

Silicon Valley Health Institute

Host of the Smart Life Forum

Next Meeting: Thursday, August 15, 2013

Main Presentation: Dr. Bruce N. Ames

“Vitamin and Mineral Inadequacy Accelerates Aging-Associated Disease”

Short Presentation: Dr. Justin Marchegiani

“Thyroid Imbalances and What You Can Do About It!”

Smart Life Forum

Presentation Location

Cubberley Community Center

Room H1

4000 Middlefield Road

Palo Alto, California

Directions on our website:

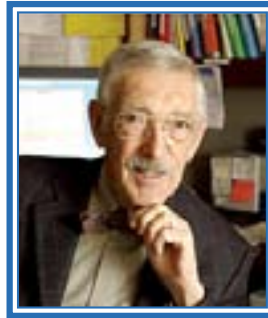
www.SVHI.com

For those who cannot attend,
you can view livestreaming at

<http://bit.ly/Zpld3o>

See our archived videos at

[http://tinyurl.com/
smartlifeforum](http://tinyurl.com/smartlifeforum)



Meet Dr. Bruce Ames
Page 2



Meet Dr. Justin Marchegiani
Page 10

Newsletter Table of Contents

Page 2 - Announcements/Upcoming Events

Page 3 - Meet Dr. Bruce Ames!

Page 4 - Main Presentation: *“Vitamin and Mineral
Inadequacy Accelerates Aging-Associated Disease”*

Page 11 - Meet Dr. Justin Marchegiani!

Page 12 - Short Presentation: *“Thyroid Imbalances and
What You Can Do About It!”*

Page 13 - Become a member of the SLF Community!

Announcements/Upcoming Events

Foundation for Mind Being Research Meeting

Friday, August 23, 2013 @ 7:30pm

Speaker: Suzanne Taylor will speak about Crop Circles

Please go to www.FMBR.org for more information.

Upcoming Speakers:

SEPTEMBER

Dr. T, Christine Rosche, MPH, CNS, Elize St. Charles, PhD. on a Panel
about Nutrition

OCTOBER

Steven Blake, S.d.D. - "Natural Approach to Arthritis - Keeping our Joints
Young"
Raymond Francis - "Why Aging is a Mistake"

NOVEMBER

Devra Davis, P.h.D. - "Disconnect: Cell Phones and Industrial Response"

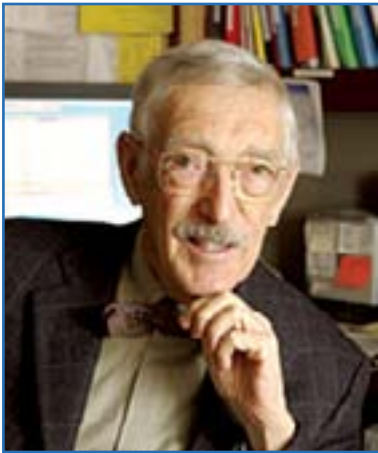
FUTURE SPEAKERS:

Beverly Rubik
Mahtab Jafari - "Truth About Anti-Aging Medicine"
Ari Vojdani - "Immunity Issues"
Diana Schwarzbein, MD

If you have questions please email susanrdowns@hotmail.com or call 650-704-7710.

Thank you.

Main Presentation Speaker: Meet Dr. Bruce N. Ames!



Dr. Ames is a Professor of Biochemistry and Molecular Biology, emeritus, University of California, Berkeley, and a Senior Scientist at Children's Hospital Oakland Research Institute. He is a member of the National Academy of Sciences and he was on their Commission on Life Sciences. He was on the board of directors of the National Cancer Institute, the National Cancer Advisory Board, from 1976 to 1982. His awards include: the

General Motors Cancer Research Foundation Prize (1983), the Tyler Environmental Prize (1985), the Gold Medal Award of the American Institute of Chemists (1991), the Glenn Foundation Award of the Gerontological Society of America (1992), the Honda Prize of the Honda Foundation, Japan (1996), the Japan Prize, (1997), the Kehoe Award, American College of Occup. and Environ. Med. (1997), the Medal of the City of Paris (1998), the U.S. National Medal of Science (1998), the Linus Pauling Institute Prize for Health Research (2001), the American Society for Microbiology Lifetime Achievement Award (2001), the Thomas Hunt Morgan Medal from the Genetics Society of America (2004), and the American Society for Nutrition/CRN M.S. Rose Award (2008). His 540+ publications have resulted in his being among the few hundred most-cited scientists (in all fields).

