

[View this email in your browser](#)

BioMarketing Insight



January 15, 2017

Dear Regina,

Welcome to BioMarketing Insight's monthly newsletter.

We have a new look to our newsletter. Love to receive your [feedback](#).

Last month I covered "The First Human to Receive the CRISPR, Gene Editing Therapy." If you missed last month's article, click [here](#) to read it. This month's newsletter will cover, Your Mother Telling You to "Eat Healthy and Get Enough Sleep" is Now Related to Longevity.

Read on to learn more about this topic and other current news. The next newsletter will be published in the new year on February 15th, 2017.

We encourage you to share this newsletter with your colleagues by using the social

Please email [me](#), Regina Au, if you have any questions, comments, or suggestions.

Sincerely,
Regina Au
Principal, New Product Planning/
Strategic Commercial Consultant
[BioMarketing Insight](#)

[Share](#)[Tweet](#)[Forward](#)

Table of Content

[Developing a Product? Commercializing a Product?](#)

[What Are the Next Game Changing Drugs in Cancer?](#)

[Save the Date: 5th Annual Medical Informatics World Conference -
May 22-23, 2017](#)

[Your Mother Telling You to "Eat Healthy and Get Enough Sleep" is Now Related
to Longevity.](#)

[Closing Thoughts](#)

[Previous Newsletters](#)

[Join my mailing list](#)



Developing a Product? Commercializing a Product?

If you are developing a product and have not conducted the business due diligence to determine commercial viability or success, contact [me](#) for an appointment. For successful commercial adoption of your product or looking to grow your business, contact [me](#) for an appointment.

For more information on our services, click on the links below:

[Product Development](#)

[Market Development](#)

[Marketing Strategies](#)

[Top](#)



What Are the Next Game Changing Drugs in Cancer Therapy?

I am pleased to announce that my article on "What Are the Next Game Changing Drugs in Cancer Therapy?" that covers immuno-oncology drugs (Checkpoint Inhibitors and CAR-T Therapy) has been published in Pharma IQ. To read the article, click [here](#).

[Top](#)

Medical Informatics World Conference

May 22-23, 2017
Renaissance Waterfront Hotel
Boston, MA

Challenging Leaders from Across Healthcare to Deliver Patient-centered Solutions with IT Innovation

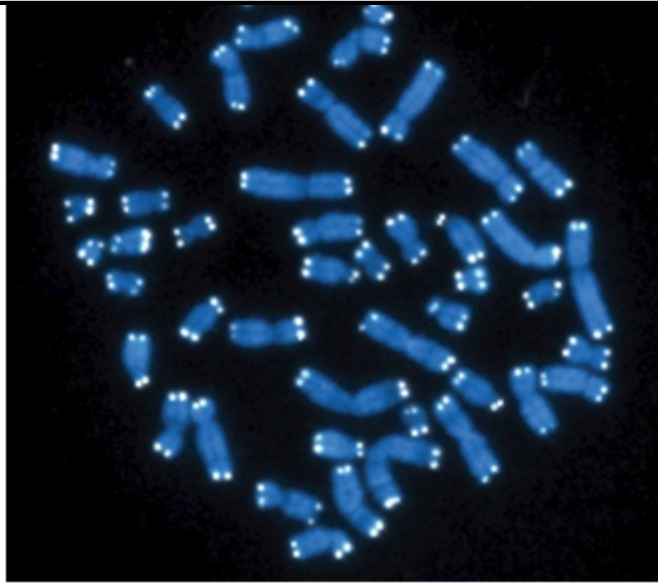
Save the Date: 5th Annual Medical Informatics World Conference - May 22-23, 2017

I am pleased to announce that I will be chairing the [opening session](#), Perspective: Large Medical Centers in the Telehealth Integration and Implementation Track on Monday May 22, 2017 at 10:55 am right after the Keynote Speakers.

I will also be moderating a [breakout discussion](#) group Monday afternoon entitled “Improving Health and Reducing Costs through Traditional and Innovative Approaches to Coordinated Care and Patient Engagement.”

Please join me at the Medical Informatics World conference as this meeting has become the critical meeting place for health IT executives and innovators, delivering the knowledge-sharing needed to continue improving patient care and outcomes. Click [here](#) to learn more about the conference. As a subscriber of my newsletter, you will receive a 10% discount off the registration fee with the keycode “1766BMI” when registering for this event. Offer is valid on new registrations and does not apply to workshop registration. To register, click [here](#).

[Top](#)



Your Mother Telling You to "Eat Your Vegetables and Go to Bed Early" is Now Related to Longevity

As a child, your mother always told you to "Eat your vegetables and go to bed early," and now there is scientific evidence to confirm that when you "eat healthy and get enough sleep," you live longer. Your longevity is related to telomeres. What are they and how are they related to longevity?

Nobel Prize Winner Elizabeth Blackburn, a molecular biologist awarded for her research on telomeres, demonstrated that telomeres, structures at the tips of chromosomes, play a key role in cellular aging. Although her work has been accepted by academia, the general public is unaware or doesn't understand the importance of this information. Blackburn and Elissa Epel, director of the University of California, San Francisco Aging, Metabolism and Emotions Center, laid out a scientific case that hopefully will motivate people to stick to their New Year's resolutions in not smoking, eating well, getting enough sleep, exercising regularly and cutting down on stress in her book *The Telomere Effect*.

