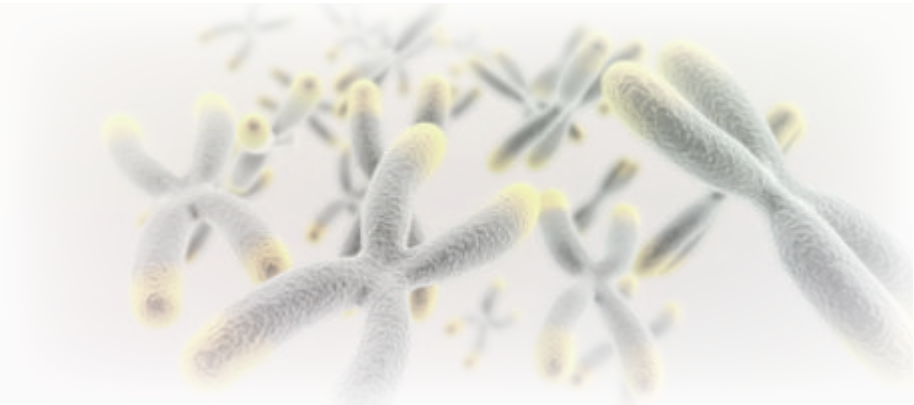
TELOMERE COIN

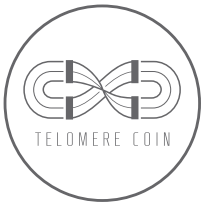
defytime Telomere Total Solution

TXY WHITE PAPER



Ver.3.1.1

The telomere total solution program will raise a lifespan revolution!



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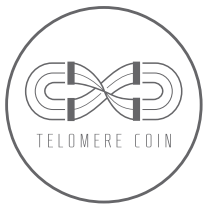
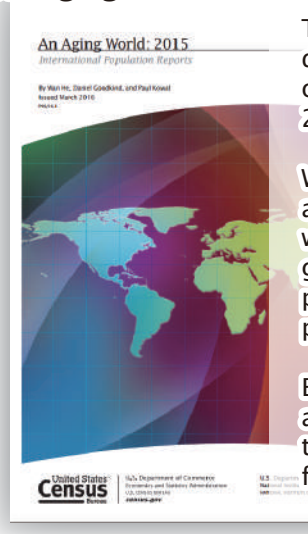


1. MARKET OVERVIEW

40% of its population will be over 65 in 2050, according to a new analysis by the U.S. Census.

人口老龄化是包括发达国家在内的许多国家的一个问题。 扩大老龄化社会的医疗费用和护理费用扩张问题将导致财务压力。
有必要通过创造老年人的工作机会，包括支持老年人，尽快解决伴随人口老龄化的生产年龄人口减少的问题。

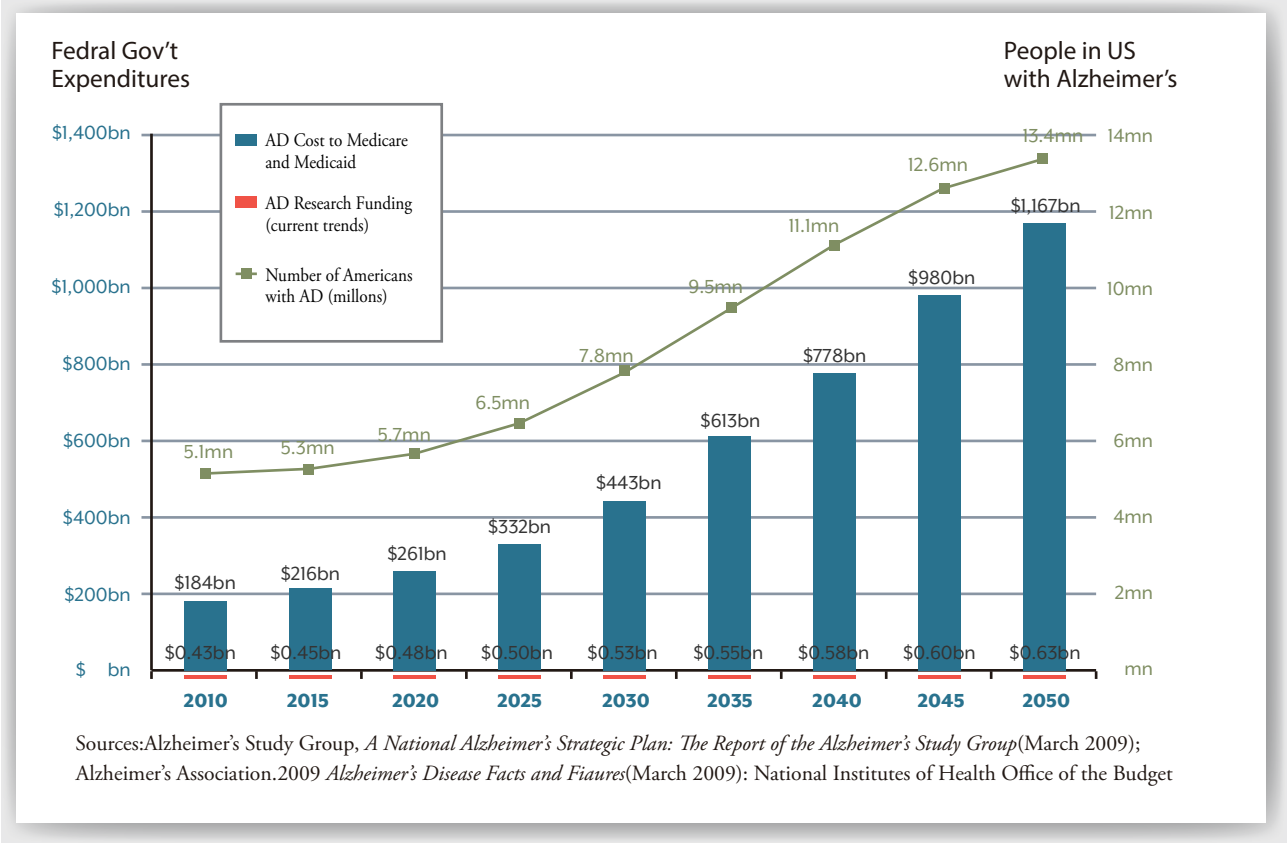
An Aging World : 2015



The age burden for Japan is already terrible, which makes solutions more difficult to come by. It has no way to replace the 27% of its population that is over 65, as the nation's total population is expected to drop from 127 million in 2015 to 107 million in 2050.

Whatever positive solutions, along with failed plans, the Japanese government and private enterprise come up with to combat the trend, other countries will watch closely. Among developed countries, the U.S. population is expected to grow from 321 million last year to 398 million in 2050. Over the same period, people who are 65 or older will grow from 14% of the population to 22%. The problem will be worse in Germany, France and Italy.

Even China faces the same problem, although the percentages of the population are not so high. China's population was 1.36 billion last year, and it is forecast to be 1.30 billion in 2050. The portion of its population over 65 will grow to 27% from the current number of 10%.



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 Fiaures*(March 2009): National Institutes of Health Office of the Budget

超老龄化社会的问题与解决方案

问题：医疗费用和护理费用的膨胀

老人增加 ▶ 年龄相關疾病的患者增加 ▶ 医疗·介护费膨张增大

在日本超老龄化社会，2014年度的“国民医疗费+护理福利”的支出超过50万亿日元，最终达到GDP的10%。

挑战的关键点：减少医疗费用和护理费用的扩大

医疗和护理费用的控制 ▶ 预防与年龄有关的疾病 ▶ 增加健康的老年人

▶▶ 换句话说，解决方案是延长“健康生活”

医学 = 诊断医学 + 治疗医学 + 预防医学

关于预防医学，似乎与其他两种方法相比，尚未完全被开发。
换句话说，还有一个问题，那就是目前还不清楚科学的有效性究竟是关于什么样的对象，然后什么样的对象和什么样的方法用来预防疾病已取得成效。

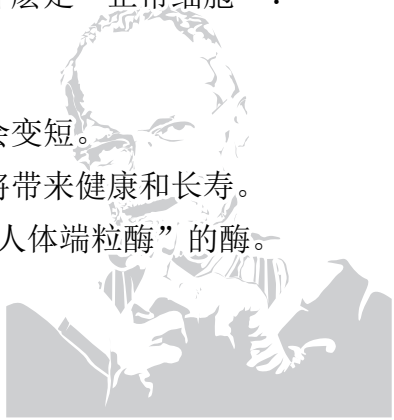
*千叶大学预防医疗中心网站访谈专题1摘录自“千叶大学预防医学中心教授长森教授”的评语

在预防医学中，重申“非疾病”的概念是重要的。

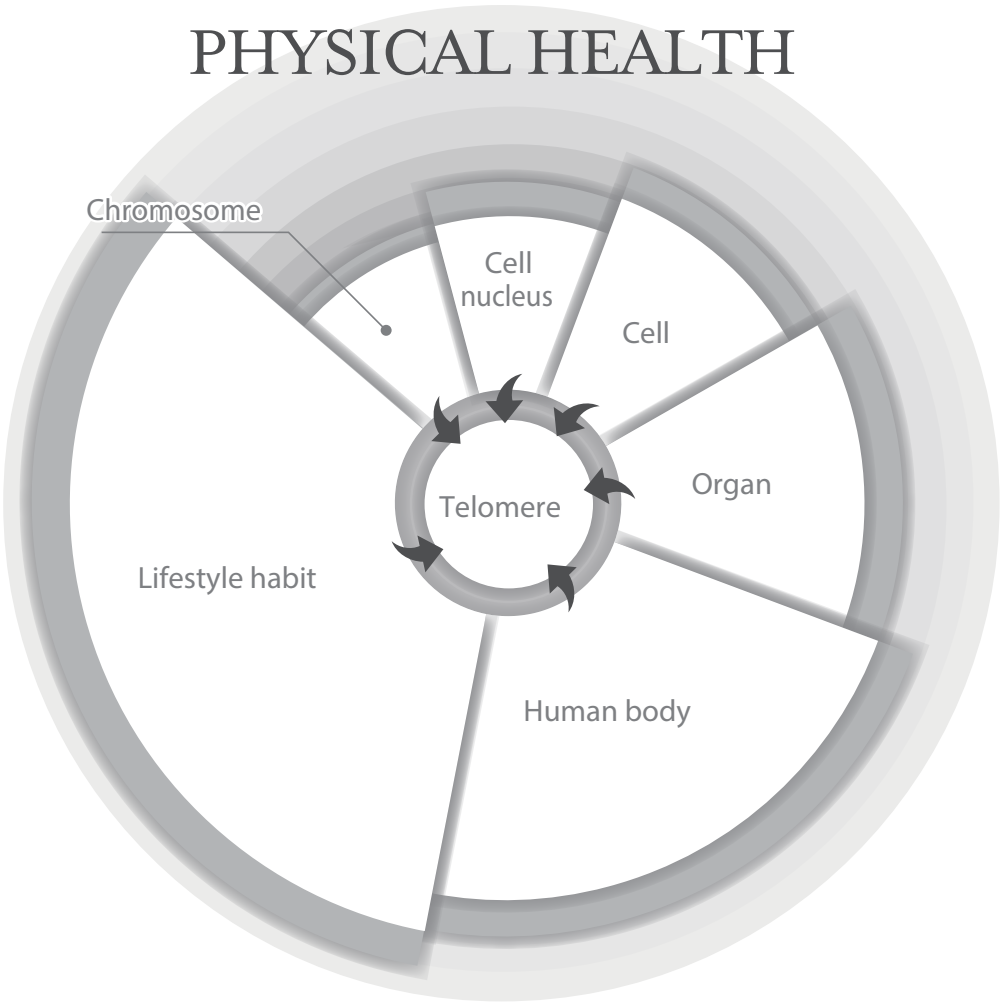
你是否曾想过什麽是“健康”？

健康是身体各部分正常运转的状态。大脑，器官，骨骼和血管是人体的重要组成部分。这些部分由人体的最小单位“细胞”组成。

这意味着当我们的“细胞”正常时，我们是“健康的”。 那麽，什麽是“正常细胞”？每个细胞都有染色体，人体端粒位于染色体的末端。



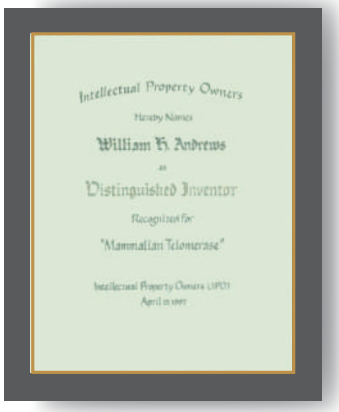
人体端粒决定细胞的健康。 在人体中，每当细胞分裂时，端粒就会变短。当端粒达到一定长度时，细胞停止分裂并死亡。 保持端粒的长度将带来健康和长寿。分子生物学家比尔安德鲁斯博士在历史上首次发现了这种被称为“人体端粒酶”的酶。



来自首席科学官

Bill Andrews, Ph.D.

