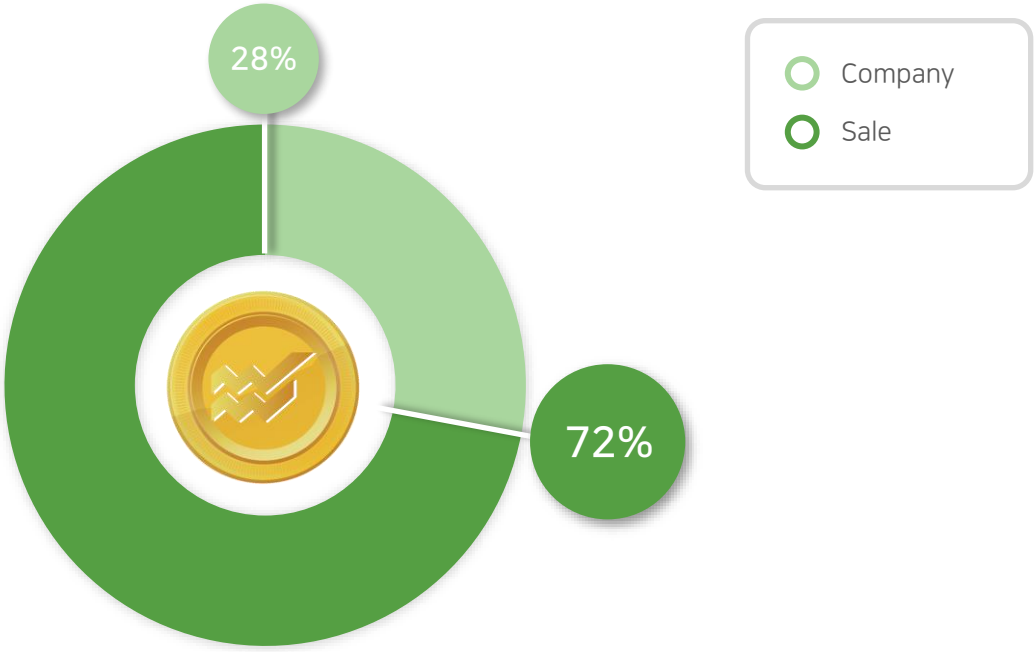
By doing this, you can prevent TLC coin fraud and give all TLC coins a real monetary value.

Responsibility

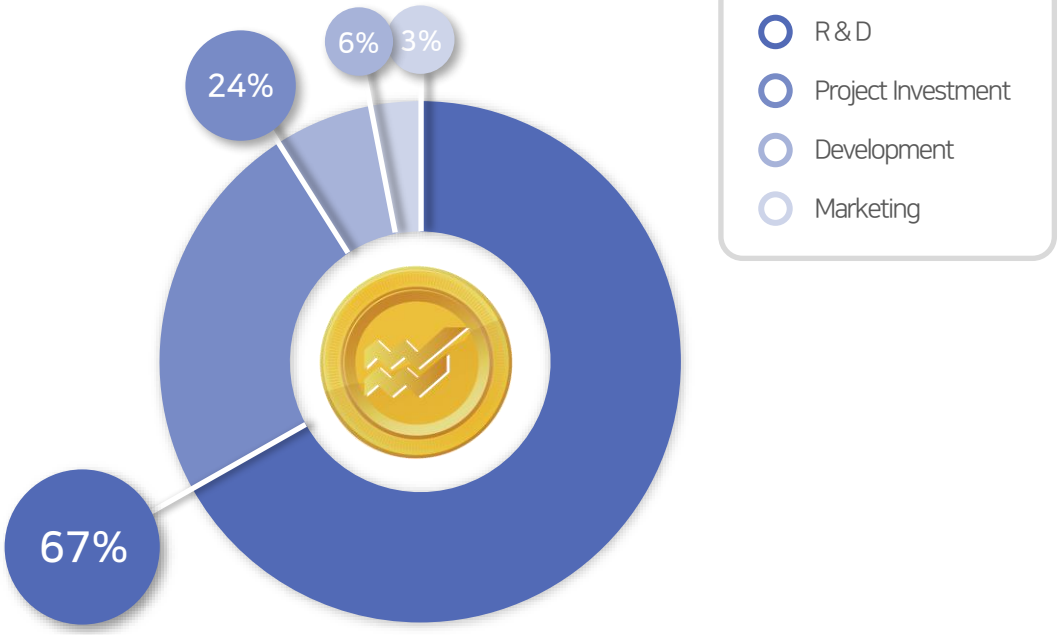
Whatever you send is recorded on the system and encrypted. User wallets are also encrypted on the platform, so the association with user profiles is minimized as much as possible.

