

CURRICULUM VITAE

Part I: General Information

NAME: Mara Lorenzi

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PLACE OF BIRTH: Bordighera, Italy

EDUCATION:

1965 B.A. Classic Lyceum, Ventimiglia, Italy
1971 M.D. University of Torino Medical School, Italy; Medicine and Surgery

POSTDOCTORAL TRAINING:

Internships and Residencies:

1971-1972 Intern in Medicine, Istituto di Patologia Medica, University of Torino, Italy
1972-1973 Resident in Medicine, Istituto di Patologia Medica, University of Torino, Italy
1978-1980 Resident in Laboratory Medicine, University of California San Francisco

Fellowships:

1973 (summer) Visiting Fellow, Diabetes Clinic, King's College Hospital, London, England
1973-1976 Fellow in Endocrinology, Metabolic Research Unit, University of California San Francisco

LICENSURE AND CERTIFICATION:

1972 Italian Licensure
ECFMG certificate
1975 FLEX certificate
1977 Specialization in Internal Medicine (Italy)
1978 California license registration
1982 American Board of Clinical Pathology, Certificate
1988 Massachusetts license registration

ACADEMIC APPOINTMENTS:

1980-1987	Assistant Professor of Medicine, University of California San Diego
1988-1991	Assistant Professor of Ophthalmology, Harvard Medical School
1991-2004	Associate Professor of Ophthalmology, Harvard Medical School
2004-	Professor of Ophthalmology, Harvard Medical School

AFFILIATED INSTITUTION APPOINTMENTS

Schepens Eye Research Institute

1987-1991	Associate Scientist
1991-	Senior Scientist
1997-	George and Frances Levin Scholar in Diabetic Retinopathy
2001-	Director, Juvenile Diabetes Research Foundation (JDRF) Center for Diabetic Retinopathy

HOSPITAL APPOINTMENTS

UCSD Medical Center

1980-1987	Attending Physician in Medicine
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Massachusetts General Hospital

1989-	Clinical Associate in Medicine
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OTHER PROFESSIONAL POSITIONS AND MAJOR VISITING APPOINTMENTS:

1976-1978	Research Physician, Metabolic Research Unit, University of California San Francisco
1976-1980	Co-Investigator, Evaluation of the Artificial Pancreas (Miles Biostator), University of California San Francisco
1989-1993	Visiting Adjunct Professor, Faculty of Medicine and Surgery University of Genova, Italy
1991	Visiting Scholar, Vision Science Research Center, University of Alabama School of Medicine
1993	Visiting Professor, Department of Internal Medicine, University of Vienna, Vienna, Austria
1998	Visiting Professor, Center for Clinical Neuroscience and Ophthalmology, Michigan State University

CLINICAL AND HOSPITAL SERVICE RESPONSIBILITIES:

UCSD Medical Center:

1980-1987	Attending Physician, Medical Service
1980-1987	Attending Physician, Endocrinology and Metabolism subspecialty

1980-1984 Director, Diabetes Center

Massachusetts General Hospital:

1988-present Attending Physician, Diabetes Center

MAJOR ADMINISTRATIVE RESPONSIBILITIES:

1980-1984	Director of the Diabetes Clinic, University of California San Diego
1983-1987	Director, Clerkship in Clinical Endocrinology and Metabolism, University of California San Diego
1988-1990	Head, Biochemistry and Cell Biology Unit, Schepens Eye Research Institute
1998-2002	Chair, Training Committee of the Schepens Eye Research Institute
2001-	Principal Investigator and Director, JDRF Center for Diabetic Retinopathy at the Schepens Eye Research Institute

MAJOR COMMITTEE ASSIGNMENTS:

Medical School (University of California, San Diego)

1981-1983	Recruitment and Admission Committee
1985-1987	Core Curriculum Committee

Department (Dept. of Ophthalmology, Harvard Medical School)

1993	Program Committee for Research Retreat
1997	Program and Site Committees for Research Retreat
1997-1998	Search Committee for an Associate Professor in a Basic Science area
1997-	Program Steering Committee and Selection Committee of the National Eye Institute Postdoctoral Training Grant

Affiliated Institution (Schepens Eye Research Institute)

