

# Organization Section

## OBITUARY



**NORBERT FREINKEL (1926–1989)**

Dr. Norbert Freinkel, C.F. Kettering Professor of Medicine at Northwestern University Medical School and 36th President of the American Diabetes Association (ADA), died unexpectedly at 63 years of age on September 5, 1989. Death came while he was attending a concert in Leningrad. He had taken a side trip to the Soviet Union after attending a meeting of the European Diabetes in Pregnancy Study Group in Uppsala, Sweden.

Dr. Freinkel received his bachelor's degree from Princeton University in 1947 and his medical degree from New York University College of Medicine in 1949. During these years, he was awarded membership in Phi Beta Kappa and Alpha Omega Alpha. After internship at Bellevue Hospital, he spent 2 years at Walter Reed Army Medical Center. Norbie's interest in research was kindled as a medical student, when he had an opportunity to spend a summer working in the laboratory of Dr. Homer

Smith, and flourished in his years at Walter Reed, where he was involved in pioneering studies in the use of radioactive isotopes to treat human diseases and understand human physiology. Thus, after the years at Walter Reed, he became a Research Fellow on the Harvard Medical Service and Thorndike Memorial Laboratory at Boston City Hospital from 1952 to 1955 followed by a year (1955–1956) as an Overseas Research Fellow with Sir Rudolph Peters at the ARC Laboratories in Cambridge, UK. He then spent the next 10 years on the faculty of Harvard Medical School at the Thorndike Memorial Laboratory and Boston City Hospital as Director of the Diabetes and Metabolism Division. In 1966, he joined the faculty of Northwestern University Medical School as the C.F. Kettering Professor of Medicine and Chief of the Section of Endocrinology, Metabolism, and Nutrition and, in 1973, was named Director of the Center for Endocrinology, Metabolism, and Nutrition.

Norbert Freinkel believed passionately that research in a medical school should be focused on human biology and disease. In this context, a question should optimally be framed at the bedside of a patient with an unsolved problem. The solution might be sought at several levels of complexity and require input from several scientific disciplines. Finally, the new insights should be integrated into our pool of knowledge or applied to the treatment of the problem. In a career that spanned four full decades, Norbie's approach to all of his research epitomized this philosophy. In essence, he was the embodiment of the "physician scientist." Furthermore, he remained actively engaged in exciting research up to the time of his untimely death as evidenced by the article by Weigensberg et al. (this issue, p. 575).

For more than 30 years, studies of metabolic regulation in normal and diabetic pregnancies were the focus of much of Norbie's most creative research endeavors. His laboratory was instrumental in documenting the pregnancy-induced alterations in both the fed (facilitated anabolism) and fasted (accelerated starvation) states and defining the implications of such phenomena for the pathophysiology of gestational diabetes and the treatment of all forms of diabetes mellitus complicating pregnancy. In his 1980 Banting Lecture, Norbie advanced the hypothesis that alterations in the intrauterine metabolic environment during fetal development may have both immediate and life-long impact on the development of the offspring; the nature of the effects would depend on when in the course of gestation the metabolic disturbance was

present and which cells or tissues were undergoing critical stages of development at the time. He pointed out that, in this context, metabolic fuels would be exerting pharmacological or teratogenic effects, and he coined the phrase *fuel-mediated teratogenesis* to describe the potentially adverse effects that could arise from alterations of maternal metabolism in diabetes mellitus and other conditions.

Many clinicians and those engaged in basic aspects of diabetes-related research are aware of Norbie's major contributions to diabetes in pregnancy. These established the foundation from which he pioneered the development of novel approaches to the treatment of diabetes in pregnancy. Such strategies are leading to reductions in the risks of a poor outcome or the chances of birth defects to nearly the level of risk in nondiabetic pregnancy. However, note that in his scientific lifetime, Norbie also made major contributions to our understanding of thyroid hormone metabolism and turnover, elucidating the cause and prevention of alcohol-induced hypoglycemia (often of life-threatening severity) that can occur secondary to the inhibition of gluconeogenesis and delineating the factors regulating insulin synthesis and release from the  $\beta$ -cells of the pancreas. The magnitude and significance of Norbie's work in each of these areas would satisfy the expectations of many for a lifetime of work. Yet, Norbert Freinkel accomplished all of it in the 40 years from medical school graduation in 1949 to his death in 1989.