The main theme of the book is that you have more control over your own aging than you think. You can actually lengthen your telomeres and perhaps your life if you follow a healthy lifestyle.

"Telomeres listen to you, they listen to your behaviors, they listen to your state of mind," said [Blackburn](#), president of the Salk Institute for Biological Studies in La Jolla, Calif.

Every cell in our body has a limited cell life or internal clock and that clock is controlled by telomeres. Telomeres, like the protective caps on shoelaces, sit at the end of strands of DNA. When a cell divides into two daughter cells, it has to copy its DNA. But the DNA replication machinery cannot reach the very ends of chromosomes, so 25 to 200 letters

Telomeres are the structures at the tip of our chromosomes depicted in white, our chromosomes are in blue. See image above. Source: Hesed Padilla-Nash and Thomas Reid, National Institutes of Health.

The [telomeres](#) on the ends of the chromosomes make sure that no important genes are being cut off and they prevent chromosomes from sticking together. [Telomeres](#) also keep the chromosome from fraying, but they get shorter every time the cell divides. When the internal clock reaches zero, the cells stop dividing and essentially die.

Constant stress or a rough lifestyle will shorten those caps, making it more likely that cells will stop dividing and essentially die earlier than those with longer telomeres. However, too much telomerase is a bad thing as well. Most cancers produce a lot of telomerase, 10 to 20 times the normal amount. The cells can't stop dividing, and then they form tumors.

A pilot study conducted by scientists at University of California, San Francisco and the Preventive Medicine Research Institute, a nonprofit public research institute in Sausalito, Calif., showed for the first time that changes in diet, exercise, stress management and social support can result in longer telomeres, the part of the chromosomes that affects aging.

The lifestyle changes were the following: a plant-based diet (high in fruits, vegetables and unrefined grains, and low in fat and refined carbohydrates); moderate exercise (walking 30 minutes a day, six days a week); and stress reduction (gentle yoga-based stretching, breathing, meditation). They also participated in weekly group support.

The [results](#) showed that men who were in the intervention group experienced "a 'significant' increase in telomere length of approximately 10 percent. Further, the more people changed their behavior by adhering to the recommended lifestyle program, the more dramatic their improvements in telomere length."

The control group, those with no lifestyle changes, experienced shorter telomeres – nearly three percent shorter at the end of the five-year study. Telomere length usually decreases over time.

"We can provide a new level of specificity and tell people more precisely with clues emerging from telomere science, what exactly about exercise is related to long telomeres, what exact foods are related to long telomeres, what aspects of sleep are more related to long telomeres," said [Epel](#).

[Judith Campisi](#), an expert on cellular aging at the Buck Institute for Research on Aging in Novato, Calif., said the underlying research is solid. "If you have a terrible diet and you

Short telomeres increase the likelihood of cells becoming senescent and producing molecules that lead to inflammation, which she said is a huge risk factor for every age-related disease. “So there is a link there,” Campisi said, “it’s just not this exclusive magic bullet, that’s all.”

Researchers at [Stanford University School of Medicine](#) have developed a new procedure that can quickly and efficiently increase the length of human telomeres. The procedure, which involves the use of a modified type of RNA, will improve the ability of researchers to generate large numbers of cells for study or drug development, said the scientists. Skin cells with telomeres lengthened by the procedure were able to divide up to 40 more times than untreated cells. This research may pave a way to a new treatment of diseases caused by shortened telomeres.

“Now we have found a way to lengthen human telomeres by as much as 1,000 nucleotides, turning back the internal clock in these cells by the equivalent of many years of human life,” said [Helen Blau](#), PhD, professor of microbiology and immunology at Stanford and director of the university’s Baxter Laboratory for Stem Cell Biology. “This greatly increases the number of cells available for studies such as drug testing or disease modeling.”

The advantage of this procedure is that the lengthening of the telomeres is temporary. After 48 hours, the telomeres begin to shorten again. From a biological perspective, this means the treated cells can’t divide indefinitely, which would be dangerous when using this as a potential therapy in humans because of the risk of cancer. This new approach paves the way toward preventing or treating diseases of aging.

Blackburn said, her research suggests that lengthening telomeres with medications could be dangerous — that lifestyle changes are far safer than a pill.

[Top](#)



Closing Thoughts

People have been looking for the fountain of youth for centuries. No one has found it yet, but it appears we may be able to prolong our lives if we start early and continue to maintain a healthy lifestyle. Evidence shows that if you have inherited short telomeres that make you predisposed to certain diseases, you may be able to delay onset by lengthening your telomeres with a healthy lifestyle.

While the modified RNA research from Stanford University sounds intriguing and promising, who knows how long it will take to perfect the procedure in order for it to be used in humans? But, in the meantime, healthy lifestyle modification can be started immediately, is safer and longer lasting naturally if one continues this lifestyle.

So I guess, the old wives' tale that your mother told you as a child was actually true, we just couldn't prove it scientifically. The moral of our story is that your "mother knows best."

[Top](#)

Copyright © 2017 BioMarketing Insight, All rights reserved.

Want to change how you receive these emails?
You can [update your preferences](#) or [unsubscribe from this list](#)

MailChimp.