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



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

大家好
我是比尔安德鲁斯，
过去36年来，我一直在研究生物技术，并在过去的24年中研究如何通过预防和扭转人类衰老来创造健康的生活。我的公司Sierra Sciences在端粒生物学，衰老时钟以及端粒和端粒酶之间的关係方面做了大量的研究。因此，我们能够找到许多端粒酶活化分子（TAM）。

TAM是能够帮助延缓端粒缩短以延长青春的物质，同时延长极短的端粒以使细胞恢复活力。TAM-818是所有现有端粒酶激活分子中最强大和最有效的物质。我希望我们中的许多人能够通过使用TAM-818进行研究，从而延缓衰老，变得更加年轻和健康。

本网站（http://defytimer.com）介绍了我长期的研究成果和抗衰老产品，以帮助大家保持更健康和更年轻的生活。

我希望你们中的大多数人能通过我们的研究和Defytime的产品重新获得健康和幸福。

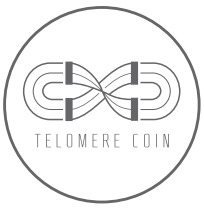
日期:2017年11月27日

Sincerely
Bill Andrews, Ph.D.

比尔安德鲁斯博士在生物技术行业工作超过30年，过去20年一直致力于通过乾细胞端粒缩短来延长人类寿命。
比尔安德鲁斯博士1981年在乔治亚大学分子和人类遗传学获得博士学位。他是Armos公司和Codon公司的资深科学家，Coden公司和Geron公司的分子生物学主任，以及EOS Biosciences的技术开发总监。

比尔安德鲁斯博士1992年至1997年期间，在Geron公司担任分子生物学主任时，是人体端粒酶RNA和蛋白质组成部分的主要发现者之一，并于1997年获得“年度国家发明人”的第二名。他目前是在美国发行的50种端粒酶专利的发明者。*

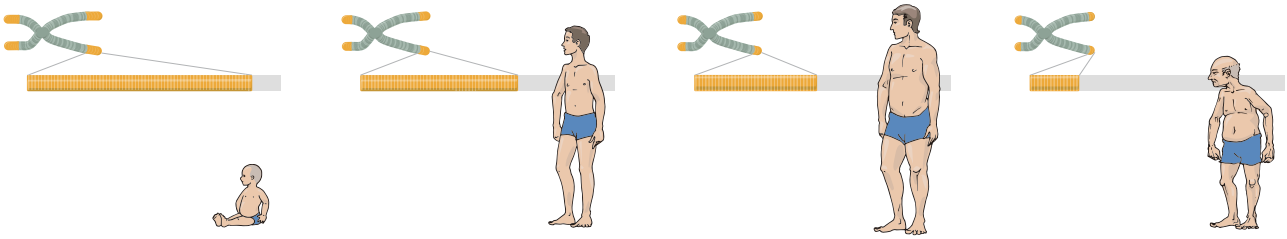
* 有关专利详情，请参阅“P45 6-b。专利”。



2. ABOUT TELOMERE

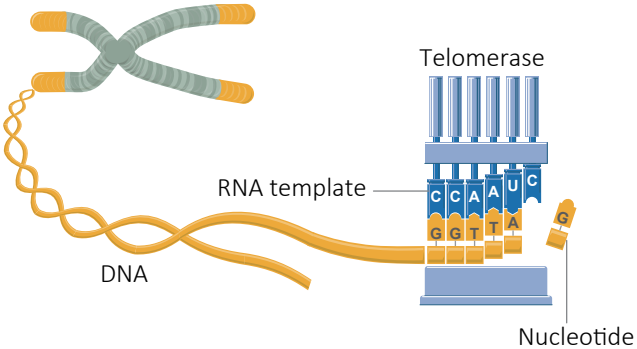
Human aging and telomere （人类衰老和端粒）

在人类中，衰老是随时间变化的积累，包括身体，心理和社会变化。
反应时间可能随着年龄增长而减慢，而知识和智慧可能会扩大。 老龄化是大多数人类疾病最重要的风险因素之一，
而全球每天约有15万人死亡，约三分之二死于与年龄有关的原因。



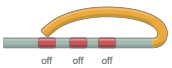
Telomerase （端粒酶）

端粒酶，也称为端粒末端转移酶，是一种核糖核蛋白，在真核生物染色体的末端添加多核苷酸“TTAGGG”到端粒的3’末端。
端粒酶是一种逆转录酶，其携带自己的RNA分子（在嵴椎动物中具有“CCCAAUCCC”模式），它被用作将新碱基添加到端粒末端的模板。
它可以取代每个细胞分裂中丢失的端粒部分，所以染色体不会缩短。



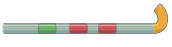
Fold-back Model

Fold back turns gene 1 off



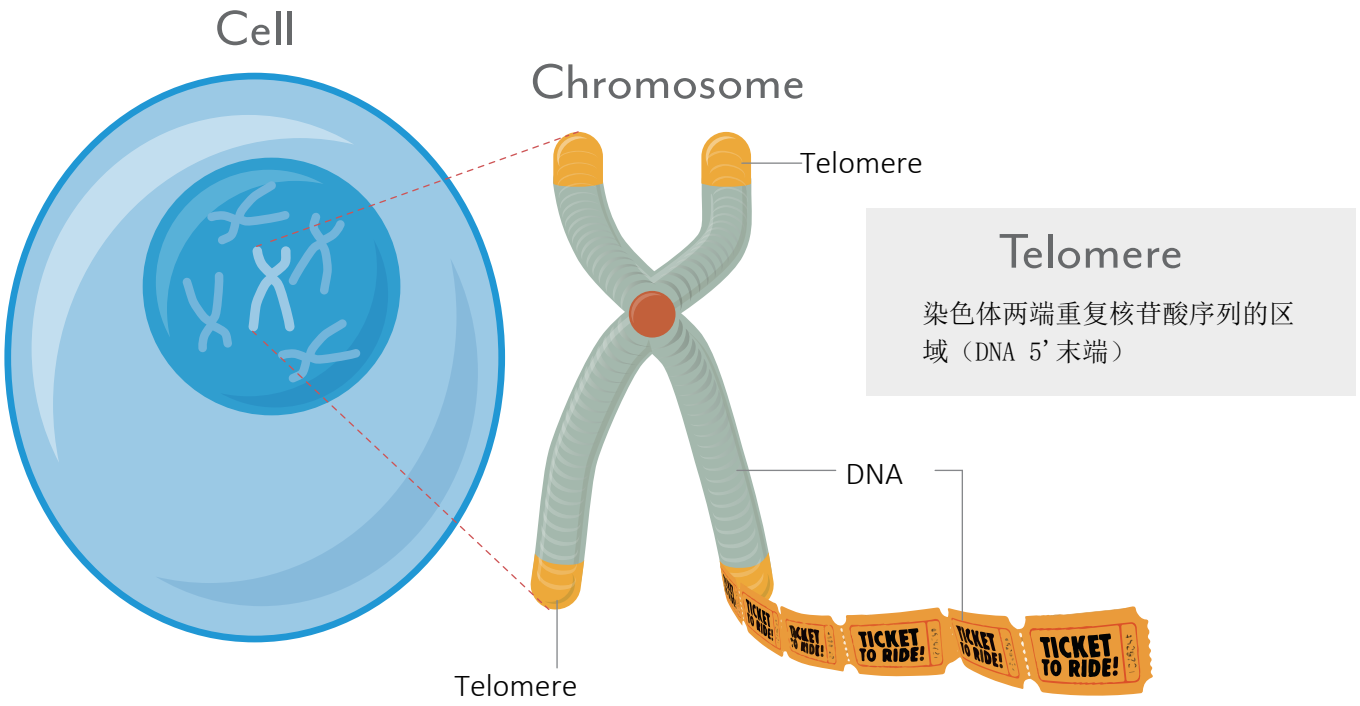
Fold back turns gene 2 on

Short Telomere can’t reach genes



端粒就像所谓的门票。

它每分裂一次就. 会. . 减. . . 少一些

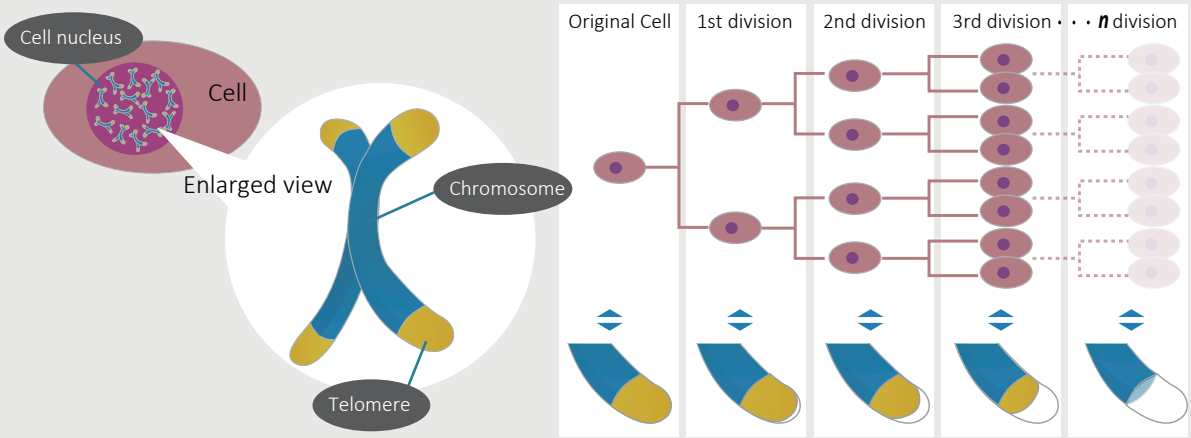


端粒是我们染色体末端的结构，每当人类细胞分裂时都会缩短。每当我们的细胞分裂和我们的染色体複製时，我们的端粒变短了。它们在我们整个一生中都会缩短，当它们达到平均约5,000个核苷酸时，我们的细胞就不会再分裂了，然后我们死于衰老。

这个问题是由于端粒酶缺乏综合徵，或者缺少影响我们每一个人的TEDS。如果它不能缺乏这种酶，我们的端粒会保持长久和健康。一个人的端粒长度与其生物学年龄密切相关，研究表明控制端粒长度有可能治疗许多与衰老有关的疾病。

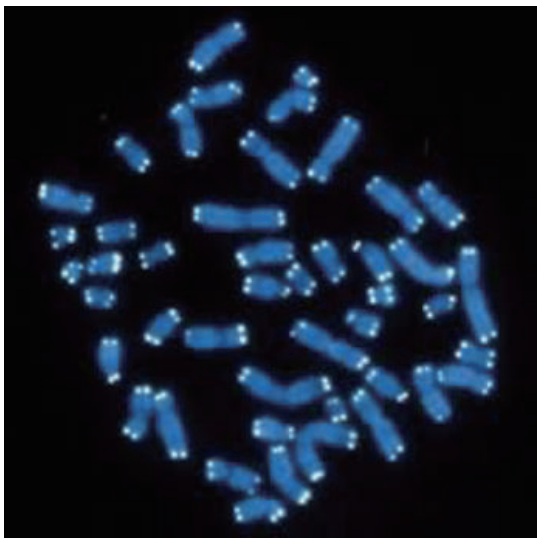
只有在过去的三十年中，科学在理解我们为什麽年龄增长以及可以做些什麽这个基本问题方面取得了实质性进展。但是，这些发现还没有被广泛宣传。因此，大多数还没有被广泛宣传的人并不知道我们有多么接近治愈老化疾病。