All personal user data including passwords, emails and wallet IDs are encrypted.
This way, TLC users can be protected from hacking or information leakage.
Even in the worst case, it stays safe because you don't have access to your user data, passwords, and wallet, so you can't transfer money from your wallet.

Telomere Lengthening Coin Extract



Telomere Lengthening Project



08

ROAD MAP

ROAD MAP

2021

Publish TLC Coin

2021

• Commercialization of Telomere Extension Treatment (Vanuatu)

• Commercialization of Telomere Extension Treatment (Japan/Thailand)

• Listing on Global exchanges

• Clinical trials related to hair loss due to aging (Proceed in connection with Dankook University)

• Strengthening immunity through telomere extension Clinical trial (Experiment in connection with Dankook University)

Telomere extension clinical trial progress (Telomere Lengtnening Therapy Clinical tests) NZ & Vanuatu

2022

Hair loss related products Started sales in the US, Europe and China markets

09

RISK FACTORS

Disclaimer

This document has been prepared for informational purposes only and is not an offer or call to sell stock or securities of the TLC Coin platform or any other related company.

TLC Coin is not a security.

Users acknowledge, understand and agree that TLC Coin is not a securities, is not registered as a security with a government agency, and is not considered to be such.
The user is entitled to receive, retain, manage or dispose of revenue, exercise, redemption or redemption of profits, income or other revenue, the right to receive revenue, TLC coin or TLC coin platform or other TLC coin property. You acknowledge, understand and agree that it does not grant the termination or expiration of any or all rights, interest, titles, or interests of the Company.

Benefit coverage

There is no guarantee that the value of TLC coins will increase. There is no guarantee that the price of TLC Coin will not drop significantly due to unexpected circumstances, reasons beyond the developer's control or force majeure circumstances.

Risks associated with Ethereum

TLC coins are issued on the Ethereum blockchain. Hence Ethereum
TLC Coin's trading network may not work as expected due to protocol errors or malfunctions.

Regulatory uncertainty

Blockchain technology is supervised and controlled by various regulatory agencies around the world.
TLC coins may be subject to one or more requests or actions, including, but not limited to, restrictions imposed on the use or possession of digital tokens such as TLC coins. These restrictions may slow or limit the functionality or redemption of DTLC coins in the future. TLC Coin is not an investment.
TLC Coin is not an official or legally binding investment. In the event of unforeseen circumstances, the objectives described in this article may change. Although we strive to achieve all the goals described in this document, all risks arising from purchasing TLC Coins are the responsibility of the individual users and organizations.

Quantum computer

Technological innovations such as the development of quantum computers can pose risks to cryptocurrencies, including TLC coins.

Capital loss risk

Funds raised for fundraising are never guaranteed. If they lose or lose value, there is no private or public insurance agent for buyers to apply for help.

Return of funds

If the campaign does not end successfully or is canceled by the creator or operator, TLC coins will be returned to the wallet of the user who transferred funds to the wallet of the Campaign. If the user has paid in fiat currency (USD, EUR, RUR or other), the funds will be returned to the ETH wallet within the public money system. Users can withdraw this ETH or use this ETH to participate in other campaigns launched on the TLC Coin platform.