1988-1993	Chair, Molecular Biology Committee
1989	Ad hoc committee to study the position of Director of Research
1990	Chair, Search Committee for Grant Administrator
1990-2001	Training Committee
1990-1992	Search Committee for Director of Research
1991-1994	Chair, Radiation Safety Committee
1993-1997	Chair, Appointments and Promotions Committee
1995	Search Committee for Molecular Biologist
1996	Search Committee for Retinal Molecular Biologist
1996-2004	Committee on Responsible Conduct in Research
1998-2001	Chair, Training Committee
1999-2000	Advisory Committee on the Starr Center for Scientific Communication
2001	Committee on Human Studies
2001-2002	Committee on Institute's Archives Committee on Emergency Response Planning
2001-	Chair, Radiation Safety Committee
2004-	Seminars Committee
2004-	Chair, Ad Hoc Committee on Investigator Position
2005-	Training and Responsible Conduct of Research Committee

Hospital (UCSD Medical Center)

1981-1983

Nutrition Committee

1984-1987

Patient Care Monitoring and Policy Committee

National:

1995-	NIH Peer Review Committees (ad hoc reviewer)
1991-1994, 1998	Medical Science Review Committee of the JDRF
1995	Site visit for NIH Program Project at the Picower Institute, NY
2000-2003	Medical Science Review Committee of the JDRF (Training Study Section)
2001	Site Visit to JDRF Center for Diabetes Complication at the University of Michigan
2002	Site Visit to JDRF Gene Therapy Center at the University of Florida
2002	NIDDK Advisory Panel on Special Funding Program for Type 1 Diabetes
2002-	Medical Science Review Committee of the JDRF (Clinical Investigation Study Section)
2003-	JDRF Advisory Panel on Diabetic Complications
2004-	NIDDK Advisory Committee for Animal Models of Diabetic Complications Consortium

PROFESSIONAL SOCIETIES:

1975	American Diabetes Association
1981-1985	Committee on Research of the California Affiliate
1984-	Member, Council on Epidemiology and Statistics
1987-	Member, Council on Complications
1989-	Chair, Scientific Sessions at Annual Meetings
1996	Abstract Reviewer for the 56 th Annual Meeting
1997-2000	Research Grant Review Panel
1999-2000	Steering Committee of the Council on Complications
2003	Chair, Symposium on Oxidative Stress and Downstream Mechanisms in Microvascular Complications, 63 rd Annual Meeting Panel Member, Discussion Session of the Council on Complications, 63 rd Annual Meeting
1977-	American Association for the Advancement of Science
1978-	The Endocrine Society
1983-	American Federation for Medical Research
1986	European Association for the Study of Diabetes (EASD)
1989-	Chair, Scientific Sessions at Annual Meetings
1996	Co-Chair, Satellite Symposium "Role of Adhesion Molecules in Diabetes Mellitus", Vienna, Austria
1997	Co-Chair, Oxford Workshop on Diabetic Retinopathy sponsored by the EASD and the JDRF
2003-	Advisory Editorial Board, Diabetologia (official Journal of the EASD)

1997-
1999-

Member, Massachusetts General Physicians Organization, Inc.
Société Française de Microcirculation (by invitation)

EDITORIAL BOARDS:

1987-1997	Member of the Editorial Board, Diabetes, Nutrition and Metabolism
1990-1996	Member of the Editorial Advisory Council, Journal of Endocrinological Investigation
1993-1998	Associate Editor, Diabetes Metabolism Reviews
1998-2004	Co-Editor, Diabetes/Metabolism Research and Reviews
1998-	Consulting Editor, Journal of Clinical Investigation
2003-	Member of the Advisory Board, Diabetologia

AWARDS AND HONORS:

1972	Montecatini Prize for Therapy (Italy) for study of the mechanisms of action and clinical use of antiandrogens (Doctoral Thesis)
1973-1975	Scholarship from the Department of Education, Italian Government, for specialization in Endocrinology
1987-	Endowed position of Institute Scientist, Schepens Eye Research Institute
1992-1995	Mentor-Based Postdoctoral Fellowship Award of the American Diabetes Association
1994	Mary Jane Kugel Award of the Juvenile Diabetes Foundation
1996	Honor Lecture, 16 th Congress of the Italian Diabetes Association
2003	First recipient of the Alessandro Beretta-Anguissola Prize of the University of Rome "La Sapienza" for scientific merits in Internal Medicine

Part II: Research, Teaching, and Clinical Contributions

A. NARRATIVE REPORT

Diabetes and its vascular complications have been and are the focus of all my academic activities. I trained in Endocrinology at the University of California San Francisco at a momentous time. Somatostatin (the peptide inhibitor of growth hormone secretion) had just been discovered and made available to Peter Forsham's group. In seminal clinical studies led by Jack Gerich, we used somatostatin to demonstrate the critical role of counterregulatory hormones in the metabolic decompensation induced by insulin deficiency. It was also the time of a heated debate over the metabolic versus genetic etiology of the vascular sequelae of diabetes. The issue had enormous implications for patient care, and I became eager to explore it experimentally.

