



OFAS

Logo: Life's blood flows through the hourglass; the stopcock represents the alteration of aging and disease as biomedical research progresses.

Report of the Directors

Dear Friends, Supporters, and Fellow Researchers,

To celebrate our 46th year, we depart from our usual text-based report on research projects (most of which are covered in detail in our 45th Anniversary report, downloadable from <www.orentreich.org>). Instead, we present our dedicated staff whose daily and meticulous efforts make our achievements possible. We hope you enjoy getting a sense of the individuals and the collaborative laboratory groups.

Briefly, throughout 2007 research has continued to focus on two areas where the biomedical impact of OFAS is well established:

- our pioneering work on the lifespan extending effects of a diet low in the essential amino acid methionine. While investigators around the world have joined in low-methionine diet research, OFAS is further examining a variety of low-methionine diets in rodents, teasing out the biochemical mechanisms underlying their anti-aging effect.
- utilizing the Serum Treasury to gain an immediately useful understanding of risk factors for the development (or avoidance) of diseases like dementia, breast cancer, and non-Hodgkin's lymphoma. To date, research using the OFAS Serum Treasury and its medical records database at Kaiser Permanente has produced some 30 papers of direct relevance to human health.

We continue to explore the anti-aging effects of plasmapheresis. Our studies evaluate the influence of this 'blood washing' technique on a variety of physical, behavioral, biochemical, and cell-function parameters characteristic of mature and elderly rats.

And there's something new: OFAS now has an applied research division, Therapeutic Silicone Technologies, Inc (TST), specifically for the development of highly purified silicones for therapeutic uses. Clinical trials will be implemented at various research centers and will include treatments for cutaneous conditions such as ulcers related to the complications of diabetes and lipoatrophy associated with HIV infection. Further information about TST, which is based in our NYC offices, can be found at <www.orentreich.org/tst.htm>. TST does not manufacture or sell the therapeutic products; rather, it licenses proprietary technology for commercial distribution, using proceeds to fund on-going clinical trials, research, and development.

In all regards, OFAS remains dedicated to biomedical research that focuses on developing interventions that prevent, halt, or reverse those disorders that decrease the quality or length of life.

With appreciation for our staff and collaborators—and your support and encouragement,

Norman Orentreich, MD, FACP
Founder and Co-Director

David S Orentreich, MD
Co-Director

Biochemistry Laboratory



Clockwise from top: Steve Massardo, Ines Augie, Joyce Schmidt, Frantz Perodín, Nancy Borofsky

Recent Publication

de Martel C, Haggerty TD, Corley DA, Vogelmann JH, Orentreich N, Parsonnet J
Serum ghrelin levels and risk of subsequent adenocarcinoma of the esophagus.
American Journal of Gastroenterology, 102(6):1166-72, 2007.



Rozlyn Krajcik, Lab Director and Director of Scientific Affairs

Rozlyn A. Krajcik, PhD, RPh, graduated *summa cum laude* from the University of Pittsburgh in 1973 (BS, Pharm). She practiced pharmacy in both retail and hospital settings before obtaining a doctorate in 1992 (topic: Transcriptional regulation of the neuropeptide Y gene) in Biomedical Sciences from Wright State University (Dayton, OH). Dr. Krajcik joined OFAS shortly thereafter, serving as head of the Biochemistry Laboratory and eventually as Assistant Director of Science, overseeing projects involving biomaterials applications and hair loss disorders, which led to two US patents. She became Director of Scientific Affairs in 2006 and coordinates numerous collaborative research projects involving disease biomarkers, cancer epidemiology, and clinical trials; in this role she also oversees aging studies including methionine restriction, use of the Serum Treasury, and the VitaLongevity™ newsletter. Her interest in pet health and aging led to the concept and implementation of the Pet Animal Serum Treasury (see back page). Her primary research interest is the genetic cause of androgenetic alopecia.

Dr. Krajcik is a past member of the Biomaterials Society and a current member of American Society of Hypertension, American Association for the Advancement of Science, New York Academy of Sciences, North American Hair Research Society, and American Aging Association.

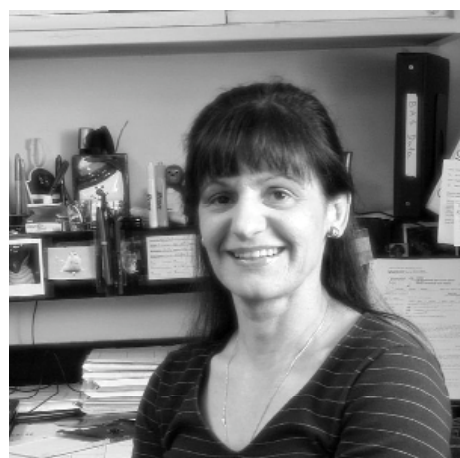
Biology Laboratory



Clockwise from top: Steve Bailey, Ginny Malloy, Mike Carafas, Heidi Seymour

Recent Publication

Linford NJ, Beyer RP, Gollahon K, Krajcik RA, Malloy VL, Demas V, Burner GC, Rabonivitch PS
Transcriptional response to aging and caloric restriction in heart and adipose tissue.
Aging Cell 6(5):673-88, 2007.