Norbert Freinkel's curriculum vitae was truly impressive. The large number of publications and his editorial activities chronicle the scientific achievements described above. He was active in numerous professional societies (including American Association for the Advancement of Science, American Clinical and Climatological Association, American College of Physicians, ADA, American Federation for Clinical Research, American Physiological Society, American Society for Clinical Investigation, American Society for Clinical Nutrition, American Thyroid Association, Association of American Physicians, Central Society for Clinical Research, and Endocrine Society) and contributed services to several editorial boards (*Journal of Clinical Endocrinology and Metabolism*, *Journal of Laboratory and Clinical Medicine*, *Annual Review of Medicine*, *Journal of Clinical Investigation*, *International Diabetes Federation Bulletin*, *Endocrinology*, *Journal of Developmental Physiology*, *Hypocrates*, and *Diabetologia*). In recognition of his talents, he was asked to serve on a wide range of

governmental, voluntary health agency, and university and private-sector advisory boards and committees. Some of these were: consultant, Surgeon General, United States Army; member, Metabolism Study Section, National Institutes of Health; member, Advisory Committee and Consultant for Endocrinology and Metabolism, Food and Drug Administration; member, National Diabetes Advisory Board; member of planning and advisory committees for several International Diabetes Federation Congresses; and director, Collaborating Center for Diabetes in Pregnancy, and member, Board of Directors, Collaborating Centers in Diabetes, World Health Organization. He served the Endocrine Society as a member of two editorial boards, its Council, and numerous committees.

Perhaps Norbie's most far-reaching contributions were to the ADA, which he served as a member of the Board of Directors of its Northern Illinois Affiliate and the National Board, a member of the Executive Committee, Vice-President, and President. During the years Norbie was intimately involved in the leadership of the ADA, its evolution to a voluntary health agency was fully accomplished, and sharing of affiliate income and research funds for national programs was implemented. In the year of his presidency, 1977-1978, the publication of *Diabetes Care* was launched. During his years of service to the ADA, he was also a member and Chairman of the Committee on Scientific Programs and served as Cochairman and Chairman of the First and Second International Workshop-Conferences on Gestational Diabetes and, at his death, was Chairman Designate for the third such conference, which will be held in 1990.

Dr. Freinkel was the recipient of many awards and honors in appreciation of his contributions. These included more than two dozen Visiting Professorships or named Lectureships. He was elected an Honorary Fellow at King's College, Cambridge University, UK, and was awarded honorary degrees from Uppsala University and the University of Umea, both in Sweden. He received the John Claude Kellion Medal from the Australian Diabetes Society, the McCollum award from the American Society for Clinical Nutrition, the Agnes Higgins award from the March of Dimes Birth Defects Foundation, and awards of distinction from several affiliates of the ADA, including the Joslin Medal of the New England Affiliate, the Mosenthal Award of the New York Downstate Affiliate, the Lukens Medal and Lectureship of the Greater Philadelphia Affiliate, and the Woodyatt Memorial Lectureship of the Northern Illinois Affiliate. Finally, the ADA awarded him the Lilly Award and Medal, the Banting Medal of highest distinction, and the Banting Memorial Lectureship.