Risks of using new technologies

TLC Coin is a relatively unproven new technology. In addition to the risks mentioned in this document, there are additional unpredictable risks for the TLC Coin team. These hazards may appear in other forms of hazards other than those specified here.

Integration

This Agreement constitutes the entire agreement between the parties with respect to the content of this Agreement. All previous agreements, discussions, presentations, warranties and conditions are incorporated into this document. Except as expressly set forth in this Agreement, there are no express or implied warranties, representations, conditions or agreements between the parties.
This Agreement may be changed or modified with documents duly enforced by both parties.

10

TEAM AND ADVISORS

Jonathan Greenwood
CEO

Jonathan Greenwood (Park) is the Director of Business Development and CEO of Defytime Holdings Ltd., a global marketing and trading company. After graduating from the College of Architecture, he became an entrepreneur between Antipodean and East Asia. With 15 years of global marketing sales experience, he has secured excellent clients in the Asian market and built a large network in the Southeast Asian market. His management skills and understanding of the region add tremendous value to making Defytime & Sierra Science a world-class anti-aging destination.

Bill Andrews, Ph.D.
Chief Scientist/Chief Technology Officer

Dr. Bill Andrews is the President and CEO of Sierra Science. As a scientist, athlete and executive, he constantly challenges the limits and competitions. He has appeared in popular science, the Today show, and many documentaries on the extension of life, including the movie "The Immortalist" in which he starred with Aubrey de Gray. . Since 1981, Dr. Bill Andrews has focused on finding ways to extend human longevity and health conditions by maintaining telomeres. Dr. Bill Andrews was one of the leading discoveries of both the RNA and protein components of human telomerase in 1997. Ranked second in'National Inventor of the Year'. He earned a Ph. He is also one of the renowned inventors who have received more than 50 invention patents for telomerase published in the United States and is the author of numerous scientific research articles published in peer-reviewed scientific journals. Dr. Bill Andrews is also an avid marathon runner. Born on December 10, 1951, he regularly challenges 100 kilometers and runs 100+ miles often set the best record of his age. From all over the world, his run took place in the most extreme environments, now featured in the film'The High'.

Dr. Laura Briggs
Telomere Researcher (Partner Scientist)

Laura Briggs received her Bachelor of Science in Nutrition in 1993, and in 2000 she received her Ph.D. in Environmental Science and Health from the University of Reno Nevada. After a year of PhD at UNR, she entered Sierra Science in 2001. In addition to coordinating her research and development at Sierra Science, she currently works as a biology lab coordinator at Truckee Meadows Community College (TMCC), where she is a V.A. Participated in a research project at a medical center in Reno, Nevada.

Federico Gaeta, Ph.D.
Telomere Researcher (Partner Scientist)

Dr. Geta identified the first potent, small molecule, a human telomerase inhibitor. He is the only one to invent a universal therapeutic cancer vaccine technology based on telomerase that is currently being evaluated in human clinical trials. Dr. Geta is one of the experienced executives of leading pharmaceutical biotechnology companies in the field of new drug discovery and development.

Dr. Shin D.Y.
Telomere Researcher (Partner Scientist)

Dr. Shin presented the first evidence that a p53 tumor suppressor gene could be injected into human tumor cells published in PNAS in 1997, which he first published as PI. In this paper, he proposed a new cancer treatment to induce old age in human tumors. He also showed interest in the aging of articular chondrocytes and discovered new signaling pathways of chondrocyte senescence that are mediated by p38MAPK and regulated by immunosuppressants such as CsA and FK506. He recently focused on new genes screened by a cloning strategy of functional cDNA expression that regulates cell death and aging. His studies provide insight into the regulation of the aging process and the development of age-related diseases.