After a postdoctoral training based solely on clinical research, I thus moved to bench work to test whether the high glucose levels characteristic of diabetes have untoward effects on vascular cells. We generated and demonstrated the concept of "glucose toxicity". By linking a metabolic abnormality of diabetes to hallmarks of diabetic microangiopathy, the work tilted the balance in favor of the metabolic versus genetic hypothesis of the vascular complications. The work provided a new paradigm for the study not only of the vascular complications of diabetes, but also of the teratogenicity of diabetes and the compromised insulin secretion found in type II diabetes. We also discovered a "memory" of abnormal gene expression induced by high glucose, which is still viewed as a prime mechanism for the inertia with which even incipient diabetic microangiopathy responds to restoration of near-normoglycemia.

We brought the concepts developed through the *in vitro* work to the investigation of the biology of human diabetic retinopathy. Diabetic retinopathy had been studied until then almost exclusively at the histological level. We documented that diabetes alters early and selectively the program of gene expression of the cells of retinal vessels, with remarkable similarity to the effects induced by high glucose *in vitro*. A turning point for the field was our observation in 1996 of accelerated apoptosis of retinal microvascular cells in diabetic subjects. Apoptosis was found to predict retinal capillary obliteration, the lesion that transforms nonproliferative into sight-threatening proliferative retinopathy. Relevant to the early "pericyte drop-out" in diabetic retinopathy, we are observing that the pathways to apoptosis differ in retinal pericytes and endothelial cells. Diabetes and high glucose trigger a proapoptotic program in pericytes, but affect endothelial cells more subtly, by reducing protective mechanisms that render the luminal surface of endothelium antiinflammatory and antithrombogenic. We documented complement activation and microthrombosis in the retinal vessels of diabetic patients, and a recently awarded clinical grant will permit us to begin testing the efficacy of antiplatelet drugs on retinal vascular changes occurring early in human diabetes.

An additional line of investigation uncovered after short duration of diabetes retinal glial changes and a pervasive retinal "neuropathy". The mechanisms of these early abnormalities, and their role in the development of the microangiopathy are being addressed by a team of five investigators supported by the Juvenile Diabetes Research Foundation (JDRF) Center for Diabetic Retinopathy at the Schepens Eye Research Institute, of which I am Principal Investigator and Director. Current findings in my project point to an important role of the polyol pathway of glucose metabolism in the neuroglial

abnormalities, as well as in the vascular abnormalities. We are testing the relevance of these findings to human diabetic retinopathy and new drugs to inhibit the polyol pathway.

I genuinely enjoy teaching and I have taught in most forums. Most of my current teaching is with research fellows and students in my laboratory and with the larger group of postdoctoral fellows (over 60) at the Schepens. I have trained postdoctoral fellows from many countries, and all of them have entered academic careers. I have supervised Ph.D. and Master theses. From '94 to 2004, I have organized a monthly Fellows' Journal Club which has become integrated into the curriculum of the Department of Ophthalmology Training Program on the Molecular Bases of Eye Diseases, funded by the NEI. I chaired for four years the Training Committee at the Schepens. During this period, the Committee introduced an annual prize for the two best papers authored by fellows, a weekly fellows' Seminar Series, and a Fellows' Manual that structures core activities and mechanisms for grievance. I have worked closely with the Committee on Responsible Conduct in Research to organize seminars and events that expose fellows to ethical issues in research. I lecture as Visiting Professor and as an invited guest in the U.S. and abroad.

I have always been active in clinical medicine. I directed the Diabetes Clinic at UCSD for several years, and authored clinical chapters on diabetes and hypoglycemia. Since 1988, I have had a most rewarding association with the Diabetes Center at MGH, where I see patients one-half day per week, interact with the Endocrine fellows, and continue to learn from my splendid clinical colleagues.