Norbert Freinkel's bibliography includes more than 260 scientific publications. However, he was convinced that teachers and scientists can make their greatest impact via personal interactions. Indeed, he often mused that increasingly, memory of the work of others seems to be limited to what can be found in the computerized citation indexes of the last 5 years. By contrast, personal contacts are lasting, and they may even multiply. Norbie achieved those lasting influences in several compelling ways. He was a brilliant lecturer and an inspiring teacher. His presentations were always lucid and informative, however difficult the subject matter. And he possessed the rare ability to convey the essence of detailed, complex information in a single graphic term. Above, I drew attention to a few of the most notable examples of his phrases, which include fed and fasted states, accelerated starvation, facilitated anabolism, the phosphate flush, and fuel-mediated teratogenesis. He took great pride in the accomplishments of the more than 100 students, postdoctoral fellows, and visiting scientists from other countries whom he had a part in training and the former faculty colleagues at Harvard University and Northwestern University who have gone on to assume positions of lead-

ership at other universities and medical centers. He continued to be a counselor and supporter for many, although years may have elapsed since their formal training or work in the laboratory. Norbie was quick to offer congratulations for success and support during adversity to his scientific progeny with a phone call, letter, or even a personal visit in the same way that he provided encouragement to his children Susan, Andrew, and Lisa. In short, they remained a part of his extended family. Furthermore, they have contributed to that ever growing scientific family by sending their own students, fellows, and even children to Norbie's laboratory to continue their education. A family lineage has also been perpetuated through Norbie's nephew Kenneth Mayer, a member of the faculty of Brown University Medical School, and his son Andrew, who is a Senior Resident in Neurology at the University of Virginia. In keeping with the warm affection he displayed toward his students, colleagues, and friends, Norbie elevated making an introduction to an art form. He had the capacity to bring an audience to the edge of their seats in eager anticipation of what they were about to hear. Meanwhile, the guest or speaker was often distracted by having his background and accomplishments described more eloquently than he imagined could be possible.

Surely Norbie was one of the scientific giants of our time, and we are tempted to lament for the even greater accomplishments that might have been and over the unfinished manuscripts, the still open and partially filled notebooks of data, and the new ideas still germinating. However, those of us who had the privilege to be part of his life or even know his warm smile or jovial greeting share a wonderful heritage that we will cherish and not forget.

Boyd E. Metzger, MD

## ADA EVENTS

### Future Meetings

50th Annual Meeting: 14-19 June 1990, Atlanta, Georgia.

51st Annual Meeting: 21-28 June 1991, Washington Convention Center, Washington, DC.

### Clinical Education Program (CEP)

Funded by an educational grant from The Upjohn Company, ADA's new Clinical Education Program (CEP) "Managing Diabetes in the 1990s" focuses on helping physicians gain a better understanding of how to manage the diabetic patient, including treatments that may delay or avoid diabetic complications. The 3.5-hour seminars are specifically designed for primary-care physicians. Attendees will receive Continuing Medical Education credits. ADA affiliates will conduct approximately 100 CEP seminars during the coming year. The following ADA affiliate CEP meetings have been scheduled:

ADA Pennsylvania Midstate Affiliate—TBA May 1990, location TBA.

ADA Minnesota Affiliate—3 May 1990, Minneapolis.

ADA North Dakota Affiliate—5 May 1990, Williston.

ADA Arkansas Affiliate—5 May 1990, Hot Springs.

ADA Mississippi Affiliate—8 May 1990, Jackson.

ADA Iowa Affiliate—10 May 1990, Des Moines.

ADA California Affiliate—19 May 1990, Bakersfield.

ADA New York Upstate Affiliate—19 May 1990, Buffalo.

ADA Ohio Affiliate—26 May 1990, Rootstown.

ADA Mississippi Affiliate—30 May 1990, Starkville.

ADA Arkansas Affiliate—TBA June 1990, location TBA.

ADA Indiana Affiliate—TBA June 1990, French Lick.

ADA Missouri Affiliate—1 June 1990, Columbia.

ADA Vermont Affiliate—7 June 1990, Burlington.

ADA Kansas Affiliate—8 June 1990, Wichita.

ADA Florida Affiliate—15 June 1990, Marco Island.

ADA Western Pennsylvania Affiliate—15 June 1990, Pittsburgh.

ADA Maine Affiliate—29 June 1990, Waterville.

ADA California Affiliate—30 June 1990, San Diego.

ADA New Mexico Affiliate—16 July 1990, Ruidoso.

ADA Michigan Affiliate—23 July 1990, Traverse City.

ADA Virginia Affiliate—27 July 1990, Virginia Beach.