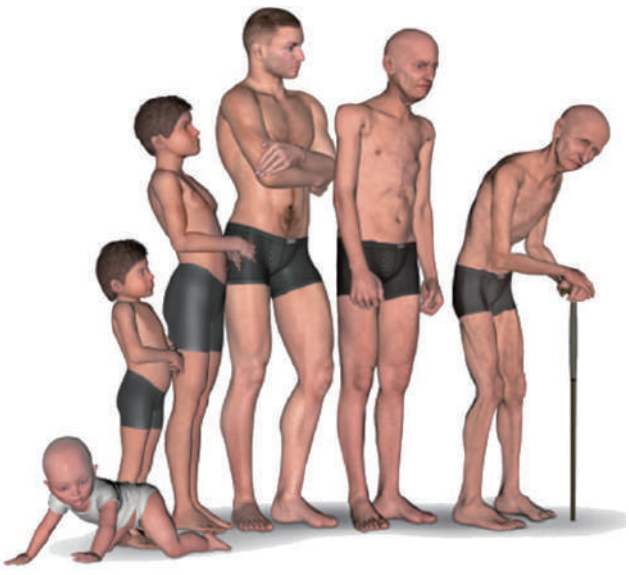
衰老的原因“端粒”胜利



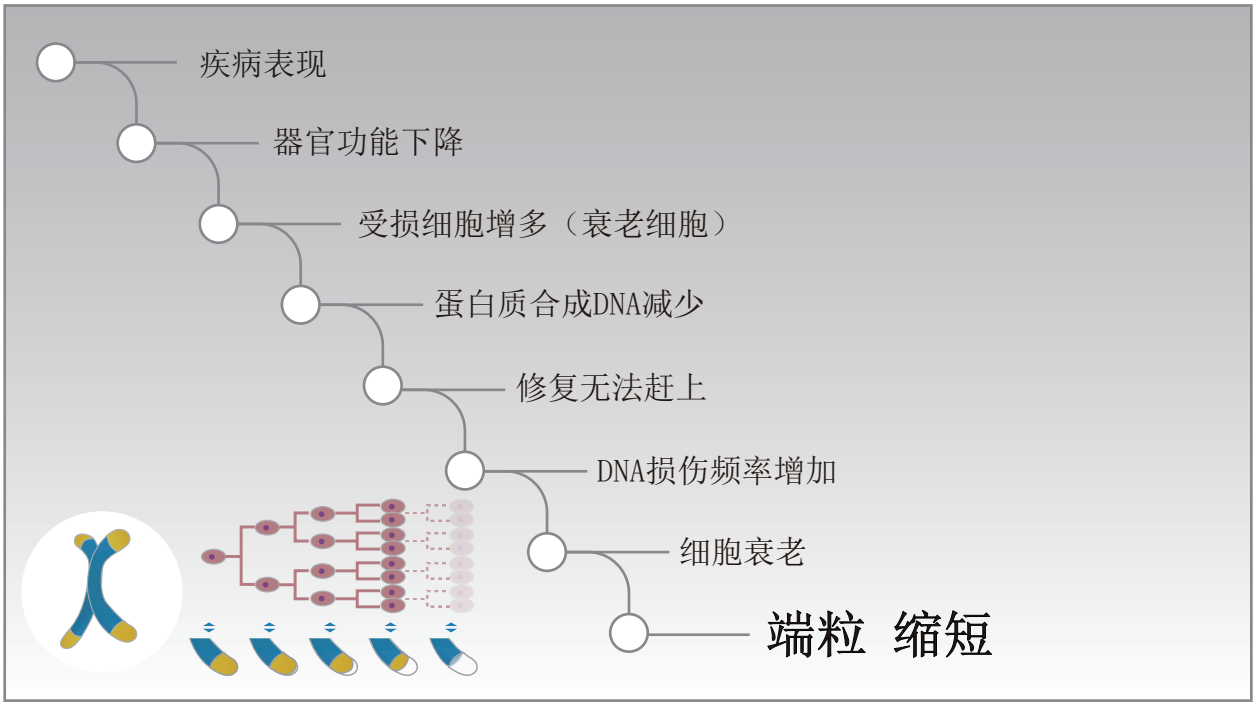
Telomeres shorten each time the cell division, no longer evevtually cell division.

然而，端粒对于正常染色体分离是必需的，因为由此缩短了细胞分裂的时间，端粒变得短于一定长度，细胞活力出现由于染色体丢失导致的不稳定，结果将出现各种身体老化的迹象。换句话说，端粒与人类衰老的基本因素有关。





想想“疾病”的开始。

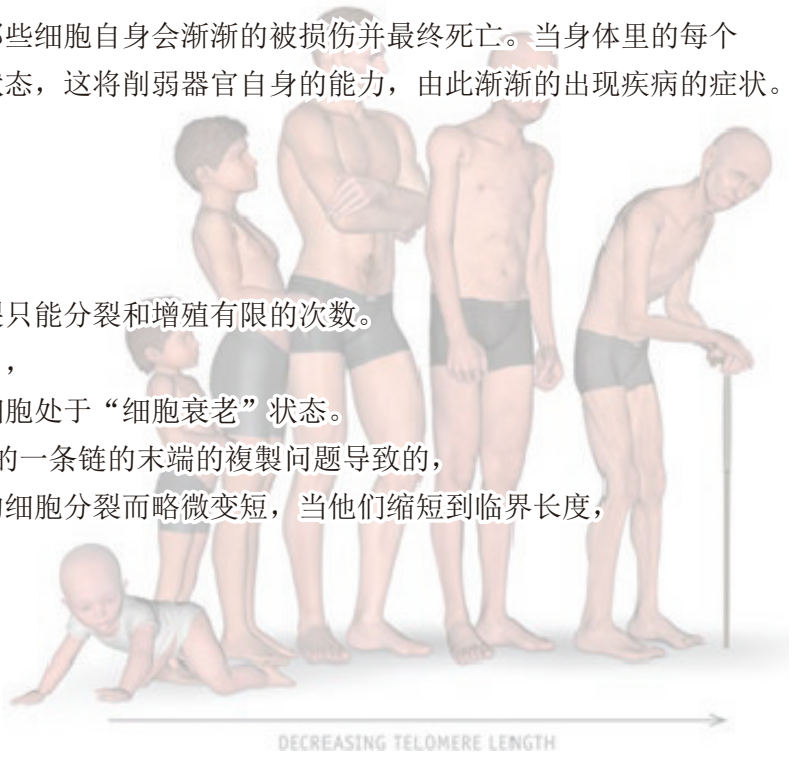


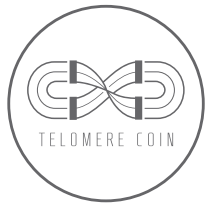
在疾病症状发展之前.....

伴随着细胞老化，DNA损伤发生的频度超过了DNA修复的速度，然后损伤累计直到不能修复DNA。
结果，蛋白质合成减少。
当细胞内的蛋白质被消耗于维持生命那些细胞自身会渐渐的被损伤并最终死亡。当身体里的每个器官中的的许多细胞都达到这样一个状态，这将削弱器官自身的能力，由此渐渐的出现疾病的症状。

细胞衰老

形成人的每个器官或组织中的细胞分裂只能分裂和增殖有限的次数。
划分的局限性被称为“海弗利克极限”，
已经达到海弗利克极限并停止分裂的细胞处于“细胞衰老”状态。
经验证据表明，海弗利克极限是在DNA的一条链的末端的複製问题导致的，
这使得染色体末端的端粒随着每个新的细胞分裂而略微变短，当他们缩短到临界长度，
就会发送科学信号，细胞停止分裂。





3. TELOMERE TOTAL SOLUTION

Business Model : 4 Category + One

不仅仅要牢记Defytime的使命，我们的目标是追求一个让所有人都能更健康，更长寿的社会。
我们将继续开发产品和服务，以改善全球超过70亿人的生活（2050年超过98亿人）。
为实现这一目标，我们结合了多种业务方法，如TAT（端粒分析技术），TSA（端粒支持推进），
TAM（端粒酶诱导激活因子），TAR（端粒人工智能机器人） 我们将扩展我们的业务。
在本节中，我将详细解释这些业务。

Telomere Analysis Technology

Telomere Support Advance

Telomerase Activating Molecule

Telomere Lengthening Therapy

Telomere A. Intelligence Robot

Telomere Analysis Technology

2009年诺贝尔生理学和医学奖授予三位研究端粒对人类生命影响的科学家，引起了全世界的关注。

我们将构建一个解决方案，让人们可以从这一发现中受益，并进入下一阶段。 首先是，分析每个人的端粒情况。

通过验血的“TAT：端粒分析技术”不仅可以预测个人寿命，而且可以对包括癌症在内的各种疾病进行早期预后，作为独立的生物标志物具有很大的作用，对未来医学是一重大贡献，并正在引起全世界医生和医疗专业人士的关注。

「关于“TAT：端粒分析技术”中，我们不是简单地估计平均端粒长度，而是从成千上万的白细胞中获取所有端粒的直方图，包括每个染色体每个缩短的端粒的比例， 我们有一种适当评估的算法，例如通过我们已经拥有的大量数据对年龄相关疾病的风险进行分层，采用综合评估方法。

TAT Telomere Analysis Technology

通过“血液测试”的端粒分析
在世界范围内受到关注！

Medical institution

在医疗机构的血液采样

通过采集套件送血

Analytical center

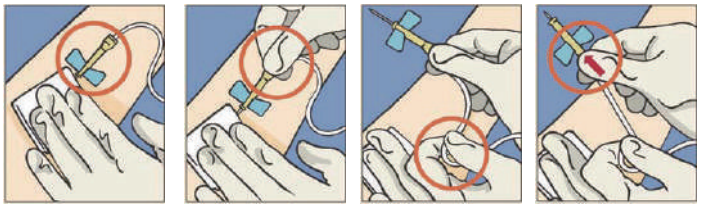
用白细胞分析端粒

分析中心的分析结果
反馈

医生对
分析结果的解释

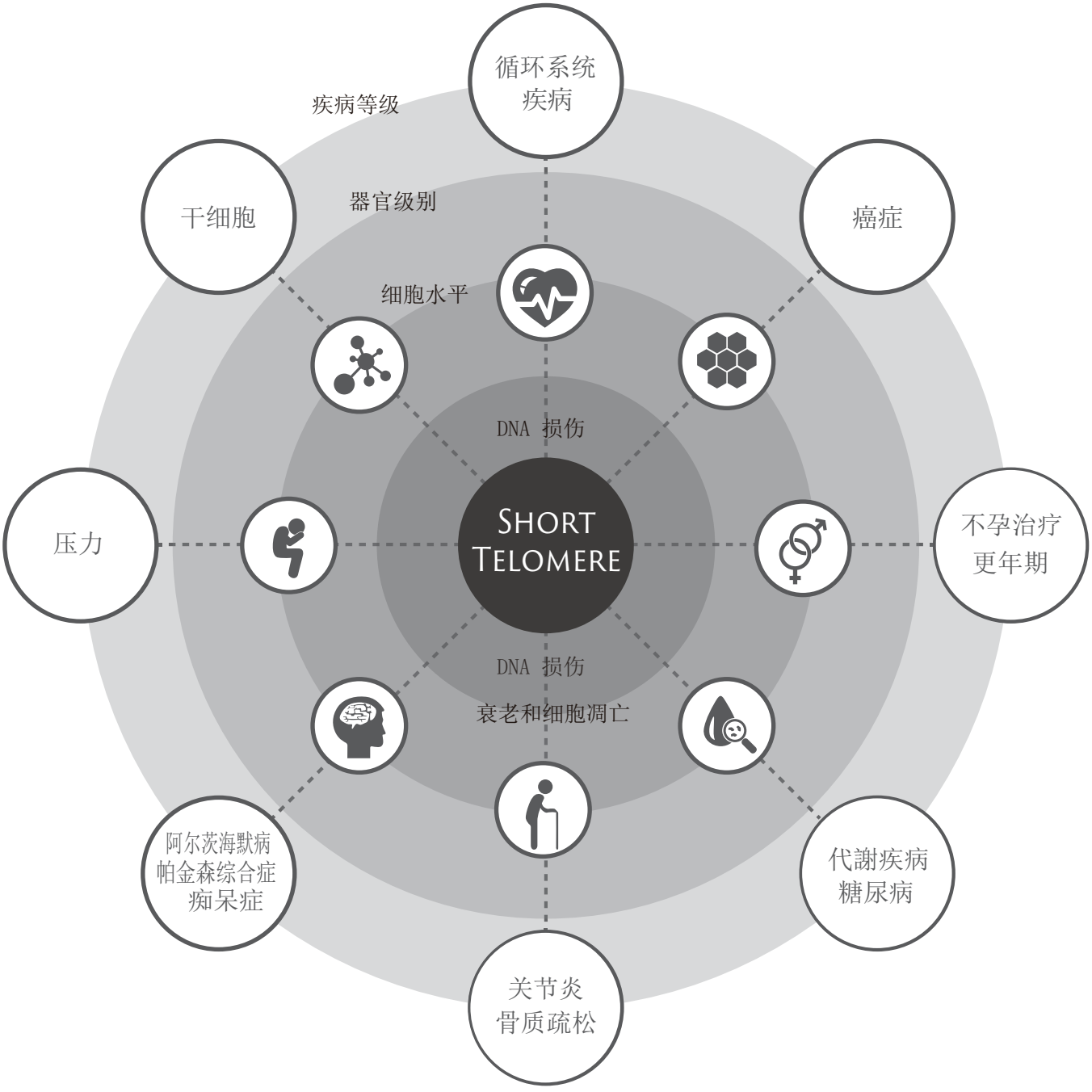
Collection kit

Blood sampling

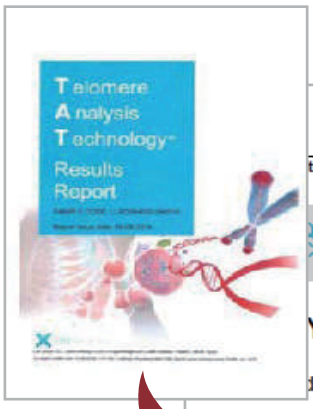


Telomere Analysis Technology

由于端粒萎缩引发的疾病



Telomere Analysis Technology



ts report Sample code: ESLL008083 | 14-07-2017

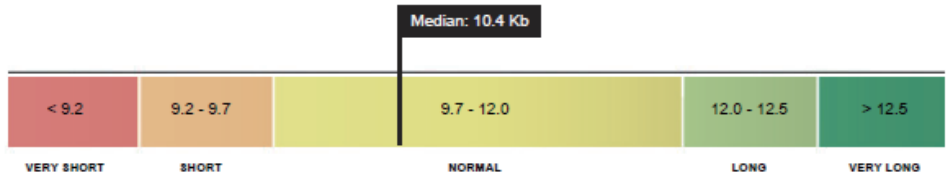
Questions?
Contact your physician for further interpretation.