Ginny Malloy
Lab Director

Virginia L. Malloy, MS, began her tenure at OFAS shortly after receiving her MS in 1982 in Biology (topic: Parabiosis of mice of different ages) from St. John's University (New York). Her initial research studied potential antiandrogen therapies for the treatment of dermatoses such as acne and androgenetic alopecia. Her focus since 1989 has been aging, specifically studying biomarkers responsible for the increased survival of rats and mice maintained on diets low in the essential amino acid methionine. On the same subject, she has coordinated collaborative methionine restriction studies in animals with the former American Health Foundation (Valhalla, NY) and the Pennington Biomedical Research Institute (Baton Rouge, LA).

Ms. Malloy is Director of the Biological Sciences Laboratory and serves on the 7-member Institutional Animal Care and Use Committee (IACUC). This committee, required under the Animal Welfare Act, oversees the animal care and use programs at OFAS and reviews all animal research protocols. Ms. Malloy is certified by the American Association of Laboratory Animal Science as a Laboratory Animal Technologist and has earned a graduate certificate in Clinical Research Administration from New York Medical College (Valhalla, NY). She is a member of the Society for Investigative Dermatology.

Cell Biology Laboratory



Left to right:
Maureen Jarvis-Morar,
Dwight Mattocks, Carmen
Perrone

Recent Publication

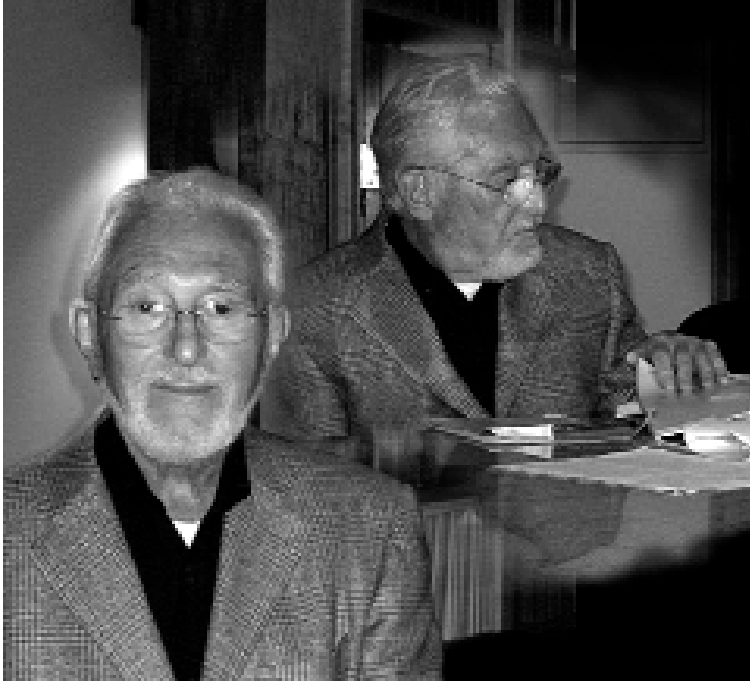
Perrone CE, Mattocks DAL, Hristopoulos G, Plummer JD, Krajcik RA, Orentreich N
Methionine restriction effects on 11β -HSD1 activity and lipogenic/lipolytic balance in F344 rat adipose tissue.
Journal of Lipid Research, in press.



Carmen Perrone
Lab Director

Carmen E. Perrone, PhD, received her doctorate in Cellular Biology (topic: Physiologic significance of mitochondria/rough endoplasmic reticulum complexes) in 1992 from the University of California, Los Angeles (UCLA) and conducted post-doctoral research at Brown University and the American Health Foundation. At Brown she was involved in studies geared to understanding skeletal muscle atrophy. At American Health she used conducted toxicology work on lipid-lowering agents. In 2000 she was appointed Research Assistant Professor in Pathology at the New York Medical College where she utilized non-animal models of chemical-induced carcinogenesis as potential bioassays to determine the carcinogenic potential of new chemical entities.

Dr. Perrone joined OFAS in August 2005 as Director of the Cell Biology Laboratory where she currently directs research examining molecular mechanisms involved in adipose tissue growth as well as the identification of serum biomarkers of aging. She is a past member of the NY Paleontological Society and a current member of the American Association for the Advancement of Science and the American Association for Cancer Research.



