

Introduction

It is my pleasure to be invited by defytime Science to share my clinical experiences on telomere science and related treatments. The studies are based on my core practice in integrative naturopathic medicine which upholds the principles of non-invasiveness, holism and education.

Relevant Period

The relevant period of the survey and studies in this article is - Sep 2018 to April 2020

Subjects / specialties covered in the article:

Telomere, Telomere Analysis Technology (TAT) telomerase, human chromosomes, placenta, cellular - peptide therapy, anti-aging, aging reversal and preventive healthcare.

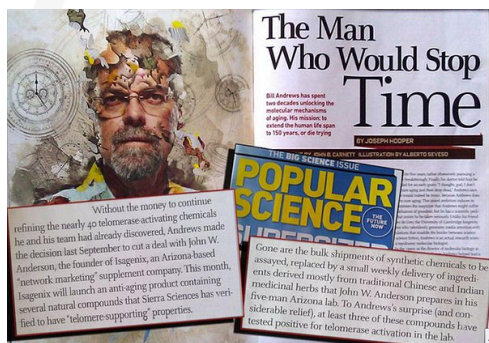
Background:

Telomere science has been a Nobel Prize winning field that attracts many top scientists and doctors around the globe. Among these experts, Dr Bill Andrews is one of the principal discoverers of both the RNA and protein components of human telomerase, and was awarded 2nd place as National Inventor (1997) in USA.

Telomeres are repeated sequences of DNA, along with their associated proteins, at the ends of each chromosome. Telomeres protect chromosomes from damage to the ends and play a role in gene regulation throughout the chromosome. However, each time human cells divide and chromosomes replicate, the telomeres become shorter and when they reach an average of about 5,000 nucleotides, human cells cannot divide any further, and as result we die of old age.

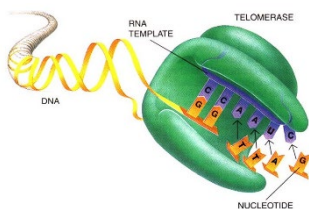
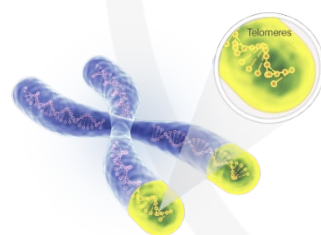
Telomerase is a naturally occurring ribonucleoprotein enzyme which is ideally able to elongate telomeres. Unfortunately, human chromosomes also carry a gene (or genes) that function as “telomerase repressors”, a restrictive factor that limits telomerase expression in all our cells except our reproductive cells and in a majority of tumor tissues. Yes! Sadly, telomerase activity is not detected in most somatic cells which contain a regulatory factor(s) to repress this activity. The mechanisms that turn on or maintain telomerase expression in tumor / cancer cells *“always involve mutations that provide different ways for telomerase gene repression to be deregulated. And, these mutations are usually induced by the short telomeres. So, cancer can be considered a short telomere disease”* as Dr. Andrews explained.

In addition, numerous scientific studies have shown that many other diseases like Cardiovascular, Tuberos Sclerosis, Alzheimer’s, Rheumatoid Arthritis and Macular Degeneration etc. are induced by telomere shortening too.



Fortunately, the telomerase gene already exists in all our cells. Dr. Andrews PhD (Sierra Sciences, LLC.) in 2014 developed a substance “Telomerase Activation Molecule 818 (TAM),” a molecule that activates the telomerase gene leading to younger and healthier cells. Studies have shown that by using and taking supplements containing the telomerase inducing activator TAM, *cell basic strength will be improved, telomeres will be increased and telomere shortening will be reduced.*

It has been my honor to work with Dr. Andrews, being his designated doctor in Hong Kong. I completely agree with Dr. Andrews’ assertion that “aging is a disease” with no reservation and I am very devoted to this health revolution – to optimize human youthful lifespan. Below are four case studies of my patients with different lifestyle and health conditions.



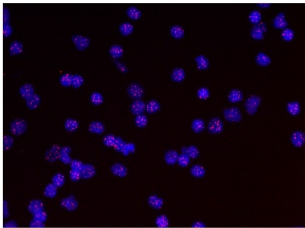
Clinical Case 1

Patient: Ms. W Age: 50 Gender: Female City: Hong Kong

Ms. W is a housewife with overall good health condition, sporty lifestyle, no specific disease and health complain according to her regular full medical checkup and alternative holistic assessment at my clinic.