Contact Dr. Ames on his website at: www.bruceames.org, or by email at: bames@chori.org.

(End of Meet Dr. Ames!)

Main Presentation by Dr. Bruce N. Ames

“Vitamin and Mineral Inadequacy Accelerates Aging-Associated Disease”

Most of the world's population, even in developed countries, has inadequate intake of one or more of the ~30 essential vitamins and minerals (V/M), mostly used as cofactors by the proteins/enzymes of metabolism. A varied and balanced diet should provide enough V/M; an unbalanced diet with too much refined food provides calories, but not enough V/M. Triage theory (1,2) posits that, as a result of recurrent shortages of V/M during evolution, natural selection developed a strategic rationing response to moderate shortages so that the scarce V/M is preferentially retained by V/M-dependent proteins that are essential for short-term survival and reproduction. In contrast, proteins needed for long-term health, which I term “longevity proteins” because they defend against the diseases associated with aging, are starved for the V/M and thus are disabled.

Moreover, since the damage from moderate deficiency is insidious, its importance for long-term health is not clinically apparent. Strong support for triage theory comes from our analyses of published data on proteins dependent on vitamin K (3) and on selenium (4). Both of these V/M have built into metabolism a triage-like trade-off between short-term survival and long-term health; each uses a different mechanism to accomplish this end. Mechanistic, genetic, and epidemiological evidence suggests that this metabolic trade-off accelerates aging-associated diseases, such as cancer, cardiovascular disease, immune dysfunction, and cognitive decline.

(Continued on Next Page)

Importantly, by the official U.S. Institute of Medicine measure of inadequacy, the EAR (Estimated Average Requirement; the RDA is set at 2 standard deviations above the EAR), most of the U.S. population is below the EAR for one or more V/M. We have calculated from the NHANES database that the percentages of the U.S. population that are currently below the EAR are: magnesium 56%; zinc 12%; iron 16% of menstruating women; vitamin B6 49% of elderly women; folate 16% of adult women. The U.S. population also has very low intake of vitamin D, calcium, potassium, omega-3 fatty acids, vitamin K, and probably others, and this is especially true for children, adolescents, elders, and the obese. These official estimates of population inadequacy are likely to be underestimates, as EARs should be set taking long-term triage effects into account, which is likely to lead to numerous changes. Longevity proteins suggest a mechanism that could be used for prevention, by monitoring in a finger-prick of blood the level of a vulnerable protein for each V/M.

The obese eat the worst diet, as judged by the calorie V/M ratio; they are starving for V/M, which may overrule satiety signals. Every age-associated disease examined is accelerated in the obese. Our Choribar (V/M-dense, low-calorie, high-fiber, fruit-based) markedly improves metabolism in those with less than optimal diets (most subjects) in many human trials (5).

About half of the proteins we have studied are longevity proteins, which suggests the existence of an undiscovered class of longevity V/Ms, which we are exploring and discovering.

(Continued on Next Page)

1. Ames, B (2006) Proc. Natl. Acad. Sciences, U.S.A., 103:17589-94. doi:10.1073/pnas.0608757103
2. Ames, BN (2010) J Nucleic Acids. doi:10.4061/2010/725071.
3. McCann JC and Ames BN (2009) Am J Clin Nutr. 90: 889-907. doi:10.3945/ajcn.2009.27930.
4. McCann JC and Ames BN (2011) FASEB J. 25: 1793-1814, doi:10.1096/fj.11-180885.
5. Mietus-Snyder, et al. (2012) FASEB J. doi:10.1096/fj.11-201558.

Editors Note: Some of Dr. Ames Past Research

Susan Downs, MD

In the 1970s, Dr. Ames invented an inexpensive assay to check the mutagenicity of compounds. Since then he focused on understanding the biochemistry of aging with a focus on mitochondria and on how micronutrients may prevent disease, malnutrition and obesity.

He was instrumental in studying mitochondrial health and mitochondria's role in longevity and disease prevention. Mitochondrial damage contributes to aging and degenerative diseases including cancer and neurological decline. Aged mitochondria generate increased amounts of mutagenic oxygenic free radicals along with changes in membrane electrical potential. This results in oxidative stress and cascades into DNA and RNA damage. This results in cell, tissue and ultimately organ damage. Dr. Ames found that carnitine and lipoic acid complement each other in restoring mitochondria health and possibly cognition.