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

Your telomere length

dian Telomere Length: 10.4 Kb

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

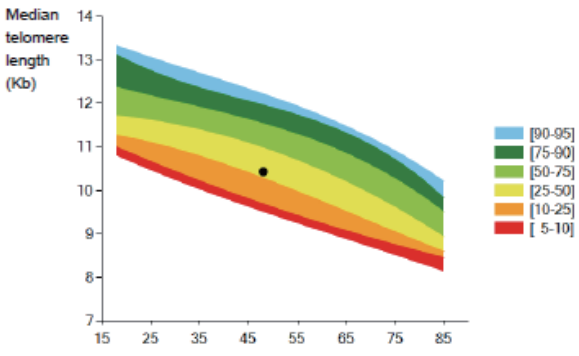


Median Telomere Length (MTL) = 10.4 ± 0.2 Kb

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

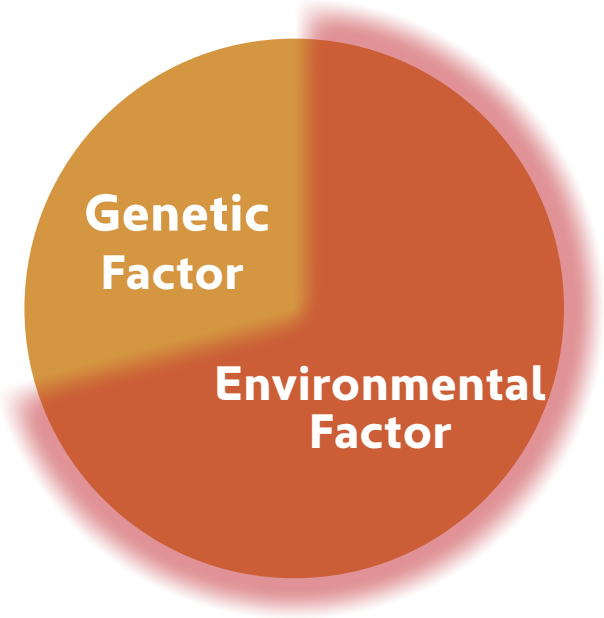
Estimated Biological Age: 50.7 years old
Chronological Age: 48.5 years old

www.lifelength.com | info@lifelength.com 4

Telomere Support Advance

环境因素对端粒长度的影响大于遗传因素

为了延长健康的预期寿命而保持端粒长度很重要，所以有必要了解端粒长度取决于许多因素。尽管原始端粒长度由遗传因素决定，但已知端粒缩短水平由于随后的环境因素而具有很大影响。 事实上，决定端粒长度的因素受后期环境因素的影响大于遗传因素。



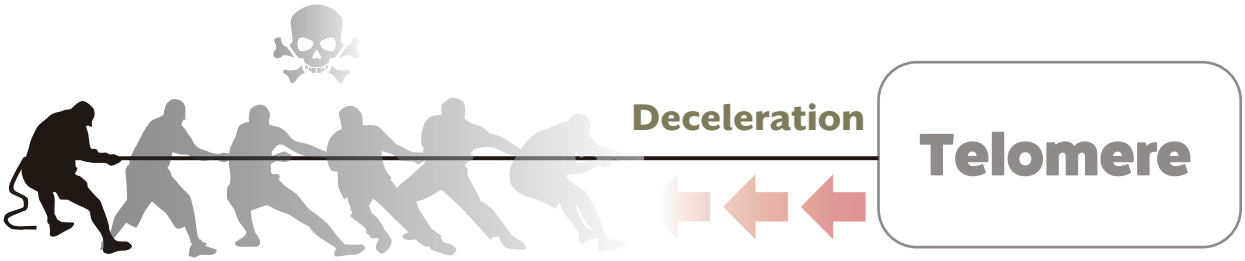
上述环境因素对决定端粒长度的因素的影响大于遗传因素。

Telomere Support Advance

换句话说，您可以通过改善后来的环境因素来延缓端粒缩短速度。

虽然改变遗传因素很难，不过可以通过改善环境因素，如生活习惯，适当的治疗来延缓端粒的短缩。

- 吸烟
- 久坐不动的生活方式
- 不治疗抑郁症
- 不控制体重
- 悲观地思考事情
- 睡不着觉
- 积累压力

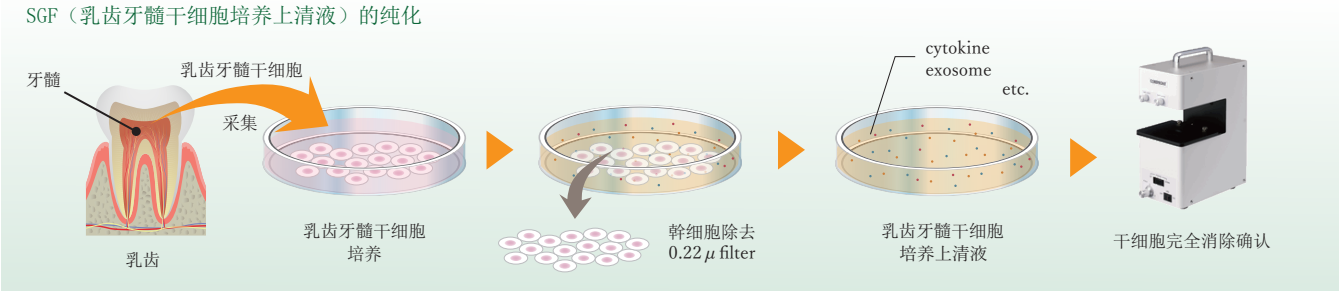


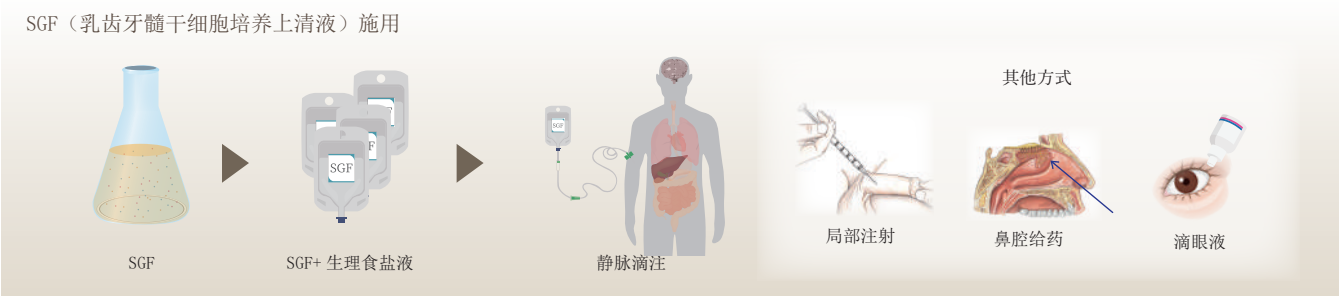
- 戒烟
- 摄取抗氧化剂
- 摄取omega-3脂肪酸
- 摄取维生素D3
- 不积压力
- 减肥
- 充足的睡眠
- 不悲观、不沮丧

Telomere Support Advance

TSA SGF Therapy

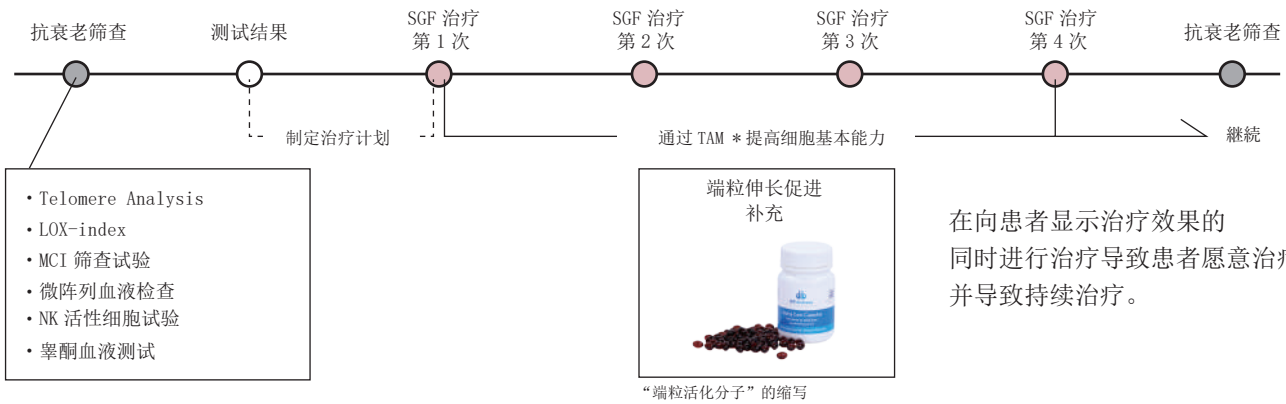
在通过培养源自牙髓和牙髓的干细胞获得的培养上清液中，来自牙髓和牙髓的干细胞有数百种或更多种分泌物。细胞因子，生长因子，趋化因子和外泌体。该液体因子通常称为“SGF”。
“SGF”通过静脉滴注或局部注射等给药。靶器官中的靶干细胞被“SGF”中包含的细胞因子或外来体的旁分泌作用激活至受损的靶器官以再生组织。





“SGF”修复药的应用实例

先发制人的自我再生计划



在向患者显示治疗效果的
同时进行治疗导致患者愿意治疗
并导致持续治疗。

Telomerase Activating Molecule

“TAM”比尔安德鲁斯博士的伟大发现

“端粒酶活化分子”（TAM）是比尔博士团队发现并获得专利的物质的名称。 利用该TAM，可以诱导和激活人端粒酶。
此外，我们将包含此TAM的产品阵容命名为“TAM系列”。

作为TAM系列的开发计划，我们将继续开发包含各种类别TAM的创新产品，包括已经销售的产品，如护肤霜，美容精华液，口腔喷雾剂和补充剂。
目前，销售渠道以网上电子商务为平台，主要由本公司直接销售，我们目前正在考虑与多家海外代理商达成销售协议。

未来，各国之间的产品将根据监管部门的批准和海关限制等因素而有所不同，但我们正在考虑在诊所和沙龙进行销售。

在第32和33页，我们介绍了由世界着名的临床研究机构Abich S.r.l.进行的TAM临床试验的结果。

TAM Product Lineup

defytime TAA cream

defytime theFirst

defytime theFirst PREMIUM

defytime EYE FILLER PATCH

defytime TAM Spray

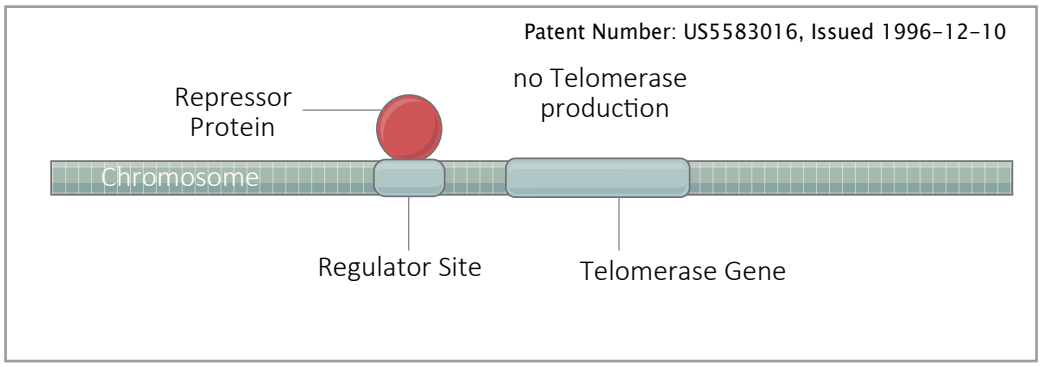
defytime TAM Capsules

Telomerase Activating Molecule

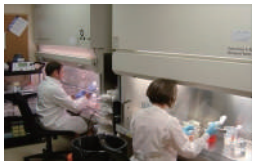
“TAM”如何帮助抵抗衰老？

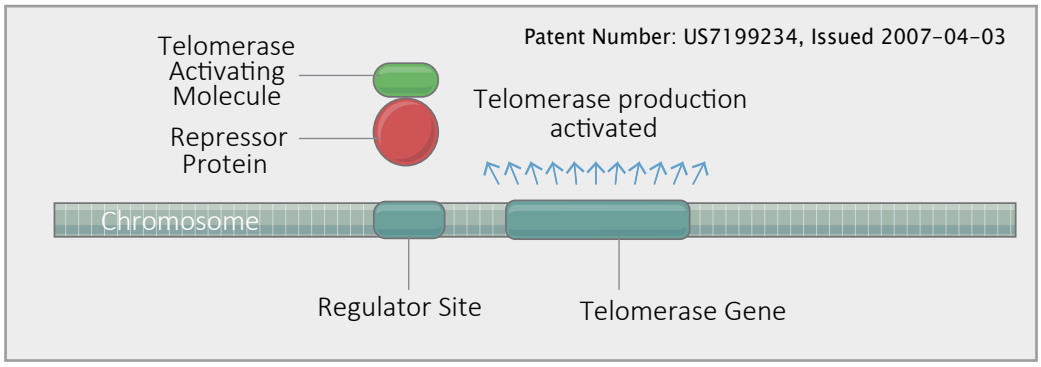
从一开始就众所周知，端粒缩短与细胞衰老有关，但细胞衰老被认为是不可避免的。 然而，随后的纤毛虫研究发现存在阻止端粒缩短的酶“端粒酶”，并且有希望可能延迟或阻止人类的端粒缩短过程，但发现人类细胞中端粒酶处于无活性状态，导致端粒研究停滞不前。

