



Orentreich
Foundation for the
Advancement of
Science, Inc.

Report of the Director

December 2003

First, on behalf of the Board and staff of OFAS, we extend to you our best wishes for a happy and healthy 2004.

As some may not know, OFAS was founded forty-two years ago to repeat and extend the discoveries of Drs. Alexis Carrel and P. Lecompte du Noüy on the effect of aging on wound healing. It would seem obvious that as we age we heal more slowly, but it took their pioneering studies of treating infected wounds during World War I to prove this. They quantitatively demonstrated that clean wounds of the same size took twice as long to heal in a 40-year-old soldier as in a 20-year-old. Their work also led to the development of the Carrel-Dakin Solution—a hypochlorite water solution still in use today—that decontaminates wounds yet allows them to heal normally; this was a critical medical advance because more soldiers were dying of infected wounds than from directly fatal injuries. Carrel later studied the beneficial effects of plasmapheresis (blood washing) on wound healing and aging.

Over the decades, OFAS research has extended well beyond studies of wound healing and the benefit of plasmapheresis on aging to include nutritional (such as the life-extending effects of dietary restriction of the essential amino acid methionine) and pharmacologic interventions.

Biologic age is more significant than chronologic age and is best measured by the interactive sum of the reserve capacity of the body's organ systems. An organ's function is usually measured by a "stress test" such as the familiar stress electrocardiogram. Clinicians are now more frequently employing a stress test for metabolism: the glucose/insulin tolerance test that evaluates the production and efficacy of insulin in response, over time, to a specified dose of glucose. Abnormal results are frequently the first sign of "Dysmetabolic Syndrome" (formerly called Metabolic Syndrome X). The Dysmetabolic Syndrome can include, in addition to elevated blood insulin, high triglycerides, low levels of the good cholesterol (HDL), hypertension, and abdominal obesity.

OFAS continues to evaluate tests and interventions that enhance vitality and longevity. Twenty three years ago, in 1980, we acquired, stored, and catalogued a remarkable serum collection from Kaiser Permanente (KP); we have added to it so that it now consists of a half million specimens. Stored at -40°C at our Cold Spring-on-Hudson Biomedical Research Station, the OFAS-KP Serum Treasury has been a source of data for numerous research projects performed in cooperation with other institutions. These studies have demonstrated, for example, the causal relationship between the Epstein-Barr virus and Hodgkin's Disease; and the bacterium *H. pylori* and peptic ulcer, gastric cancer, and gastric lymphoma.

(over, please)

Information for Donors

The Orentreich Foundation for the Advancement of Science, Inc., was founded in 1961. OFAS is a non-profit institution dedicated to biomedical research to prevent, halt, or reverse those disorders that decrease the quality or length of life. It is duly registered with the US Internal Revenue Service as an Operating Private Foundation under Section 4942(j)(3).

Your tax-deductible contribution should be mailed to:

**Orentreich Foundation for the
Advancement of Science, Inc.**
910 Fifth Avenue
New York, NY 10021-4187

Studies with the OFAS-KP Serum Treasury continue to reveal blood biomarkers that help to establish positive or negative associations with subsequent disease as well as provide early warning signs that can aid in the development of interventions to prevent and treat common diseases.

Serum Treasury Studies In Progress

Alzheimer's Dementia

In collaboration with researchers from the Mount Sinai Schools of Medicine in New York and Toronto, we are organizing a large multi-laboratory investigation of the risk factors associated with Alzheimer's dementia. This study will look not only at serum markers, but also at genetic factors that might put an individual at significant risk for dementia of the Alzheimer type. The study will take at least three years to complete and is anticipated to result in a practical risk assessment profile for use by clinicians.

Prostate Cancer

Our study utilizing the OFAS-KP Serum Treasury to analyze potential risk factors for prostate cancer is nearing completion. This study, unlike others, is particularly important because the subjects are separated by race. Since black men in the US have the highest rate of prostate cancer in the world, differences in risk factors between white and black men might shed light on the cause(s) of the disease.

Non-Hodgkin's Lymphoma (NHL)

Utilizing the Serum Repository of the US Department of Defense and the OFAS-KP Serum Treasury, prior exposure to organochlorine pesticides (DDT and PCB) and the Epstein-Barr virus will be analyzed for a potential interactive effect on the risk of contracting NHL.

Recently Completed Studies

- Insulin-like growth factor-1 (IGF-1), IGF-binding proteins, and breast cancer. *Cancer Epidemiology, Biomarkers, and Prevention* 11(12): 1566-73, 2002
- C-reactive protein, *Helicobacter pylori*, *Chlamydia pneumoniae*, cytomegalovirus, and risk for myocardial infarction. *Annals of Epidemiology* 13(3): 170-7, 2003
- No association between serum levels of tumor necrosis factor- α (TNF- α) or the soluble receptors sTNFR1 and sTNFR2 and breast cancer risk. *Cancer Epidemiology, Biomarkers, and Prevention* 12:945-6, 2003
- A prospective of *Chlamydia pneumoniae* infection and risk of Multiple Sclerosis in two US cohorts. In press.

No accomplishment of OFAS is possible without your encouragement and generous support of our goal: to prevent, halt, or reverse those disorders that decrease the quality or length of life. To this end, OFAS is planning a series of VitaLongevity™ newsletters to keep you alert to those strategies that are still valid, those that are no longer valid, and new suggestions for making your life as long and healthy as possible.



Norman Orentreich, MD, FACP
Director



David S. Orentreich, MD
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