For more information contact your local ADA Affiliate or Dr. Michael Stolar, Director of Health Sciences, ADA National Service Center, 1660 Duke Street, Alexandria, VA 22314. Tel.: (703) 549-1500, ext. 360, or 1-800-232-3472, ext. 360. To verify dates, please contact the sponsoring affiliate.

## ADA Mid-Pennsylvania Affiliate Symposium

The ADA Mid-Pennsylvania Affiliate and Pennsylvania State University's College of Medicine are cosponsoring a symposium on non-insulin-dependent diabetes mellitus 4 May 1990 at the Milton S. Hershey Medical Center. The symposium will cover such topics as the pathophysiology of type II diabetes; islet dysfunction; cellular and molecular mechanisms of insulin resistance; cellular alterations in liver, muscle, and adipose tissue responsible for insulin resistance in type II diabetes; and regulation of glucose transporter expression in diabetes. For more information call Jane Mihelic, (717) 531-7965; Mark Potter, MD, (717) 531-6892; or Leonard Jefferson, PhD, (717) 531-8567.

## Special Issues in Diabetes Management

The Clinical Society of the ADA New York Affiliate will sponsor the combined health-care course "Special Issues in Diabetes Management" 12 May 1990. Lectures and workshops will focus on motivation and assessment in patient teaching, developing an effective educational philosophy, improving nutrition counseling skills, incorporating family psychodynamics in patient care, teaching in the clinical environment, and ADA recognition of diabetes-education programs. There is a \$35 registration fee for ADA members and a \$45 fee for nonmembers. For more information contact the ADA New York Downstate Affiliate office, 505 Eighth Avenue, 21st Floor, New York, NY 10018. Tel.: (212) 947-9707.

## 15th Annual Professional Symposium for Physicians and Health-Care Professionals

The ADA North Dakota Affiliate will hold its 15th annual professional symposium for physicians and other health-care professionals "The Highs and Lows of Diabetes" 26 October 1990 in Grand Forks, North Dakota. The program will feature speakers and in-state diabetes experts. For more information contact Mary Ann Keller, RN, MS, CDE, Executive Director, ADA North Dakota Affiliate, P.O. Box 234, Grand Forks, ND 58206. Tel.: (701) 746-4427.

## OTHER EVENTS

### Diabetes & Exercise '90

The World Health Organization, the European Association for the Study of Diabetes, and the German Diabetes Association will sponsor "Diabetes & Exercise '90" 19-21 May 1990 in Dusseldorf, Federal Republic of Germany. Participation in the symposium will be limited to 100 colleagues, including a faculty comprised of 25 experts. For more information contact Dr. Michael Berger, Professor of Medicine, Department of Medicine E, Moorenstrasse 5, D-4000 Dusseldorf, FRG. Tel.: 0211-311-7812.

### **Swedish Diabetic Macroangiopathy Conference**

The Swedish Society for Diabetology and the Swedish Society for Angiology are cosponsoring the conference "Diabetic Macroangiopathy" 14–16 June 1990 in Mora, Sweden. The conference will include lectures on the pathogenesis, clinical findings, and prevention of diabetic macroangiopathy and poster sessions. The official language of the conference will be English. For more information contact Carl-David Agardh, MD, Department of Internal Medicine, University Hospital, S-221 85 Lund, Sweden. Tel.: +(46-46) 17-10-00; Fax: +(46-46) 15-14-80. Or contact the Symposium Secretariat, Congrex, P.O. Box 5619, S-114 86 Stockholm, Sweden. Tel.: (46-8) 612-69-00; Fax: +(46-8) 612-62-92; Telex: 16949 Krecon S.

### **International Study Group on Diabetes Treatment With Implantable Insulin Delivery Devices**

The 6th Meeting of the International Study Group on Diabetes Treatment With Implantable Insulin Delivery Devices will be held 21–24 June 1990 in Nice, France, during the 4th Delivery System Cardiosim symposium. For more information contact Dr. Jean-Louis Selam, ISGIID Secretary General, UCI Diabetes Center, 12555 Garden Grove Boulevard, Suite 206, Garden Grove, CA 92643.