在这种情况下，比尔博士的研究发现端粒酶在人体细胞中无活性是由于阻遏物与端粒酶表达基因的连接。



比尔博士证实，端粒酶可以在人体内表达，并一直在寻找一种激活人类端粒酶的方法，并通过使阻遏物远离端粒酶表达基因来维持端粒长度。





比尔博士在调查了60,000种化学物质后首次发现了可以去除阻遏物的“TAM”。

Telomerase Activating Molecule

Evidence

ABICH S.r.l.
Biological and Chemical Analysis
Toxicology, Research and Services

Report No: REL/0701/2014/CLI/SAB
REL/0702/2014/CLI/SAB
Version: English

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

最终报告（长期测试）
在VIVO评价化妆品对100名志愿者的抗皱，弹性和紧緻功效
小组招聘

小组的特点

研究对100名年龄在36岁至65岁之间的健康女性志愿者进行，这些志愿者从Abich临床和美容试验中心的志愿者数据库中确定，并且被评估为适合参与研究并且不患有需要治疗皮肤疾病的区域。

在研究开始之前，每位志愿者都阅读并签署了一份信息表格（知情同意书，C.I.）。
每个志愿者都有机会问任何有关该研究的问题，并给出详尽的答桉。 志愿者解释了测试的目的，程序和可能的相关风险。

只有在签署知情同意后，才允许参加研究。
研究中只包括健康状况良好的志愿者。
这些知情同意书的原件被存档在Abich化妆品实验室。
所有受试者都签署了同意书，允许根据意大利法律处理个人资料

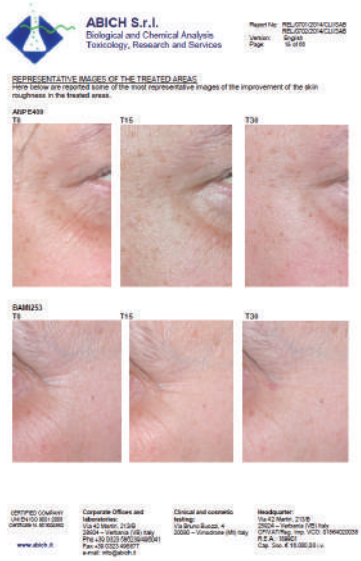
(privacy D.Lgs 196/2003)

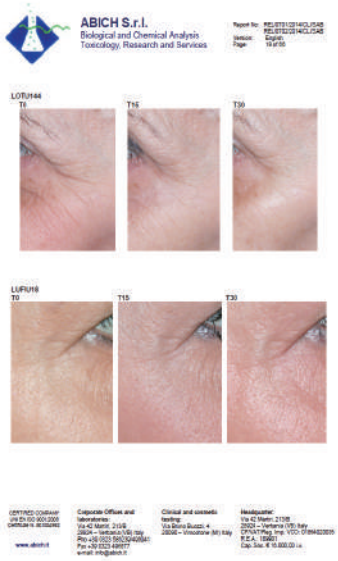
TAM Telomerase Activating Molecule

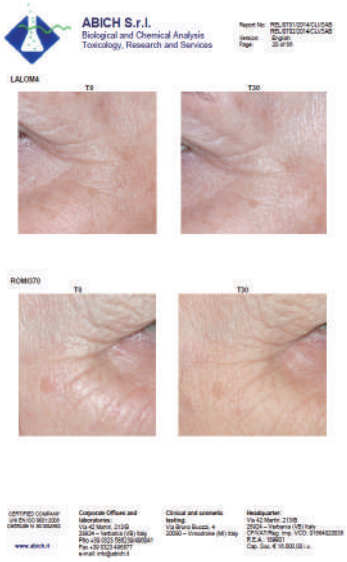
Evidence *(continued)*

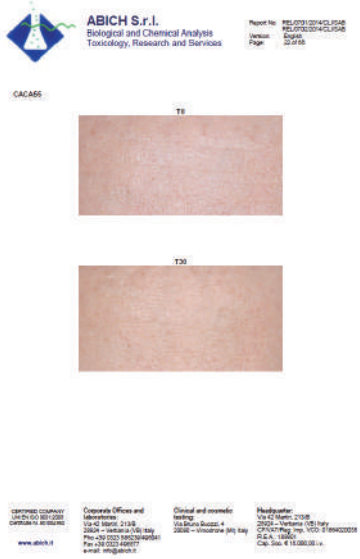
被治疗区域的代表图像

下面报导了一些最有代表性的治疗区域的皮肤粗糙度改善的图像。









Telomere A. Intelligence Robot

“TAR”是一系列促进患者与医务人员之间互动的服务，包括医疗数据库和人工智能机器人终端。目前阶段的计划中,虽然有以下内容,但也有进一步增加功能的情况。

关于“TAR”，将开发医务人员可以与患者联繫的智能机器人，併计划在医疗机构和每个家庭部署。该智能机器人可以访问主数据库和具备人工智能（AI）功能，患者数据被收集并在患者与AI机器人通信时添加到医疗数据库中。

该智能机器人可以访问主数据库和具备人工智能（AI）功能，患者数据被收集并在患者与AI机器人通信时添加到医疗数据库中。

“TAR”收集的医疗数据使得可以访问受区块链技术保护的云端上的主数据库，如医生，医疗机构，药房（调剂）等医疗人员以及患者本人。

另外，可以访问的数据类型，格式等由请求数据的用户通过资格和授权级别来设置。

同时，还计划同时使用可穿戴型健康设备收集健康相关数据，并将它们链接到主数据库。

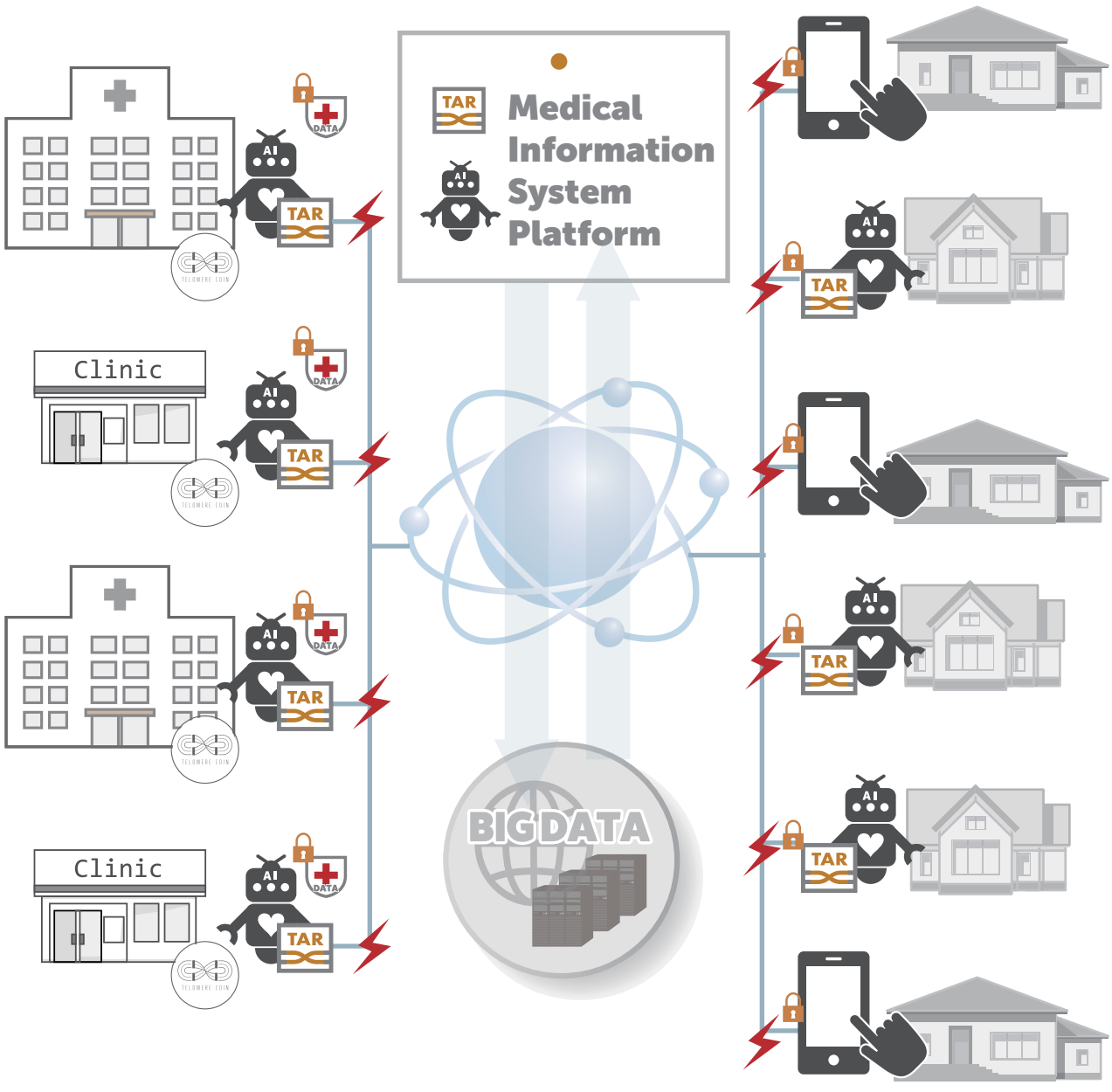
通过这种“TAR”服务，患者自己和医疗专业人员可以通过适当的身份验证方式访问数据，他们可以检索患者的信息并根据需要添加， 并且提高提供有效诊断，治疗和处方的能力，例如医务人员和护理人员可以在必要时在必要的地方使用数据。

此外，我们计划提供一个API（应用程序编程接口），用于将数据库连接到其他系统，以便保险公司与医疗机构等医疗记录系统集成。

“TAR”的主数据库是在基础知识和科学发现的基础上构建的，关于端粒如何在其健康中发挥重要作用，优化和最大化健康的目的 ，它将作为全面生活管理信息的管理基础设施。

Telomere A. Intelligence Robot

无论何时何地, 都可以利用可随时使用的Total Life care TAR, 能提供有效的诊断、治疗、处方!



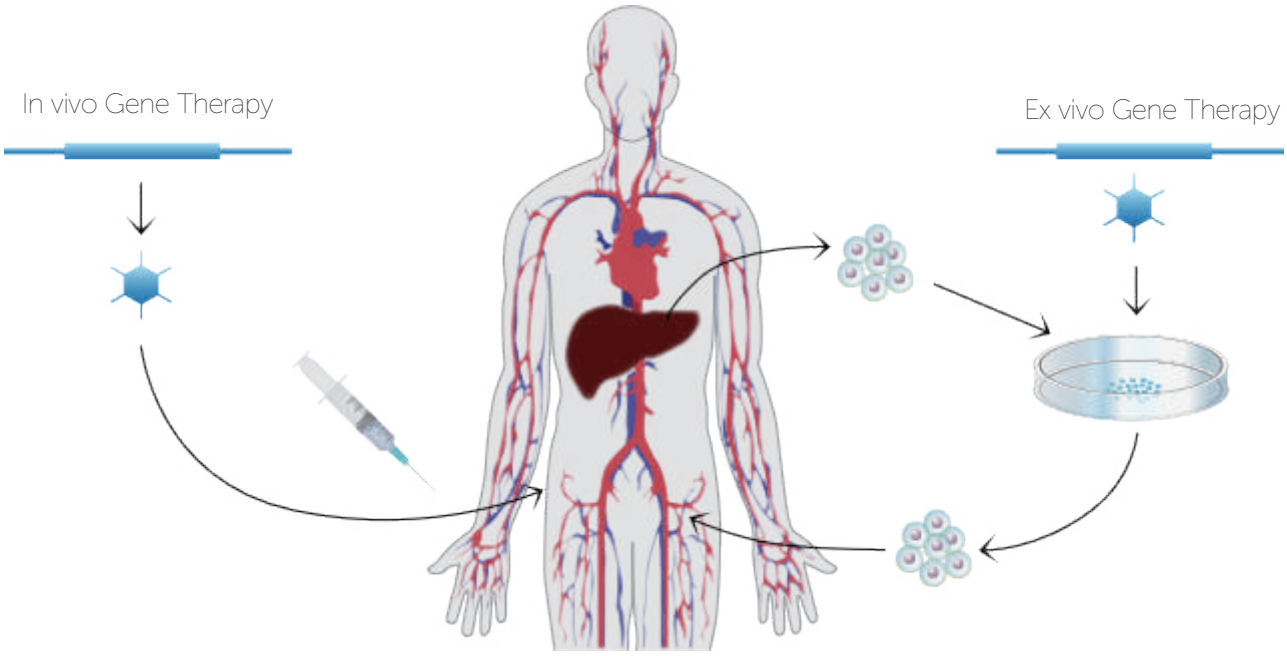
Telomere Lengthening Therapy

Exclusive Product for TXY Token Owner

基因疗法

基因疗法于1990年首次在世界范围内实施，多年来培育的基础技术蓬勃发展，自2011年以来，世界各国报告了许多成功桉例，基因疗法的时代即将就要来临。
基因治疗被定义为“为了治疗人体内的疾病而给予已引入基因或基因的细胞”*

