



David Zava, Ph.D.

Testing for Hormone Imbalances and Symptoms

Cubberly Community Center
4000 Middlefield Road, Room H1, Palo Alto, California

June 12, 2003 at 7:00 pm

Meet David T. Zava

Dr. Zava earned his Ph.D. in biochemistry at the University of Tennessee in 1974 and did his post-doctoral work at the University of Texas. He did conventional research with breast cancer cell lines at the University of Texas, San Antonio, and became proficient in performing the receptor assay to determine whether breast tumors are estrogen positive or negative. This is information that can determine a breast cancer patient's course of treatment.

Dr. Zava was hired by the Ludwig Institute at the University of Bern, Switzerland, where he headed a large international clinical study investigating the effectiveness of chemotherapy and Tamoxifen. The results of the study confirmed the toxicity of chemotherapy as destructive to the immune system and not always productive of the best outcome. He worked with Dr. Cirani's group in Walnut Creek, using monoclonal antibodies to directly target breast cancer tumors. At the same time, Dr. Zava worked with in-vitro fertilization at John Muir Hospital where he learned cutting-edge technologies in reproductive science. At Aeron Biotechnologies in San Leandro, California he became Laboratory Director. Here he developed the saliva assay with a grant from the National Institute of Health. Dr. Zava believed that the saliva assay might be a more accurate method to measure hormone levels of women at high risk of developing breast cancer. Saliva assays had been used before by the World Health Organization and scientific research groups.

For both breast and prostate cancers, he ties together the importance of hormonal balance and the biological origins

of cancer, providing a realistic, simple and rational strategy for prevention based on intelligent choices of natural (bioidentical) hormone therapies, healthy foods and exercise. Dr. Zava developed saliva testing for the commercial market as a simple, noninvasive means to test hormones and hormonal risk factors for breast cancer. He established ZRT Laboratory in 1998. ZRT Laboratory has several research projects ongoing with physicians and academic groups to understand the role of steroid hormones in health and disease, particularly in breast cancer.

Dr. Zava is coauthor with Dr. John Lee of the book *What Your Doctor May Not Tell You About Breast Cancer: How Hormone Balance Can Help Save Your Life* (Warner Books)

Breast Cancer's Hormone Link and Role of Progesterone

Nearly every risk factor for breast cancer is linked either directly or indirectly to an increase in the level of unopposed estrogen or estrogen receptor activity. Many of those risk factors and hormonal imbalances lead to excessive exposure of the breast tissue to estrogens in the absence of progesterone. The term "unopposed estrogens" refers to estrogens not balanced by adequate progesterone, which is the body's natural antiestrogen. Dr. Zava will describe the estrogen matrix related to biochemical and hormonal imbalances that increase the burden of unopposed estrogens in breast tissue, which in turn leads to increased breast cancer risks. He will briefly discuss the following:

- Obesity and insulin resistance
- Conventional hormone replacement therapy (HRT)
- Pollutants
- Estrogen dominance syndrome
- Stress and adrenal dysfunction
- Immune system dysfunction

Dr. Zava will show charts on breast screening statistics and breast tumor growth patterns, and will describe the hormonal link to breast cancer. He will explain the correlation between insulin resistance and breast cancer, and further demonstrate the proliferation of obesity to epidemic proportions with obesity maps of the U.S. from 1985-2000 from the Centers for Disease Control. He will show that conventional HRT increases breast cancer risk 1.4 to 2-fold with more than 5 years of use. A 2002 JAMA study by Shairer et al, found ERT (unopposed) increases breast cancer risk by at least 1% per year and HRT with progestin increases the risk by 8% per year (possibly by 30% after 4 years of use [this means for example an increase from 1% to 1.3%, not from 1% to 30% -ed]). The recently halted WHI (Women's Health Initiative) study (July, 2002) which found conventional (i.e., drug) HRT use over 5.1 years among predominantly healthy post-menopausal U.S. women contributed to the following increased risks:

- 41% increase in strokes
- 29% increase in heart attacks
- 26% increase in invasive breast cancer
- 22% increase in total cardiovascular disease

- 100% increase in total blood clots.

He will discuss the term "estrogen dominance syndrome," coined by Dr. John Lee, as high estradiol, low progesterone, and low thyroid activity, and will show that the breast cancer hormone profile observed in salivary hormone testing and cited in the literature is high estradiol, low progesterone, high testosterone, low DHEA-S, and high night cortisol. Dr. Ercole Cavaliere's description of estrogen as "the angel of life and the angel of death" in that estrogen has life giving function by can become toxic to the body when allowed to accumulate in the absence of adequate levels of progesterone.