(Continued on Next Page)

Dr. Ames developed the “triage theory.” The word triage comes from the French word trier meaning to sort. Triage is used on the battlefield by doctors to prioritize treatments so that efforts can focus on those with the highest priority. The body when faced with a shortage of nutritional resources, prioritizes needs and pulls the limited micronutrients from non essential processes to life-saving processes (such as ATP production) in order to insure survival. Hence, even if modestly deficient in one of the essential micronutrients, the body has to ration them in terms of priority. This diverts the resources away from long term cellular DNA repair which is essential for longevity.

Dr. Ames had observed that approximately 33 % of children coming into his clinic in Children’s Hospital in Oakland were obese. The percentages were higher in the African American and Hispanic populations. The obese lacked essential micronutrients such as magnesium due to poor nutritional intake. Typically obese people are inflamed. The lack of micronutrients encourages detrimental bacteria in the gut leading to dysbiosis (Leaky gut). Research indicates that dysbiosis is a prominent factor in the occurrence of autoimmune diseases

Dr. Ames recommends that everyone take a multivitamin. Both a good diet and a multi vitamin are important. For those who do not have a good diet, a multivitamin would provide “insurance”

(Continued on Next Page)

Vitamin deficiencies cause harm. For example folic acid deficiency breaks chromosomes. Deficiencies in zinc, vitamin B 6, pantothenic acid and biotin each damage mitochondria. When the level of either of these vitamins are low, oxidative stress, and free radicals increase setting off all the pathways for aging and chronic diseases. Dr. Ames postulates that any vitamin deficiency can lead to oxidative stress. For any vitamin, there is some group that is low in it. Sixty percent of Americans are low in magnesium. A quarter of menstruating women are getting less than half the RDA of iron. Half of the poor used to take in less than half the RDA of folate, (before folate fortified flour in the U.S)

Vitamin K is not a single vitamin but rather a collection of structurally related molecules from different sources. There are K1, MK-4, and MK-7, all with different benefits for the body. Vitamin K deficiency was associated with age-related conditions, including weaker bones and hardening of the arteries and cardiovascular disease. An increase in the incidence of spontaneous cancer was also observed

In the United States, the population tends to be fairly low with regards to vitamin K intake, largely due to the fact that we do not consume sufficient greens. In Japan, people obtain healthy amounts of MK-7 from a soy product called natto. We believe that natto consumption may be responsible for the decreased risks of fractures and bone loss among Japanese women. Additionally, natto may be responsible for the lower prevalence of atherosclerosis in Japan.

(Continued on Next Page)

Additionally, those people taking vitamin K antagonists such as warfarin (Coumadin®) to prevent strokes experience serious vitamin K deficiencies because Coumadin blocks the biosynthesis of MK-4 from vitamin K1. Persons taking Coumadin are at increased risk for osteoporosis, calcification of their arteries and possibly for aortic valve calcification.

Information obtained from interviews with Dr. Ames including:

Life Extension interview, August 2011

DoctorYourself.com on

Interview with Stephen Daniells, Feb 9, 2010

Prof Bruce Ames rebuts CBS 10/3/1989)

(End of Main Presentation)

SLF Members

BOARD OF DIRECTORS

Dave Asprey - Chairman
Sharon Luehs - Secretary
Laurel Corcoran - CFO, Treasurer
Susan Downs - President
Bill Grant - Publicity
Larry Wiessenborn - Sound
Doug Husbands, DC, CCN
Robert Menkemeller, RNC

FOUNDER

Kathryn Grosz

ADVISORY BOARD

Tim Gallagher, DDS
Bill Grant, PhD
Phillip Lee Miller, MD
Alan P. Brauer, MD
Bernd Friedlander, DC
Tim Gallagher, DDS
Bill Grant, PhD
Phillip Lee Miller, MD

MEETING MODERATORS

Dave Asprey
Alexis Bright
Stan Durst
Tom Gurske
Douglas Husbands, DC
Elise St. Charles, PhD
Board of Directors
Dave Asprey

VOLUNTEERS

Rob Baum, Assistant Editor
Jake Brzakovic, Fitness Advice
Laurel Corcoran, Records/Printing/Mailing
Laura Dominguez-Yon, Website
Susan Downs, Newsletter Editor & Prgm Editor
Steve Fowkes, Technical Advisor
Rob Larson, Equipment Manager
Don Southard, Reception
Larry Wiessenborn, Audio Engineer
Sandra Yow, Newsletter Layout
Pamela Zuzak, Video Sales

About Smart Life Forum

Smart Life Forum, Inc. is a 501(c)(3) California nonprofit corporation whose primary mission is to provide credible health education to the public with an emphasis on optimal wellness, anti-aging medicine, and longevity.