B. FUNDING INFORMATION:

1987-2005	NIH, HL 36861 and since 1990 EY 09122, PI, "High glucose, DNA, and diabetic complications"
2001-2005	Juvenile Diabetes Research Foundation, P.I. and Program Director of the Center for Diabetic Retinopathy at the Schepens (5 Investigators, 3 cores) Project "Combination therapy to prevent diabetic retinopathy", P.I. Administrative Core, Director
2002-2005	NIH, EY 14812, PI, "Retinal blood flow and microthrombi in type 1 diabetes"

C. REPORT OF CURRENT RESEARCH ACTIVITIES

Bench Research

1. Cellular and molecular mechanisms in the pathogenesis of diabetic retinopathy (PI)
2. Pharmacological approaches to prevent diabetic retinopathy (PI)

Clinical Trial

1. Antiplatelet therapy in early human diabetic retinopathy (PI)

D. REPORT OF TEACHING:

1. **Local Contributions**a. Medical school courses (University of California San Diego)

1980-1987	Pathophysiology and Medical Therapeutics, lecturer; 100 medical students; 6 h preparation, 3 h contact time
1981-1984	Diagnosis and Management of Common Clinical Disorders, lecturer; 20 medical students, 6 h preparation, 3 h contact time
1981-1983	Frontiers in Clinical Research, lecturer; 20 medical students; 2 h preparation, 2 h contact time
1982-1985	Introduction to Clinical Medicine, course leader; 16 medical students; 20 h preparation, 20 h contact time
1983-1987	Diagnosis of Endocrine Disorders, lecturer; 100 medical students; 8 h preparation, 3 h contact time

b. Graduate courses (UCSD Medical Center)

1980-1984	Weekly Diabetes Clinic Conferences, lecturer; 2 medical students, 2-3 residents, 2-3 postdoctoral fellows; 1 h preparation, 1 h contact time
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c. Invited teaching presentations

1989	Seminar, Joslin Diabetes Center
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1996	Endocrine Grand Rounds, Massachusetts General Hospital
1997	Seminar, MGH East Pathology Research
1998	Seminar, Massachusetts General Hospital Diabetes Center
1999	Seminar, Massachusetts General Hospital Diabetes Center

d. Continuing medical education courses

- 1981 “Diabetes Management: new and old”, lecturer, Postgraduate Course University of California San Diego; 200 CME students. 4 h preparation, 1 h contact time
- “Laboratory evaluation of diabetes,” lecturer, Postgraduate Course University of California San Diego; 200 CME students; 4 h preparation, 1 h contact time
- “Modes of delivery of insulin and their effectiveness,” lecturer, Postgraduate Assembly of the Endocrine Society, University of California San Diego; 100 CME students; 4 h preparation, 1 h contact time
- 1983 “An update on the management of the diabetic patient”, lecturer, Postgraduate Course University of California San Diego; 200 CME students; 4 h preparation, 1 h contact time

e. Advisory and supervisory responsibilities

- 1980-1987 Attending Physician Medical Service, University of California San Diego Medical Center; medical students and residents
- Attending Physician Endocrinology and Metabolism, University of California San Diego Medical Center; medical students and residents
- 1982-1987 Preceptor for 3rd year Core Medicine Clerkship University of California San Diego; medical students
- 1983-1987 Preceptor, Independent Study Projects, University of California San Diego; medical students
- 1988- Mentor in research laboratory, Schepens Eye Research Institute; undergraduate and graduate students and postdoctoral fellows
- 1989- Faculty of the Endocrine Training Program, Massachusetts General Hospital; postdoctoral fellows
- 1990 Thesis director for Ph.D. degree, Boston University Graduate School
- 1994 Thesis director for Master Degree, Harvard University Faculty of Arts and Sciences
- 1997- Faculty of the National Eye Institute Training Grant, Harvard Medical School Department of Ophthalmology; postdoctoral fellows

1998-2001

Chair, Training Committee, Schepens Eye Research Institute;
programs and administrative structure for postdoctoral fellows

f. Account of teaching leadership

University of California, San Diego:

- 1983-1987 Director, Clerkship in Clinical Endocrinology and Metabolism; coordinate rotation of UCSD and visiting medical students, assign mini-projects, review clinical and scholarly activities
- 1984-1987 Organizer of bi-monthly Endocrine-Metabolism Conferences; medical students, residents, postdoctoral fellows, attending physicians, local endocrinologists