*通　　告　：　2002年3月27日　（2002：教育，文化，体育，科学和技术部卫生，劳动和福利部第1号通知）
所有修正案　：　2004年12月28日
部分修正案　：　2008年12月1日



Telomere Lengthening Therapy

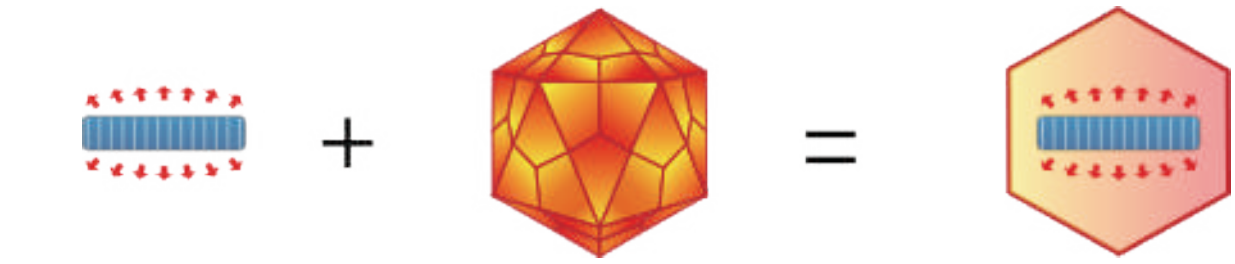
Exclusive Product for TXY Token Owner

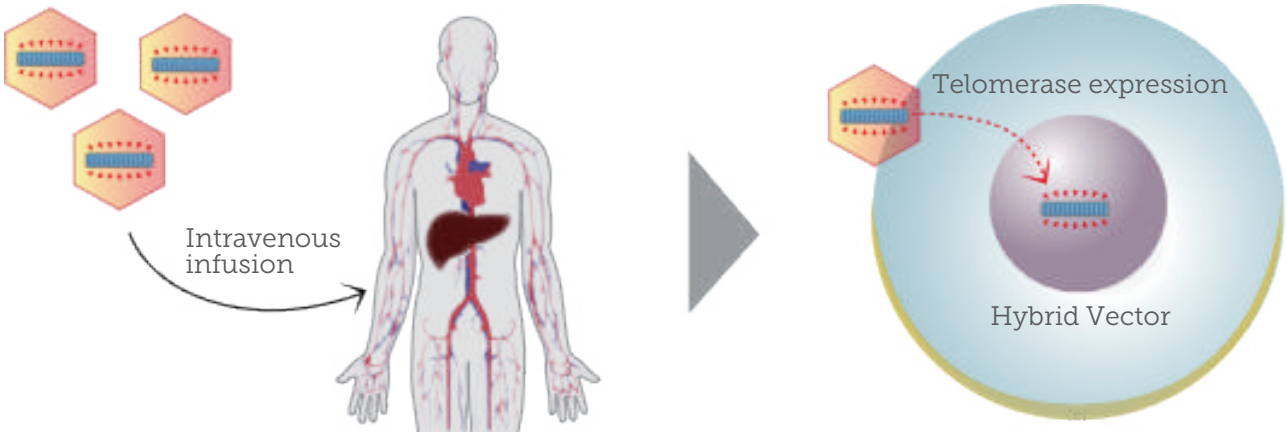
Telomerase induction, Hybrid Vector Solution

defytime的端粒延长疗法是通过准备和培养溷合载体，结合激活的人类端粒酶基因和腺相关病毒（= AAV）载体。

基本上，该杂交载体将通过静脉内注射*静脉内施用，并将通过血液循环递送至靶组织并引入细胞。

引入细胞的杂交载体开始表达端粒酶并将恢复缩短的端粒。





*The administration method may be changed to suit the patient (target tissue)

Telomere Lengthening Therapy

Exclusive Product for TXY Token Owner

TLT Annual Plan

2019年8月18日公布临床研究计划

2019-2020：哥伦比亚/瓦努阿图的临床试验

2021年：日本和中国的VVIP治疗中心

TLTの施術には莫大な費用がかかり、患者数が制限されるので、まずはTLTにより利益が得られる機会を持つTXYトークン保有者の方を対象とします。

最多患者人数

2021-2023：每年12名患者

2024-2026：每年12名患者

2027-2030：每年12名患者

Telomere Lengthening Therapy

Exclusive Product for TXY Token Owner

Our Clinics

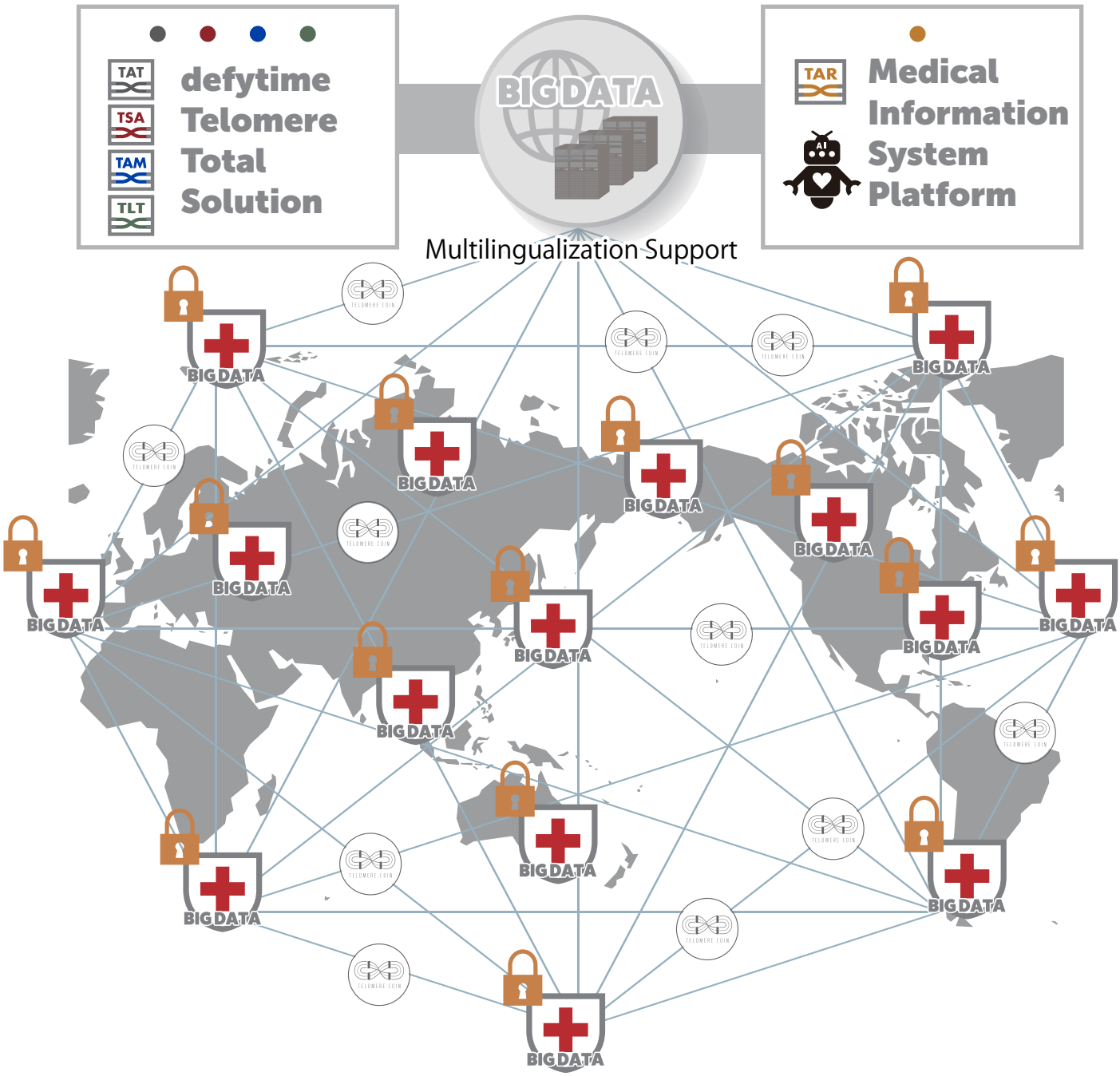
Republic of Vanuatu

MediHelp in Cartagena, Colombia is the location where the procedure will take place.

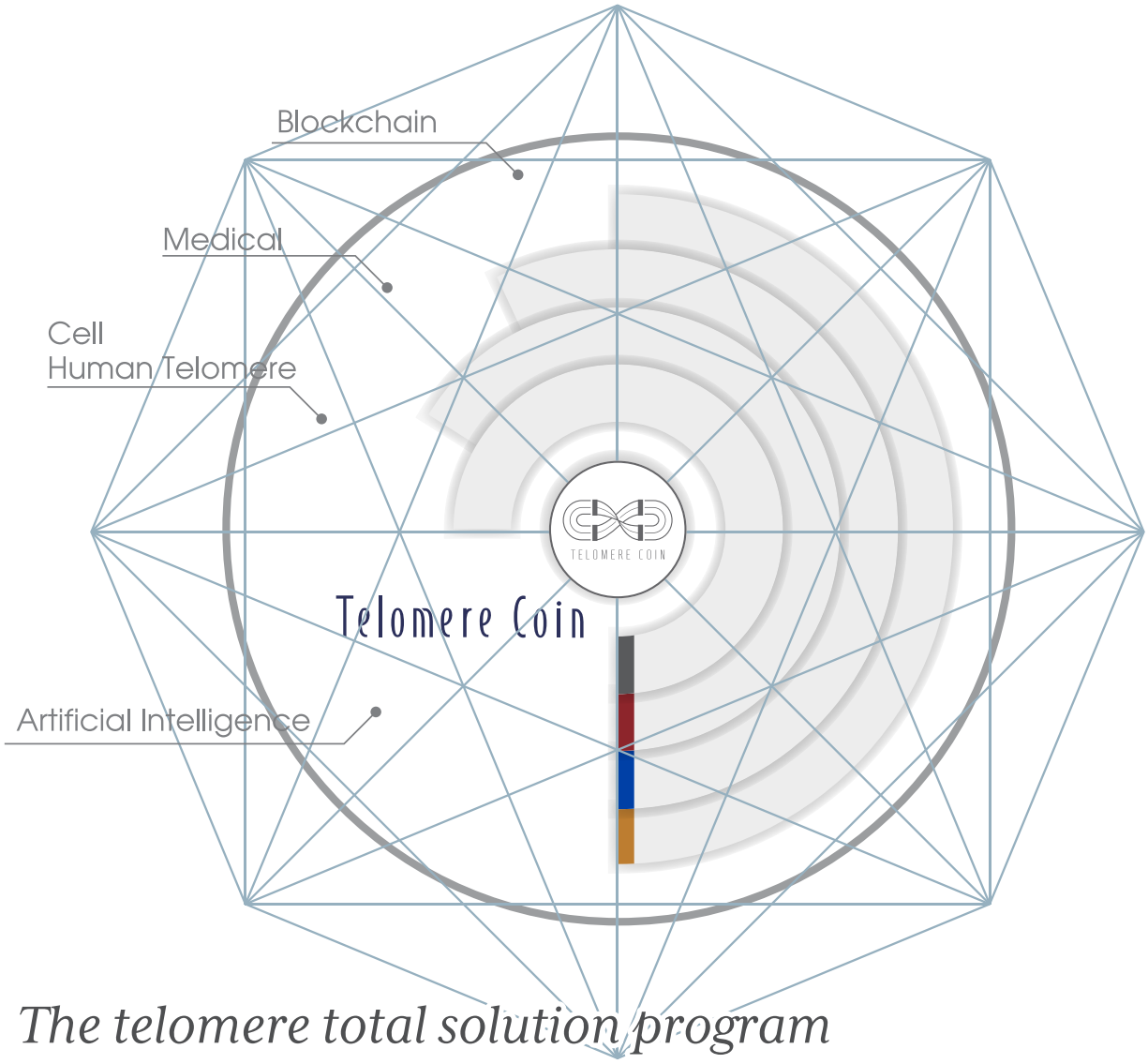
Colombia

defytime Telomere Total Solution

Medical AI Solution

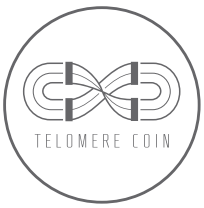


我们公司的目的是通过比尔安德鲁斯博士来最大化健康效应的受益者和社会价值。
得到端粒研究结果, 并通过最大限度地延长其持续增长期限来最大化社会贡献。



The telomere total solution program
will raise a lifespan revolution!