Joseph Raffaele, M.D.
Telomere Specialist & Doctor of Medicine

Dr. Raffaele recently focused his clinical research interest on the role of telomeres in aging and the potential benefits of the natural compound TA-65, which has been shown to be an activator of an important enzyme, telomerase. Since 2006, he has been a member of the Scientific Advisory Board. There is TA Sciences, which licensed TA-65 from Geron, a biotech company that discovered it.
Dr. Raffaele recently conducted an observational study of 114 PhysioAge patients, conducted a joint study with three telomere biologists, and the results were published in the journal Rejuvenation Research, the first human research report to demonstrate the effectiveness of TA-65.

11

APPENDIX

U.S. - Issued Patents

DNA encoding an antigenic protein derived from Eimeria tenella and vaccines for prevention of Coccidiosis caused by Eimeria tenella
Patent Number : US4874705, Issued 1989-10-17
https://patents.google.com/patnet/US4874705

DNA encoding an antigenic protein derived from Eimeria tenella and vaccines for prevention of Coccidiosis caused by Eimeria tenella
Patent Number : US5187080, Issued 1993-02-16
https://patents.google.com/patnet/US5187080

Mammalian telomerase
Patent Number : US5583016, Issued 1996-12-10
https://patents.google.com/patnet/US558301

Mutagenesis methods and compositions
Patent Number : US5702931, Issued 1997-12-30
https://patents.google.com/patnet/US5702931

Assays for the DNA component of human telomerase
Patent Number : US5776679, Issued 1998-07-07
https://patents.google.com/patnet/US5776679

Protease-resistant thrombomodulin analogs
Patent Number : US5827824, Issued 1998-10-27
https://encrypted.google.com/patnet/US5827824

Mammalian telomerase
Patent Number : US5837857, Issued 1998-11-17
https://www.lens.org/lens/patent/US_5837857_A
https://patents.google.com/patnet/US5837857

Methods and regents for regulating telomere length and telomerase activity
Patent Number : US5858777, Issued 1999-01-12
https://patents.google.com/patnet/US5858777

Protease-resistant thrombomodulin analogs
Patent Number : US5863760, Issued 1999-01-26
https://patents.google.com/patnet/US5863760

RNA component of mouse, rat, Chinese hamster And bovine telomerase
Patent Number : US5876979, Issued 1999-03-02
https://patents.google.com/patnet/US5876979/ja

Mammalian telomerase
Patent Number : US5958680, Issued 1999-09-28
https://patents.google.com/patnet/US5958680

RNA component of telomerase
Patent Number : US6013468, Issued 2000-01-11
https://patents.google.com/patnet/US6013468
https://lens.org/lens/patent/US_6013468_A

Mammalian telomerase RNA gene promoter
Patent Number : US6054575, Issued 2000-04-25
https://patents.google.com/patnet/US6054575

Protease-resistant thrombomodulin analogs
Patent Number : US6063763, Issued 2000-05-16

Mammalian telomerase
Patent Number : US6258535, Issued 2001-07-10
https://patents.google.com/patnet/US6258535

Telomerase
Patent Number : US6261836, Issued 2001-07-17
https://www.lens.org/lens/patent/US_6261836_B1

Peptides related to TPC2 and TPC3, two proteins
That are coexpressed with telomerase activity
Patent Number : US6300110, Issued 2001-10-09

Mammalian telomerase
Patent Number : US6320039, Issued 2001-11-20

Antisense compositions for detecting and Inhibiting telomerase reverse transcriptase
Patent Number : US6444650, Issued 2002-09-03
https://patents.google.com/patent/US6444650

Human telomerase catalytic subunit: diagnostic And therapeutic methods
Patent Number : US6475789, Issued 2002-11-05
https://lens.org/lens/patent/US_6475789_B1

Mammalian telome
Patent Number : US6548298, Issued 2003-04-15
https://patents.google.com /patent/US6548298

U.S. - Issued Patents *(continued)*

Promoter for telomerase reverse transcriptase
Patent Number : US6610839, Issued 2003-08-26
https://encrypted.google.com/patnet/US6610839

Cells immortalized with telomerase reverse Transcriptase for use in drug screening
Patent Number : US6617110, Issued 2003-09-09
https://patents.google.com/patnet/US6617110/en