Norman Orentreich, Founder and Co-Director



Consultants, clockwise from top left: Jay Zimmerman, Herb Burack, Joel Brind, Bob Nash, Leon Bradlow, Joe Vogelman (Senior Scientist)



Administrative Affairs, left to right: Nancy Durr (Associate Director), Angela Tremain, Sylvia Duffy

David Orentreich (Co-Director),
Bernardita Calinao (Deputy Director)



Serum Treasuries

Identifying the risk factors or biomarkers of a disease is essential to the success of preventive medicine. That such critical information might be discovered by careful analysis of the serum of human blood has been repeatedly demonstrated by studies using the method of *prospective epidemiology*.

To conduct a prospective epidemiologic study of the possible relationship of Serum Factor X to Disease Y, Factor X first must be measured in a large group of apparently healthy (certainly free of Disease Y) persons. Over the ensuing years, a small fraction of the study group will develop Disease Y. It can then be determined if Y is more or less likely to occur in persons with high or low pre-diagnostic levels of X. Clearly, prospective studies are costly, and the results are delayed by the need to wait many years for Y to occur in enough persons in the study group to provide statistical significance.

But take a computer-cataloged collection of frozen sera collected long ago, coordinate it with a computer-cataloged database of the subsequent medical histories of the serum donors, and you have an unparalleled scientific resource. Such a serum treasury offers the unique opportunity to discover disease risk (or prevention) factors detectable in serum by the remarkably time-efficient and cost-effective method of *historical prospective epidemiology*. For example: that high levels of IGF-1 and IGFBP-3 are associated with increased risk of breast cancer in pre-menopausal women, but risk is decreased with high levels of IGFBP-2 in post-menopausal women.

The **OFAS-KP Serum Treasury** is famous for some 30 papers of clinically useful research using the OFAS-housed collection of frozen sera coordinated with the Kaiser Permanente Medical Care Program database.

The **OFAS-WHO Serum Treasury** is a recent acquisition—a truly historic and unique repository that the World Health Organization (WHO) Serum Reference Collection collected during the 1960s and 70s from interesting populations in diverse areas of the world. The collection has rich population-associated data for future research.

PAST (Pet Animal Serum Treasury) is a project started in 2003 by OFAS and the Animal Cancer Foundation. With time, the collection of sera from healthy pets (mostly cats and dogs) will grow to become a resource for historical prospective epidemiologic studies to benefit precious pets and possibly humans as well.

ATTENTION RESEARCHERS

If you have a research question relating to a human disease risk or prevention factor for which there is adequate scientific evidence of a biomarker in serum to justify use of the unique OFAS-KP Serum Treasury in pursuit of a definitive answer, please submit your proposal for consideration to:

OFAS

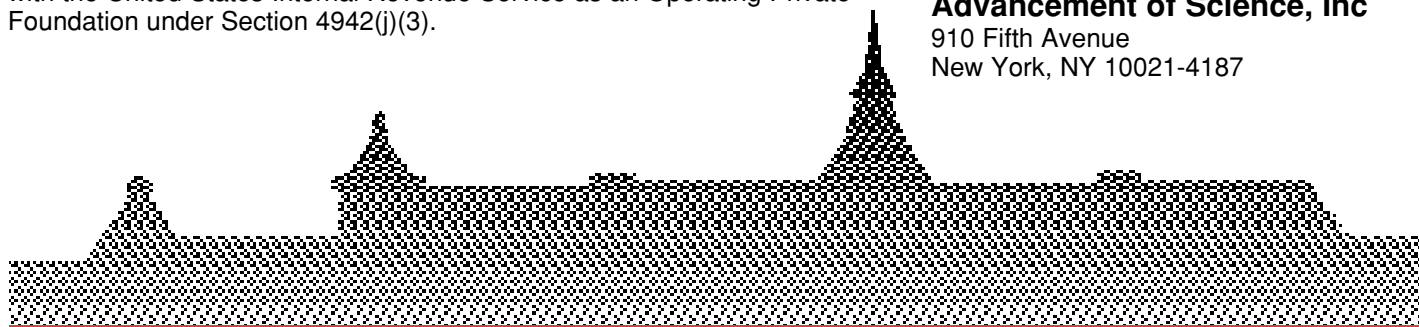
Dr RA Krajcik
Biomedical Research Station
855 Route 301
Cold Spring-on-Hudson, NY 10516-9802
Tel: 845.265.4200
Fax: 845.265.4210
E-mail: ofas@orentreich.org

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. A 501(c)(3) non-profit corporation, OFAS is duly registered with the United States Internal Revenue Service as an Operating Private Foundation under Section 4942(j)(3).

No accomplishment of OFAS is possible without your encouragement and generous support. Your tax-deductible contribution should be mailed to:

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910 Fifth Avenue
New York, NY 10021-4187



Biomedical Research Station

Cold Spring-on-Hudson, NY