Annual memberships in Smart Life Forum, Inc. and charitable donations are tax deductible to the extent allowed by law. For information on how to join or make a donation, please visit our website: www.SVHI.com.

For questions, please contact Susan Downs at susanrdowns@hotmail.com.

Become a Member!

Smart Life Forum, Inc. (SLF) is a California qualified 501(C)(3) nonprofit corporation organized under state law for educational and scientific purposes as a public benefit corporation. Please make your check payable to "Smart Life Forum, Inc." Please send your email address as well.

Donations Welcome!

Please send to:

Laurel Corcoran, *Treasurer*

314 Grant Avenue

Palo Alto, CA 94306

Annual Membership \$60 (per household)

\$10 per Meeting

Benefits: Access to a community of experienced scientists and physicians who share information and similar interests.

Short Presentation Speaker: Meet Dr. Justin Marchegiani D.C.!



While Dr. Justin studied at the University of Massachusetts, he started off his health career working in a surgical center as he prepared for his medical school training. Working in the surgical field gave Justin a first-hand, up-close perspective into the healthcare system. He was able to see where it shined especially in the area of treating acute injuries and trauma and also saw its short comings, which were most evident in the areas of chronic disease like diabetes, heart disease, and obesity which currently plague our society today. This experience shifted Justin's focus from a traditional medical approach to a more functional or natural medical approach to healing, where the underlying cause of the patient's health issues are actually addressed and not just medicated and surgically removed.

Dr. Justin Marchegiani is a graduate of the University of Massachusetts at Amherst with a B.S. degree in Kinesiology and Pre-medical studies. Dr. Justin has completed his Doctorate degree in Chiropractic Medicine from Life West University. Dr. Justin has completed post graduate study in the area of clinical nutrition, exercise and functional medicine so he can offer the most cutting edge techniques to help address his patient's growing health care needs.

Dr. Justin works with a wide variety of patients all the way from athletes trying to increase performance and heal from injuries to the every day person with chronic health problems. Using a holistic approach, addressing core underlying barriers to healing along with sensible lifestyle and nutritional changes nearly everyone can benefit from his care.

(End of Meet Dr. Justin Marchegiani!)

Short Presentation: Justin Marchegiani D.C.

“Thyroid Imbalances and What You Can Do About It!”

There are almost 30 million people (mostly women) that have an un-diagnosed thyroid disorder. Synthroid or levothyroxine (synthetic thyroid medication) is the fourth best selling drug on the market, yet there are many people who remain undiagnosed and untreated. Thyroid conditions are intrically connected with many other metabolic conditions, yet physicians persist in telling undiagnosed thyroid patients that they are fine. Thyroid symptoms typically include Fatigue, depression, weight gain, digestive issues, and hair loss. This lecture will include natural treatment options, information on medications, and advice on how to lose weight and feel better.

(End of Short Presentation)

Join Us! First time Visitors and Non-Members \$10 per meeting (at door).

Smart Life Forum, Inc. (SLF) is a California qualified 501(C)(3) nonprofit corporation organized under state law for educational and scientific purposes as a public benefit corporation. Please make your check payable to "Smart Life Forum, Inc." Please send your email address as well.

Donations welcome! Send to:

Laurel Corcoran, Treasurer,
314 Grant Ave, Palo Alto, 94306
or call: (650) 704-7710
See website for other payment options.

Annual Membership \$60 (per household).

Benefit: Access to a community of experienced scientists and physicians who share information and similar interests.

Renew your membership today!

Complete this form & mail back with payment:

\$60/year full membership (maximum 4 per household)

Yes, you can renew and pay in person at a meeting.

Donations welcomed.

NAME: _____

ADDRESS: _____

CITY: _____ ZIP: _____

PHONE: _____ PHONE 2: _____

EMAIL: _____

CREDIT CARD #: _____

Circle Type: Visa | MC | Name on card, if different: _____

Phone on card, if different: _____

I authorize this charge (Signed): _____

DATE: _____

Total amount authorized or enclosed: \$ _____, (check applicable boxes):

\$60/yr Family membership (4 max in household)

Donation: \$ _____

Please make your check payable to "Smart Life Forum, Inc." and send to:

**Laurel Corcoran, Treasurer,
314 Grant Avenue, Palo Alto, 94306**