Antisense compositions for detecting and Inhibiting telomerase reverse transcriptase
Patent Number : US6627619, Issued 2003-09-30
https://patents.google.com/patnet/US6627619/ar

Methods and compositions for modulating Telomerase reverse transcriptase(TERT) expression
Patent Number : US6686159, Issued 2004-02-03
https://patentimages.storage.googleapis.com/fd/70/fd/5181edb37e67e2/US6686159.pdf

Telomerase promoter driving expression of Therapeutic gene sequences
Patent Number : US6777203, Issued 2004-08-17
https://patents.google.com/patnet/US6777203

Method for detecting polynucleotides encoding telomerase
Patent Number : US6808880, Issued 2004-10-26
https://encrypted.google.com/patnet/US6808880

Telomerase
Patent Number : US6921664, Issued 2005-07-26

Genes for human telomerase reverse transcriptase and telomerase variants
Patent Number : US6927285, Issued 2005-08-09
https://lens.org/lens/patent/US_6927285_B2

Methods for detecting nucleic acids encoding human telomerase reverse transcriptase
Patent Number : US7005262, Issued 2006-02-28
https://search.wellspringsoftware.net/patent/US07005262B2

Telomerase
Patent Number : US7056513, Issued 2006-06-06
https://patents.google.com/patnet/US7056513

Mammalian cells that have increased proliferative capacity
Patent Number : US7195911, Issued 2007-03-27

Regulatory segments of the human gene for Telomerase reverse transcriptase
Patent Number : US7199234, Issued 2007-04-03
https://lens.org/lens/patent/US_7199234_B2

Telomerase expression repressor proteins and Methods of using the same
Patent Number : US7211435, Issued 2007-05-01

Assays for TERT promoter modulatory agents Using a telomerase structural RNA component
Patent Number : US7226744, Issued 2007-06-05
https://patents.google.com/patent/US7226744

Nucleic acids encoding human telomerase Reverse transcriptase and related homologs
Patent Number : US7262288, Issued 2007-08-28
https://lens.org/lens/patent/US_7262288_B1

Methods and compositions for modulating Telomerase reverse transcriptase (TERT) expression
Patent Number : US7279328, Issued 2007-10-09
https://www.lens.org/lens/patent/US7279328

Antibody to telomerase reverse transcriptase
Patent Number : US7285639, Issued 2007-10-23
https://patents.google.com/patent/US7285639

Identifying and testing antisense Oligonucleotides that inhibit telomerase reverse transcriptase
Patent Number : US7297488, Issued 2007-11-20
https://patents.google.com/patent/US7297488

Telomerase promoters sequences for screening Telomerase modulators
Patent Number : US7378244, Issued 2008-05-27
https://lens.org/lens/patent/US_7378244_B2

Treating cancer using a telomerase vaccine
Patent Number : US7413864, Issued 2008-08-19
https://patents.google.com/patent/US7413864

U.S. - Issued Patents *(continued)*

Muteins of human telomerase reverse Transcriptase lacking telomerase catalytic activity
Patent Number : US7517971, Issued 2009-04-14
https://patents.google.com/patnet/US7517971

Nucleic acid compositions for eliciting an Immune response against telomerase reverse transcriptase
Patent Number : US7560437, Issued 2009-07-14
https://lens.org/lens/patent/US_7560437_B2

Increasing the proliferative capacity of cells using Telomerase reverse transcriptase
Patent Number : US7585622, Issued 2009-09-08
https://lens.org/lens/patent/US_7585622_B1

Human telomerase reverse transcriptase polypeptides
Patent Number : US7622549, Issued 2009-11-24
https://patents.google.com/patent/US7622549B2/en

Antibody to telomerase reverse transcriptive
Patent Number : US7750121, Issued 2010-07-06