Ms. W has been following my recommendation on regenerative medicine since 2018 to receive cellular therapy integrated with nutraceuticals like colostrum and other growth factors.

As per my advice, Ms. W took a highly accurate telomere length test – Telomere Analysis Technology (TAT), using the HT Telomere Length Quantification Method or its full name as High-throughput (HT) Quantitative fluorescence in situ hybridization (Q-FISH).



This is an image of your own telomeres, unique to you. These come from your blood sample, which was analyzed and measured using Life Length's state-of-the-art, multi-wavelength, digital, ultra-sensitive capture and precise targets on a sub-nuclear level.

This image shows the results of one of the telomere tests that we use (in this case, your telomeres are quite short). A higher intensity of fluorescence in the green dots indicates greater telomere length and a lower percentage of short telomeres.

Her first TAT test was taken in Feb 2019, followed up by taking TAM spray supplement since March 2019 for a quarter plus period. She was further recommended to take TAM capsule supplement for another three months. In addition, an organ specific nano cell peptide therapy (fetal total - a combo that include 220 + types of cell extracts) was integrated into the treatment together with various growth factors for anti-aging.

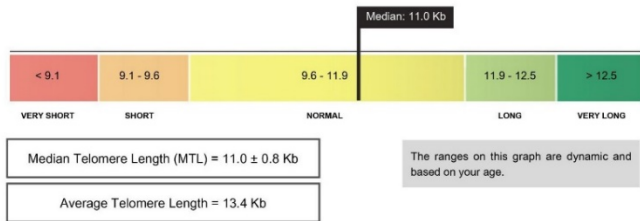
Comparison: Median Telomere Length

According to the TAT report on 25th Feb 2019 Ms. W's Median Telomere Length was "11.0 Kb" whereas the report on 17th Nov 2019 (9 months interval) shown the Length of "10.6 Kb":

More data from regular follow up tests is required to compare and conclude the efficacy of the treatment aim – to decrease the rate of shortening. Control of expectation gap from patient should be emphasized here for Dr. Andrews has mentioned in his work that *gene therapy* must be applied for longer telomeres lengthening. This *permanent treatment* will be discussed further in my future research.

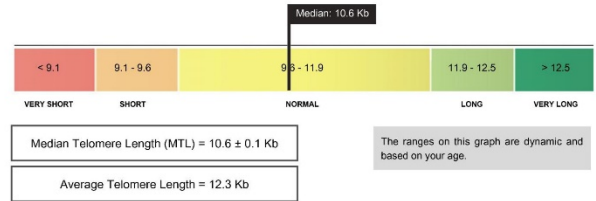
1. Your telomere length

Median Telomere Length: 11.0 Kb



1. Your telomere length

Median Telomere Length: 10.6 Kb



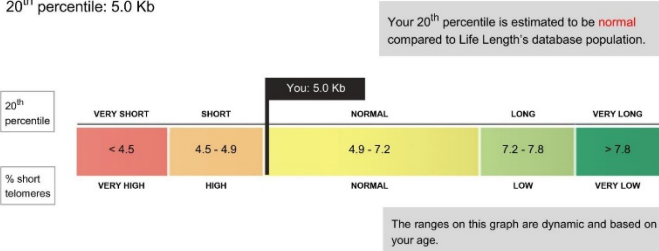
Significant Improvement on short telomeres

20th percentile / short telomeres:

TAT report on 25th Feb 2019 shown Ms. W's 20th percentile: 5.0 Kb which was just marginally be able to fall into the normal range. It should be highlighted that short telomeres are correlated to and serves as an indicator of cancer risk, the shorter the higher. Impressively, the subsequent TAT test taken on 17th Nov 2019 shown her 20th percentile at "6.2 Kb", which has become far closer to the longer side among the normal range. Such increment is encouraging and worth studying further.