Dr. Zava will give several examples of the vital role progesterone plays in protecting against the effects of estrogen dominance and breast cancer. A study by Chang et al. in 1995 published in "Fertility and Sterility" found that progesterone decreased cell proliferation in the breast ductal cell. Dr. Zava listed other benefits of progesterone - e.g. inhibition of vasodilatation (metastasis), inhibition of blood clotting, increase of natural killer cell activity, natural calming and antidepressant properties, natural anti-diuretic and facilitator of thyroid and adrenal balance.

Hormone Physiology and Testing by Saliva and Blood Spot

Dr. Zava will describe normal/abnormal menstrual cycles, delivery and tissue uptake of steroid hormones applied transdermally. He will explain physiological dosage and delivery of steroid hormones and subsequent levels in blood and saliva. He will also include the mechanics of saliva and steroid hormone entry into saliva. Only about 1.5% of steroids in the blood are not bound in blood proteins and are free or bioavailable to the tissue. This fraction that escapes the bloodstream and enters the salivary ducts is representative of tissue uptake.

Saliva/Blood Spot Testing Hormones vs. Symptoms

He will then explain the advantages of blood spot testing as being a more convenient and less invasive method to test all of the same hormones that can be tested in serum. The test involves a finger stick with a lancet and spots of blood are collected onto filter paper. Phlebotomists and centrifuging are not needed, and the sample can be shipped in the regular mail without ice or biohazard precautions. The collection can occur any time of day/month, can be done anywhere, hormones in dried blood are stable for months, and it is possible to test peptide hormones not possible in saliva.

Dr. Zava will show the advantages and disadvantages of saliva testing. He will explain testing procedures at ZRT Laboratory including - symptom-based report format, including documentation of menstrual status and history, hormone usage and the integration of this information into a comprehensive interpretation that can serve as a guideline to treatment. ZRT Laboratory conducts salivary and blood spot hormone testing to identify hormonal imbalances linked to chronic ill health, bone loss, cardiovascular disease, fatigue, depression, general aging and cancers of the breast and prostate. ZRT also provides home saliva test kits, laboratory processing, comprehensive

interpretation of test results, consultation, education and medical training.

In his lecture, Dr. Zava will discuss the key issues pertaining to hormone balance and imbalance in relationship to quality of life and diseases of western society, particularly breast and prostate cancers. More specifically, Dr. Zava will cover the physiology of steroid hormones, hormone delivery and tissue uptake; the utility of salivary and blood spot testing in detecting undiagnosed hormonal imbalances associated with severe symptoms of andropause (male menopause), poor health and disease as well as the importance of monitoring hormone levels for appropriate dosage of hormone therapies. Citing key case studies from the thousands of ZRT Laboratory test results, Dr. Zava will show how interpreting lab levels of hormones in the light of documented symptoms can provide physicians and patients with new diagnostic clues into the etiology of disease and breakthroughs in prevention.

Blood Spot Testing

He will show that blood spot testing can be used for determining at least the 10 hormone levels tested for. Furthermore, for men with prostate cancer or high PSA readings, he will process three of these tests at no charge to compare these results with their traditional serum results. The three tests are PSA, Testosterone and [SHBG](#) (sex hormone binding globulin).

How Cortisol Levels Affect Thyroid Function and Aging

Finally, he will explain the thyroid cortisol relationship. When cortisol levels get too high, you start getting resistance from hormone receptors, and it requires more hormones to create the same effect. Insulin resistance is a classic example. It takes more insulin to drive glucose into the cells when cortisol is high. This usually causes weight gain around the waist, because the body will store fat there rather than burn it.

MegaC Project Update

Tom Levy was interviewed on KPFA-FM May 27 about megaC. The interview was done by Lena Berman, a friend of Clara Felix. She had read about Tom and his book in Clara's Newsletter. Phil Jacklin learned on the same day that Julian Whitaker is making the megaC therapy his number one story for his next newsletter. Julian Whitaker is editor and author of the biggest, and one of the best, health newsletters in the country. He has 600,000 subscribers. Phil Jacklin called his office to follow up on Mike Korek's conversation with him at the ACAM Convention in Washington, DC, weekend before last. Mike showed him our April Newsletter on Levy and megaC and Julian said he wanted to see the book. Phil called to report that he had already sent a copy of Tom's book to Whitaker's office and wanted to know if they got it. Turns out he had just read the book cover to cover and had it on his desk.