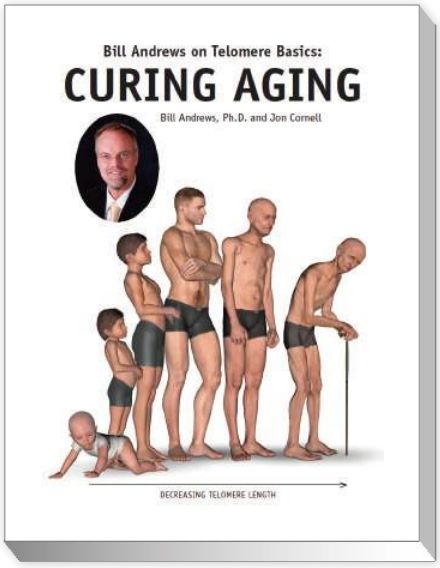
Telomerase expression repressor proteins and Methods of using the same
Patent Number : US7795416, Issued 2010-09-14
https://www.lens.org/lens/patent/US_7795416_B2

Regulatory segments of the human gene for Telomerase reverse transcriptase
Patent Number : US7879609, Issued 2011-02-01
https://lens.org/lens/patent/US_7879609_B2

Kit for detection of telomerase reverse Transcriptase nucleic acids
Patent Number : US8222392, Issued 2012-07-17
https://patents.google.com/patent/US8222392/en

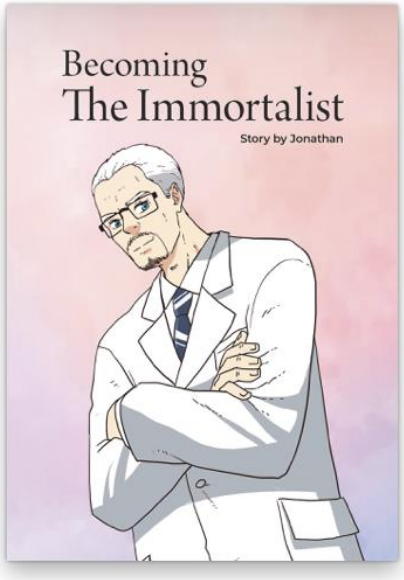
Human telomerase catalytic subunit
Patent Number : US8236774, Issued 2012-08-07
https://pubchem.ncbi.nlm.nih.gov/patent/US8236774#section=Top

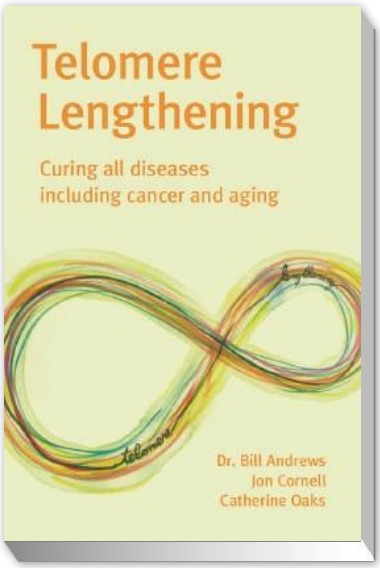
Dr. Bill's books



CURING AGING

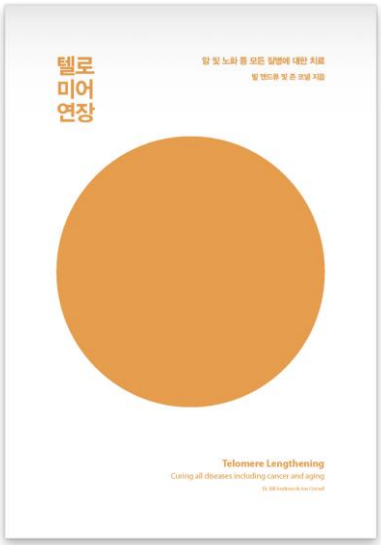
FIRST EDITION SECOND EDITION





Telomere Lengthening

NEW BOOK



Telomere Lengthening

Telomere Lengthening Coin

Defytime
Telomere Lengthening
Solution

www.telomerecoin.com