TAT TSA TAM TAR TLT



4. ABOUT TXY™

TECHNICAL SPECIFICATION

ERC-20 compatible

Telomere Coin根据以太坊的ERC20标准创建，保证了资金的安全性和TXY DApp的稳定性。

Confidentiality

用户进行的传输记录在系统中并进行加密。 用户钱包在平台上也进行了加密，并且尽可能地减少了与用户配置文件的关联。
所有个人用户数据（包括密码，电子邮件和钱包ID）均已加密。
这可以保护端粒硬币用户免受黑客攻击或信息洩露。
即使在最坏的情况下，用户数据，密码和钱包也将保持安全，因为无法访问他们或从他们转账。

Non-inflationary

TXY令牌的数量是固定的，不会增加令牌的总供应量，这对TXY令牌的用户来说是一个有价值的节省。

Open access

所有用户都可以在以太坊公共链上构建，无需地理限制即可访问DApp。
这符合我们对一个人人享有平等机会的健康世界的愿景。

Immutable and transparent records

在区块链中，所有记录和声明都不能被篡改，从而确保透明度。
记录可以由世界上任何人审核，因此没有任何欺诈性声明。 它还消除了索赔人提出的双重索赔问题。

TXY Tokens

2019.3.1

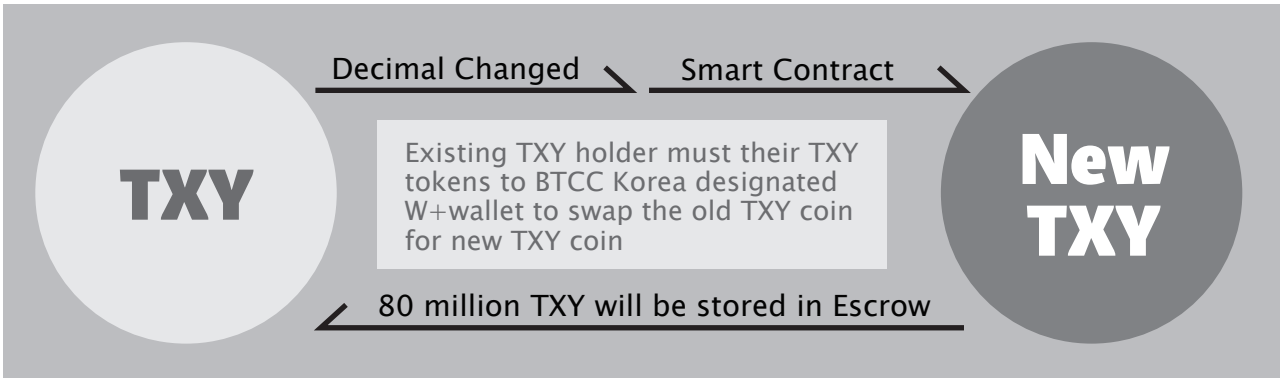
	TXY	Comments
Total Supply	36,000,000 TXY	Original total supply was 116,000,000 TXY
Decimal	8	Changed from 0 to 8
IEO Sale price	9 USD	BTCC korea IEO sale 100% sold out
Total Market Cap.	324,000,000 USD	Based on IEO price

※80,000,000 TXY将外包给BTCC韩国，不包括在总流通供应中。

TXY Token Vesting Schedule

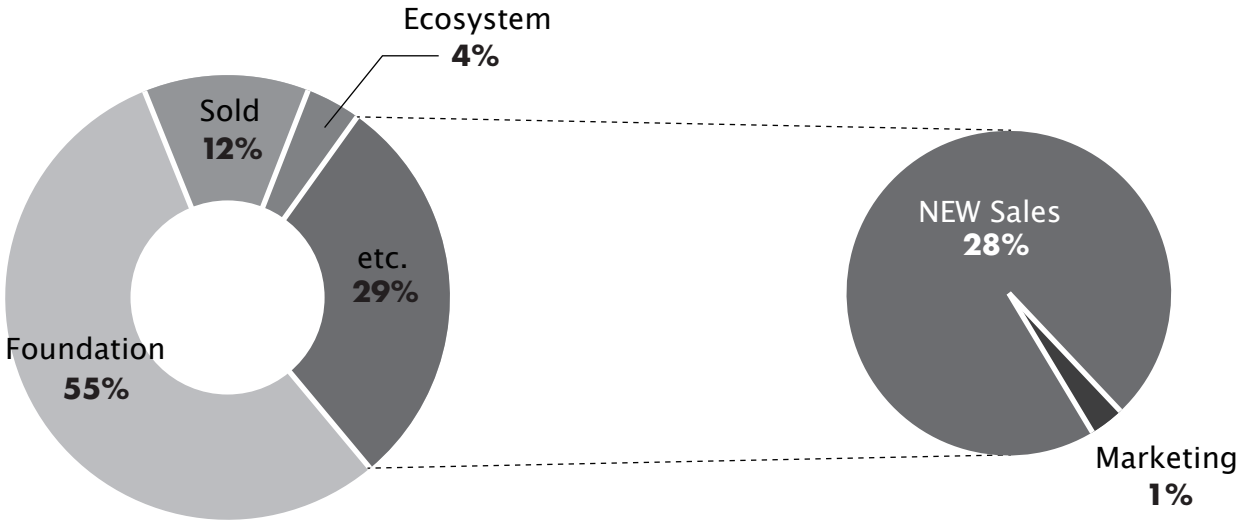
2019.3.1

Date	The day before the listing	+ 1M	+ 2M	+ 3M	+ 4M	+ 5M
% Unlocked	5%	5%	15%	15%	30%	30%



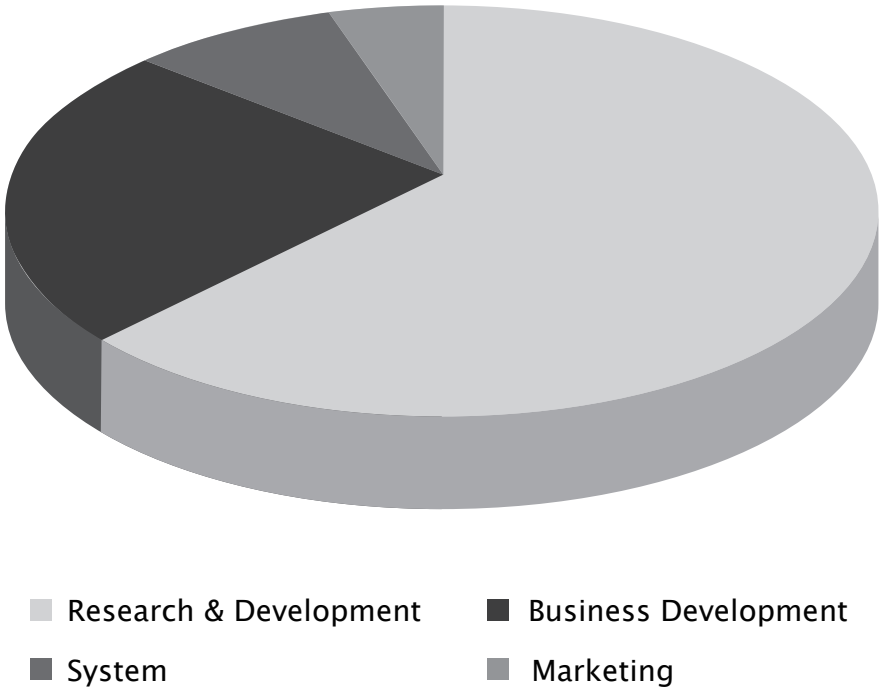
现有的TXY持有者需要将他们的TXY代币移动到BTCC韩国指定的W +钱包，以便将旧的TXY硬币换成新的TXY硬币。

COIN ALLOCATION

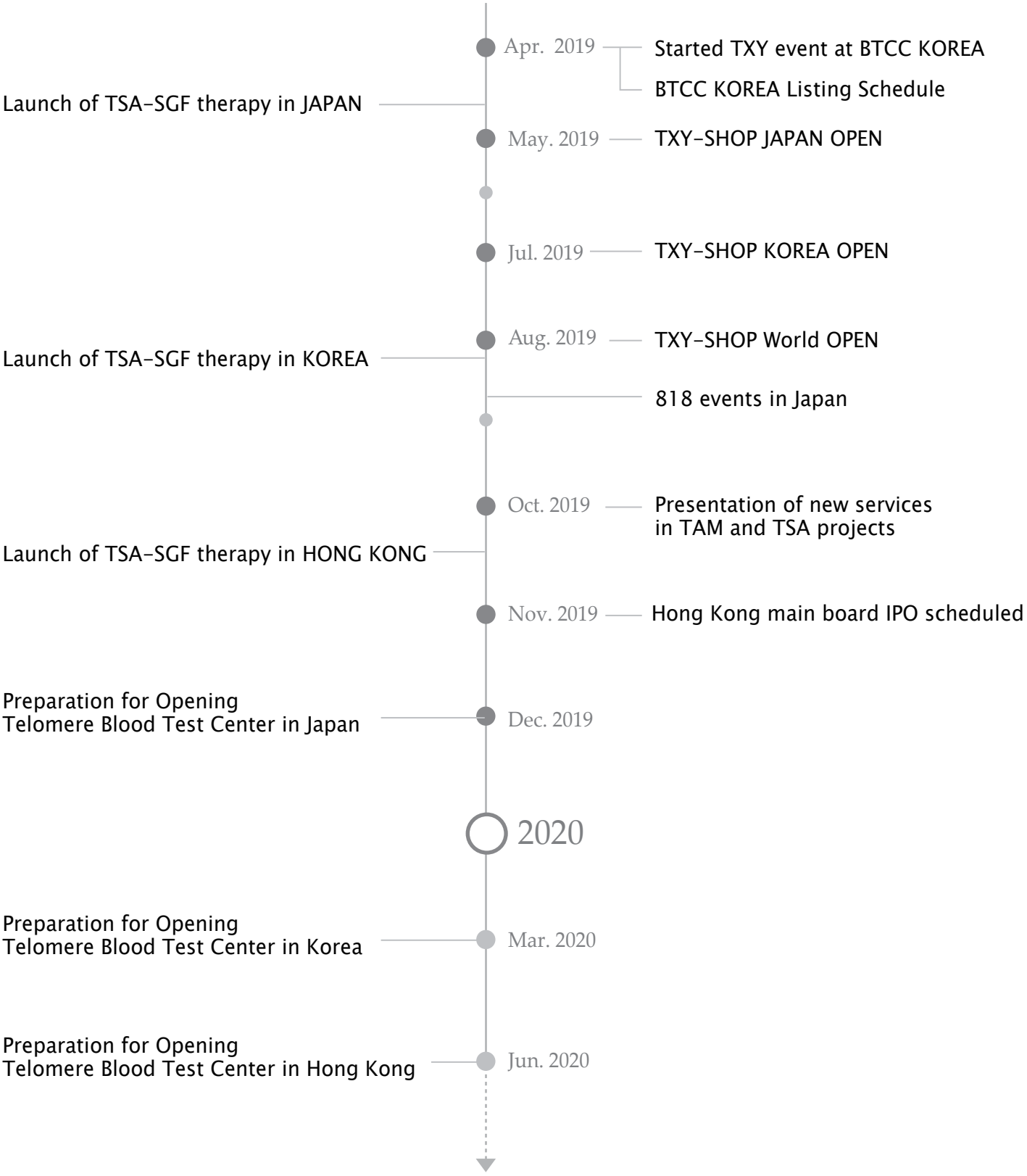


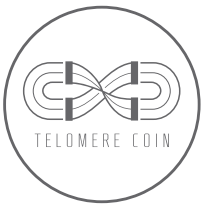
Total Supply	36,000,000 TXY
80,000,000 TXY stored in escrow	

Fund allocation



The Road Map of the Whole Telomere Project





5. TEAM AND ADVISORS

Bill Andrews, Ph.D.

Chief Scientist/Chief Scientific Officer

Dr. Bill Andrews is the President and CEO of Sierra Sciences. As a scientist, athlete and executive, he continually pushes the envelope and challenges convention. He has been featured in Popular Science, The Today Show and numerous documentaries on the topic of life extension including, most recently, the movie The Immortalists in which he co-stars with Aubrey de Grey.
Since 1981, Bill Andrews has focused on finding ways to extend the human lifespan and healthspan through telomere maintenance. As one of the principal discoverers of both the RNA and protein components of human telomerase, Dr. Andrews was awarded 2nd place as "National Inventor of the Year" in 1997. He earned his Ph.D. in Molecular and Population Genetics at the University of Georgia in 1981. He has served as Senior Scientist at Armos Corporation and Codon Corporation, Director of Molecular Biology at Berlex Biosciences and at Geron Corporation, and Director of Technology Development at EOS Biosciences. He is also a named inventor on over 50+ US issued patents on telomerase and author of numerous scientific research studies published in peer reviewed scientific journals.
Bill is also an avid ultra-marathon runner. Born December 10, 1951, he regularly competes in 100k and 100+ mile runs often finishing at the top of his age group. These grueling races have taken him all over the world to race in some of the most extreme environments, from Death Valley to the Himalayas. His running is presently featured in the movie The High.