### **14th IDF Congress**

The International Diabetes Federation will hold its 14th Congress 23–28 June 1991 at the Washington Convention Center in Washington, DC. The program will include scientific and clinical sessions covering such topics as clinical care, health-care delivery, education, public awareness, fund raising and volunteerism, association management, government and association relations, and youth services. Preliminary registration forms are available. For more information write to Linda Cann, American Diabetes Association, 1660 Duke Street,

Alexandria, VA 22314. Tel.: 1-800-232-3472, ext. 281.

### **2nd European Congress of Endocrinology**

The 2nd European Congress of Endocrinology will be held 1–6 July 1990 in Ljubljana, Yugoslavia. A manufacturers' exhibition of pharmaceutical and biomedical products will be featured at the congress. For more information contact the 2nd European Congress of Endocrinology, Secretariat, Kompas Jugoslavija, Congress Department, Pražakova 4, YU-61000 Ljubljana, Yugoslavia. Tel.: 3861 319-445. Telex: 31209 kompas. Telefax: 3861 319888.

### **Satellite Meeting of 1990 IUPHAR Conference**

The International Union of Pharmacology (IUPHAR) will hold the meeting "Pathophysiology and Treatment of Diabetes Mellitus" 8–11 July 1990 at Montpellier, France. The meeting will be a satellite meeting of the 1990 IUPHAR Conference in Amsterdam. The meeting will cover such topics as molecular mechanisms and therapeutic approaches to insulin resistance, hypertension and diabetes, insulin-receptor phosphatases, vanadium and diabetes, diabetes and the heart, and new aspects of insulin therapy. For more information contact Dr. Gérard Cros, Laboratoire de Pharmacodynamie, Faculté de Pharmacie, 34060 Montpellier-Cédex, France. Tel.: (33) 67-63-55-25; Fax: (33) 67-61-16-22.

### **16th Meeting of International Study Group of Diabetes in Children and Adolescents**

The International Study Group of Diabetes in Children and Adolescents will hold its 16th annual meeting 6–9 September 1990 in Oslo, Norway. The two main topics will be microalbuminuria and secondary diabetes (diabetes in cystic fibrosis, ataxias, etc.). The deadline for registration is 15

June 1990. For more information contact Professor O. Aagenæs, Pediatric Department, Aker University Hospital, 0514 Oslo 5, Norway. Tel.: 47-2-225050; Fax: 47-2-711564.

### **2nd International Symposium on the Immunotherapy of Type I Diabetes**

The Department of Diabetes and Immunogenetics at St. Bartholomew's Hospital in London is sponsoring the 2nd International Symposium on the Immunotherapy of Type I Diabetes 9–10 September 1990. The symposium is the official meeting of the International Diabetes Immunotherapy Group (IDIG) and will concern all aspects of strategies in the immunotherapy and prevention of type I diabetes. Lectures, selected short presentations, and ample time for debate are planned. For more information contact Anne Glover, Department of Diabetes and Immunogenetics, Dominion House, St. Bartholomew's Hospital, London EC1A 7BE, UK. Tel.: (01) 601-7447.

### **3rd Congress on Trace Elements in Medicine and Biology**

The French Society for Study and Research on Essential Trace Elements will hold its Third Congress on Trace Elements in Medicine and Biology 15–18 January 1991 at Les Deux Alpes, France. The program will focus on chromium, including discussions on chromium in diet and in diabetes, and trace elements, including a discussion on zinc and glucose tolerance. For more information contact Richard Zawislak, Laboratoire d'Analyses, Institut de Chimie Biologique, 11 Rue Humann, 67085 Strasbourg Cedex, France.

### **ALAD Address Change**

The Asociación Latinoamericana de Diabetes (ALAD) has announced a change in its postal address. The new address is Asociación Latinoamericana de Diabetes, P.O. Box 843, Lima, Peru, S.A., c/o Dr. Rolando Calderon. Tel.: 51-14-473408; Fax 51-14-475554.