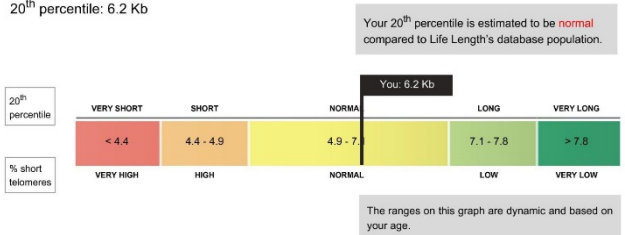
Your 20th percentile / short telomeres

20th percentile: 5.0 Kb



Your 20th percentile / short telomeres

20th percentile: 6.2 Kb



Clinical Case 2

Patient: Ms. S.W. Age: Private Gender: Female City: Hong Kong

Ms. S.W. is a financial professional who has a chronic issue of urticaria. It was complained that this health problem has been a recurrent issue and affected her repeatedly over decade.

Ms. S.W. followed my recommended treatment with herbs and homeopathic medicine. She took my advice to add regenerative medicine of sheep placenta and plant placenta capsules into the treatment course as well. It was her feedback that the situation was alleviated quite significantly and yet the issue was expected by her to be healed completely. I advised her further to integrate TAM supplement into the treatment and a 6-month course was started in Nov 2018.



I received a positive feedback from Ms. S.W. thereafter, particularly when she shared her experience after my speech on Telomere Science to over 150 attendances at a financial planning company seminar event:

"I am quite confident to tell that my urticaria problem has now been almost >95% overcome after taking the advice from my doctor to add TAM supplement into my treatment course" asserted by Ms. S.W.



Clinical Case 3

Patient: Ms. ToTo Y. Age: 30s Gender: Female City: Jiangmen of Mainland China

Ms. ToTo Y. is my patient in China, a young entrepreneur who owns a national business of beauty and eyelashes perfection over various cities in China. ToTo main concern has been anti-aging, skin whitening and stress issues. She complained of feeling aging acceleration and fitness degradation.

ToTo followed my recommendation to take plant placenta and it was started in Jan 2020 that TAM supplement was integrated into the anti-aging and whitening treatment course that I prescribed to her.



Feedback written from her shown once again positive comments: "... after taking it for a period of time, friends of mine said my skin condition has improved... feeling my overall body condition is much younger than my age and my peer. I love this small sophisticated TAM capsules that I can put in my purse and beautify me as my wish!"

"有幸认识到陈博士，邀请到江门传播简单有效的美丽秘诀。踏入40岁的女人最恐惧的就是衰老了，所以我们除了保养好皮肤，好认同博士说的最重要还是要身体的健康散发出来的美才是真正持久的美丽，所以坚持一段时间后我的闺蜜们都说我皮肤饱满了，整个人状态也是比同龄人年轻有活力。爱上可以放在包包里可随时补充的美丽端粒胶囊😊"

Being her healthcare partner, I could feel her joy and satisfaction.



Clinical Case 4

Patient: Mr. Allan Lee Age: Private Gender: Male City: Hong Kong

Mr. Allan Lee is my PhD student who is very health conscious, especially at psychological level. He is a marathon runner and has run the marathon multi-nationally. Allan encountered a minor accident that led to his minor ribs injury years ago. Full recovery and fitness regain has been his concern.

Allan has followed my advice to start his TAM supplement course for three months since Aug 2019. It was reported by Allan that: he completed a patented health assessment (AMHTS system*) with one hundred tests within four hours and the result has shown that his estimated biological age is “9 years younger than his chronological age” – a 4 years improvement when compared to the result of the same test on him 2 years ago that showed him to be “5 years younger”. Nevertheless, it will take longer time for him to tell his subjective feeling of energy performance or fitness improvement.

** AMHTS system has passed ISO 9001 : 2008 quality certifications and is accredited by the College of American Pathologists (CAP) every year. Accumulated for more than 1,000,000 entries of the health-related data, the AMHTS system has been collaborating with various international academic centers, including Leeds University of the United Kingdom, Beijing University, and the MD Anderson Cancer, University of Texas, U.S.A.. Relevant research outputs have been published in many internationally renowned medical journals, such as Lancet, JNCI, and JAMA*



Summary

The majority of my clinical cases show positive single or combined results for both my clinical application of TAM spray and capsule supplements, among which capsule seems to have achieved higher efficacy. Validity of the capsule assertion is yet to be studied further and will require more clinical data to support. The limited survey and case studies above reflect also significant enhancement of patient's short telomeres. The key value of short telomeres improvement will lead to a remarkable contribution to cancer treatment and degenerative diseases related health risk management. *“The main cause of poor telomere related health is caused by the amount of critically short telomeres. The more critically short telomeres you have the more unhealthy you are”* said Dr. Andrews. Limitation of the studies in this article includes also e.g. more consecutive regular telomere tests are required to show sustainable health enhancement and cellular regenerative results. Placebo effect and quantitative methodology are also issues to be considered in my future research. Studies on applying TAM supplement independently from other combo may also serve a better before-and-after comparison too. Except for the mentioned limitation and constraint, application of TAT and TAM supplements has shown overall positive and certain impressive health improvement results along my naturopathic practice during the relevant period.