Takashi Nishihira

Chairman of the Board

Takashi Nishihira (Nisshi) is Director of Business Development and CEO of defytime Science Japan Co., Ltd., a Asian marketing and trading company. In his 5 years of global marketing sales experience, he built excellent clients from the Asian markets and a large network in the Southeast Asia market. His management skills and understanding of the region adds tremendous value in making Defytime a world class anti-aging destination.

Jonathan Greenwood

President & CEO

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

Dr. Laura Briggs

Telomere Researcher (a Partner Scientist)

Laura Briggs received her B.S. degree in Nutrition in 1993 and her Ph.D. in Environmental Science and Health in 2000 from the University of Nevada, Reno. After a one-year post-doctoral position at UNR she joined Sierra Sciences in 2001.
In addition to coordinating research and development at Sierra Sciences, Dr. Briggs is also currently serving as the biology Lab Coordinator for Truckee Meadows Community College (TMCC) and has collaborated on research projects atthe V.A. Medical Center in Reno, Nevada.

Lancer Brown

Telomere Researcher (a Partner Scientist)

Lancer Brown received his B.S. and M.S. degrees in Biotechnology in 2003 from the University of Nevada, Reno and was one of three students in the inaugural advanced BS/MS Biotechnology Program. He distinguished himself by being the first student to complete the program. Lancer came to Sierra Sciences as an intern while completing his degree.
Following graduation, he joined Sierra Sciences full-time where he has proven to have remarkable ability to engineergenes and DNA. He has recently been promoted to program director of screening.

Federico Gaeta, Ph.D.

Telomere Researcher (a Partner Scientist)

Dr. Gaeta identified the first potent, small molecule, inhibitors of human telomerase. He is the sole inventor of universal therapeutic cancer vaccine technologies based on telomerase, currently being evaluated in human clinical trials. Dr. Gaeta is an experienced executive with major pharmaceutical and biotechnology companies in the area of new drug discovery and development.

Dr. Shin D.Y.

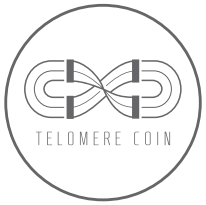
Telomere Researcher (a Partner Scientist)

Dr. Shin provided first evidence that p53 tumor suppressor gene can induce senescence in human tumor cells, which was published on PNAS at 1997, which was his first paper as a PI. By this paper, he suggested a novel cancer therapy to induce senescence in human tumors. He also interested in senescence of articular chondrocyte, and found a novel signaling pathway of chondrocyte senescence, which is mediated by p38MAPK and regulated by immune suppressants, such as CsA and FK506. He recently focused on novel genes, which are screened by a functional cDNA expression cloning strategy, that regulate cell death and senescence. These studies give an insight to regulation of aging process and development of aging-related diseases.

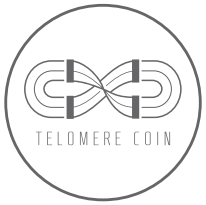
Joseph Raffaele, M.D.

Telomere Expert & Medical Doctor

Dr. Raffaele has recently focused his clinical research interests on the role of telomeres in aging and the potential benefits of TA-65, a natural compound discovered to be an activator of their critical enzyme, telomerase. Since 2006, he has been a member of the scientific advisory board of TA Sciences, which licenses TA-65 from Geron, the biotech company that discovered it.
Dr. Raffaele recently conducted an observational study of 114 PhysioAge patients, collaborating with three eminent telomere biologists, and the results—the first human study documenting the beneficialeffects of TA-65—were published in published, in the journal Rejuvenation Research.

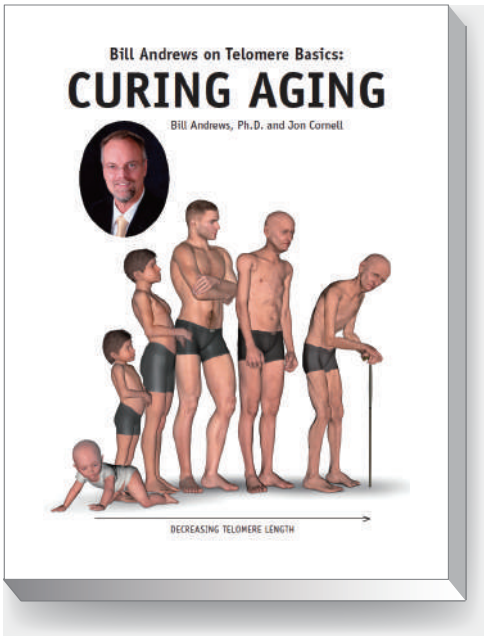


6. APPENDIX

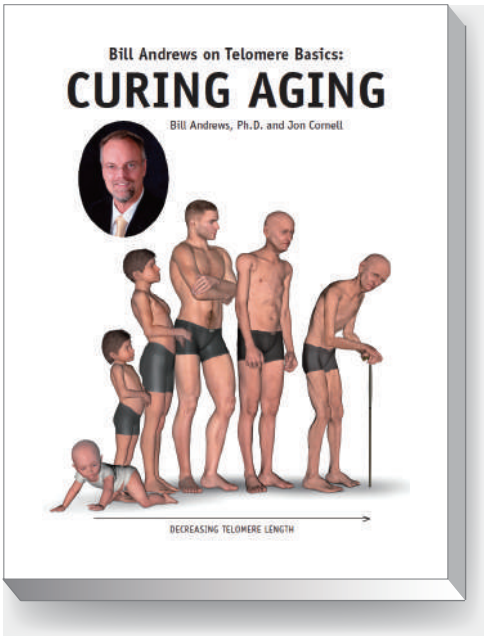


6-a. DR. BILL'S BOOKS

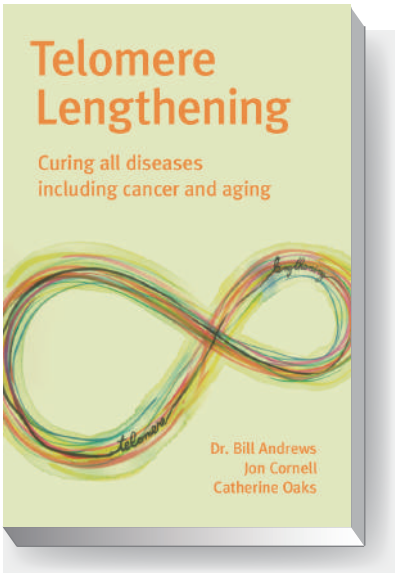
Dr. Bill's books



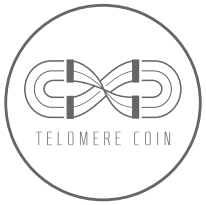
CURING AGING
FIRST EDITION



CURING AGING
SECOND EDITION



NEW BOOK
Telomere Lengthening



6-b. PATENTS

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/patent/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/patent/US5187080

Mammalian telomerase

Patent Number: US5583016, Issued 1996-12-10
https://www.lens.org/lens/patent/US_5583016_A/citations
https://patents.google.com/patent/US5583016

Mutagenesis methods and compositions

Patent Number: US5702931, Issued 1997-12-30
https://patents.google.com/patent/US5702931

Assays for the DNA component of human telomerase

Patent Number: US5776679, Issued 1998-07-07
https://patents.google.com/patent/US5776679

Protease-resistant thrombomodulin analogs

Patent Number: US5827824, Issued 1998-10-27
https://encrypted.google.com/patents/US5827824

Mammalian telomerase

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

Methods and reagents for regulating telomere length and telomerase activity

Patent Number: US5858777, Issued 1999-01-12
https://patents.google.com/patent/US5858777

Protease-resistant thrombomodulin analogs

Patent Number: US5863760, Issued 1999-01-26
https://pdfs.semanticscholar.org/6b5a/5661217b6ecad97090ad29881ff59d49c53e.pdf

RNA component of mouse, rat, Chinese hamster and bovine telomerase

Patent Number: US5876979, Issued 1999-03-02
https://patents.google.com/patent/US5876979/ja

Mammalian telomerase

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

RNA component of telomerase

Patent Number: US6013468, Issued 2000-01-11
https://patents.google.com/patent/US6013468
https://www.lens.org/lens/patent/US_6013468_A

Mammalian telomerase RNA gene promoter

Patent Number: US6054575, Issued 2000-04-25
https://patents.google.com/patent/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/patent/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://www.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/patents/US6610839

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

Antisense compositions for detecting and inhibiting telomerase reverse transcriptase
Patent Number: US6627619, Issued 2003-09-30
https://patents.google.com/patent/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/patent/US6777203

Method for detecting polynucleotides encoding telomerase
Patent Number: US6808880, Issued 2004-10-26
https://patents.google.com/patent/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://www.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/patent/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://www.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://www.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://patents.google.com/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://www.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/patent/US7517971

Nucleic acid compositions for eliciting an immune response against telomerase reverse transcriptase

Patent Number: US7560437, Issued 2009-07-14
https://www.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://www.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

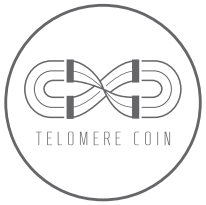
Patent Number: US7879609, Issued 2011-02-01
https://www.lens.org/lens/patent/US_7199234_B2

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



6-c. DISCLAIMER

DISCLAIMER 免責条項

本文件仅供参考，并不是在端粒硬币平台或任何其他相关或关联公司的平台上出售股票或证券的要约或通知。

Telomere Coin are not securities 端粒硬币不是证券

用户承认，理解并同意，端粒硬币不是证券，并且未作为任何政府实体登记为安全性证券，且不应被视为此类证券。 用户承认，理解并同意，端粒硬币的所有权不会授予用户收取利润，收入或其他付款或由收购，持有，管理或处置，行使，赎回， 或端粒硬币或端粒硬币平台或任何其他端粒硬币财产的全部或部分权利，利益，所有权或利益届满或终止。

Absence of guarantees of income or profit 没有收入或利润保证

不能保证端粒硬币的价值将会增长。无法保证端粒硬币的价格不会降低，包括由于一些不可预见的事件或开发商无法控制的事件或因不可抗力情况而导致的显着降价。

Risks associated with Ethereum 与Ethereum相关的风险

端粒硬币将在Ethereum区块链上发行。 因此，Ethereum协议的任何故障或故障都可能导致端粒硬币交易网络无法按预期工作。

Regulatory uncertainty 监管不确定性

区块链技术受到全球各种监管机构的监督和控制。

端粒硬币可能属于他们的一项或多项要求或行为，包括但不限于对使用或拥有数字标记（如端粒硬币）施加的限制，这可能会减慢或限制未来端粒硬币的功能或回购。

端粒硬币不是投资。

端粒硬币不是官方或任何形式的具有法律约束力的投资。 如果出现不可预见的情况，本文件中所述的目标可能会发生变化。 儘管我们打算达到本文档中描述的所有目标，但所有参与购买端粒硬币的人员和团体都应自行承担风险。

DISCLAIMER *(continued)*

Quantum computers 量子计算机

技术创新，如量子计算机的发展，可能会对加密货币造成危险，包括端粒硬币。

Risk of losing funds 失去资金的风险

筹款募集的资金绝不保险。 如果他们丢失或失去了价值，那么买方就不能接触到任何私人或公共保险代表。

Returning funds 返还资金

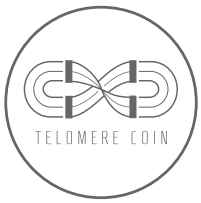
如果广告系列没有成功结束，或被其创建者或版主取消，则端粒硬币将退还给将资金转移到广告系列钱包的用户的钱包。如果用户以法定货币（USD、EUR、RUP或任何其他货币）付款，资金将返回到PUBLIC FUND系统内的ETH钱包。用户可以撤销此ETH，或者使用它们参与在端粒硬币平台上启动的任何其他活动。

Risks of using new technologies 利用新技术的风险

端粒硬币是一种新的相对未经测试的技术。 除了本文提到的风险之外，端粒硬币团队无法预见到一些额外的风险。 这些风险可能以其他形式的风险表现出来，而不是在此指定的风险。

Integration

本协议构成双方就本合同标的事项达成的全部协议。 以前的所有协议，讨论，演示文稿，保证和条件都合併在本文档中。 双方之间不存在任何明示或暗示的担保，陈述，条件或协议，除非本协议中明确规定。 本协议只能由双方正式签署的书面文件予以更改或修改。



defytime Telomere Total Solution

WHITE PAPER

defytime