About the writer

Dr Avax Chan, PhD ND NP is Dr. Bill Andrews of Sierra Sciences, LLC and defytime Science Japan CO. LTD designated Training Doctor in Telomere Science and Treatments.

Dr. Chan's professional certifications and specialties include: Board Certified Naturopathic Physician (Integrative Medicine), Chartered Naturopathic Practitioner, Preventive Medicine Specialist, International Association for Cell Therapy Europe (formerly Switzerland) Fellow, International Association of Stem Cell Transplantation USA Fellow, The Institute of Management Specialists UK Fellow.

Academic and advisory works: Visiting Professor at National Institute of Integrative Medicine Australia, Director and Academic Chief of Academy of Medicine for Peace and Southwest State University SWSU (Kursk Russia) Joint Program of Doctor of Integrative Health Management, Training Doctor and Examiner of American Academy of Procedural Medicine in Naturopathic Medicine, Tsinghua University Boshanghai Chief Advisor in Imageology and Academic Council Chief of the Chartered Society of Integrative Medicine.



Dr. Avax Chan has presented seminars and workshops on telomere science and treatments to university and medical programs, private clubhouses, scholar association and other professional bodies over the years.



Telomere science and treatments seminars and workshops delivered by Dr. Avax Chan at City University of H.K., American Academy of Procedural Medicine Programs, associations

, hospitals in China and Marina Club in Hong Kong etc...

Special thanks to Dr. Bill Andrews of Sierra Sciences, LLC for his review and contribution to this article.

"As an analogy, if you cut the aglets on your shoelaces in half your shoelaces are still OK. It's only when the aglets get critically short that you start having poor shoelace health" – Dr. Bill Andrews

References

- Telomere Lengthening: Curing All Disease Including Aging and Cancer – January 1, 2017 by Ph.D. Bill Andrews (Author), Jon Cornell (Author)
- Bill Andrews on Telomere Basics: Curing Aging – January 1, 2014 by Ph.D. Bill Andrews (Author), Jon Cornell (Author), Brendan Parker (Editor)
- Baeye A.C., Berger, A., Schlegel, R., Veldman, T., and Schlegel, R. 2002. Cervical epithelial cells transduced with the papillomavirus E6/E7 oncogenes maintain stable levels of oncoprotein expression but exhibit progressive, major increases in hTERT gene expression and telomerase activity. Am. J. Pathol. 160: 1251-1257. [PMC free article] [PubMed] [Google Scholar]
- Kim N. W., Piatyszek M. A., Prowse K. R., Harley C. B., West M. D., Ho P. L., Coviello G. M., Wright W. E., Weinrich S. L., Shay J. W. Specific association of human telomerase activity with immortal cells and cancer. Science (Wash. DC), 266: 2011-2015, 1994.
- Studies of Tumor Suppressor Genes via Chromosome Engineering. Kugoh H, Ohira T, Oshimura M. Cancers (Basel). 2015 Dec 30;8(1):4. doi: 10.3390/cancers8010004. PMID: 26729168 Free PMC article. Review.
- PITX1 protein interacts with ZCCHC10 to regulate hTERT mRNA transcription. Ohira T, Kojima H, Kuroda Y, Aoki S, Inaoka D, Osaki M, Wanibuchi H, Okada F, Oshimura M, Kugoh H. PLoS One. 2019 Aug 12;14(8):e0217605. doi: 10.1371/journal.pone.0217605. eCollection 2019. PMID: 31404068 Free PMC article.
- <https://www.nature.com/articles/1204165>
- <https://defytime.com/telomeres-telomerase/>
- <https://pubmed.ncbi.nlm.nih.gov/12461748/>
- <https://cancerres.aacrjournals.org/content/63/3/689>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC517520/>