Department of Ophthalmology, Harvard Medical School:

- 2002- Leader of course "Biology of Ophthalmic Diseases" for postdoctoral fellows of the NEI Training Program on the Molecular Bases of Eye Disease

Schepens Eye Research Institute:

- 1992 Organizer of "Diabetic Retinopathy" Lecture Series; postdoctoral fellows, investigators, local ophthalmologists
- 1994-2004 Organizer of monthly Journal Club; postdoctoral fellows
- 1995-1997 Leader, Focus Group on Biology of the Retina and its Diseases; postdoctoral fellows, investigators
- 1996 Organizer of the third annual Fellows Day at Schepens Eye Research Institute (oral presentations by 32 fellows, discussion)

g. Names of traineesCurrent position

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|--------------------------|-----------------|--|
| 1986-1989 | Michele Maiello | Director, Geriatric Institute
University of Genoa, Italy |
| 1986-1989 | Daria Boeri | Assistant Professor of Medicine
University of Genoa, Italy |
| 1987-1990 | Enrico Cagliero | Assistant Professor of Medicine
Director, GCRC Core Laboratory,
Massachusetts General Hospital
Harvard Medical School, Boston |
| 1989-1990 | Roberto Sala | Associate Professor of Pathology
University of Parma, Italy |
| 1990-1994
(1987-1990) | Sayon Roy | Associate Professor of Medicine and
Ophthalmology, Boston University, Boston |

Ph.D. Thesis)

1992-1994

Francesca Podestà

Assistant Professor of Human Nutrition
University of Milan, Italy

	<u>Names of trainees (Cont.)</u>	<u>Current position</u>
1994-1996	Jose Lopes de Faria	Associate Professor of Medicine University of Campinas, Brazil
1994-1997	Chiara Gerhardinger	Investigator Schepens Eye Research Institute Instructor in Ophthalmology Harvard Medical School
1995-1997	Masakazu Mizutani	Assistant Professor of Medicine University of Tsukuba, Japan
1997-1999	Giulio Romeo	Investigator Schepens Eye Research Institute Harvard Medical School
1999-2001	Wei-Hua Liu	Head, Mutation Detection Lab Novartis Institute for Biomedical Research Cambridge, MA
1999-2002	Jing Zhang	Postdoctoral Fellow Harvard Medical School, Boston, MA
1999-2002	Veronica Asnaghi	Clinical Science Specialist Roche, Basel, Switzerland
2001- 2003 (summers)	Abidemi Adeboje	Student, Massachusetts Institute of Technology, Cambridge, MA
2001-	Zeina Dagher	JDRF Postdoctoral Fellowship
2002-	Wei Sun	
2003-	Yongseek Park	JDRF Postdoctoral Fellowship

2. **Regional, National or International Contributions**

a. Invited presentations

a1. Honor, Plenary, and State-of-the Art Lectures

1980 Plenary presentation. California Society of Pathologists 33rd Annual Convention, San Francisco, CA

1982 Honor lecture. Annual Meeting of the Italian Diabetes Association, Bari, Italy

- 1988 Plenary presentation. Schepens International Society, Paris, France
- 1989 Plenary presentation. 21st Meeting of the Diabetic Pregnancy Study Group, Uppsala, Sweden
- Plenary presentation. Schepens International Society, Rome, Italy
- 1991 Plenary presentation. State-of-the-Art Symposium at Annual Meeting of the European Association for the Study of Diabetes, Dublin, Ireland
- 1992 Plenary presentation. Vitreo-Retinal Symposium VIII, Association pour la Recherche Sur les Maladies de la Rétine, Paris, France
- 1994 State-of-the-Art lecture at Symposium on Diabetes and Endothelial Cell Dysfunction, Kyoto, Japan
- 1995 International Guest Lecturer at the Annual Meeting of the European Diabetic Nephropathy Study Group, Heidelberg, Germany
- 1998 Plenary presentation. 8th Annual University Diabetes Symposium, Southern Illinois University School of Medicine, Springfield, IL
- Plenary presentation. Scandinavian Society for the Study of Diabetes, Helsingør, Denmark.
- Plenary presentation. European Society for Microcirculation, Paris, France
- 2000 Plenary Lecture. The Jubilee Symposium on Diabetes, University of Rome and National Research Council, Rome, Italy
- 2001 Keynote Speaker. Regional Congress of the Italian Diabetes Association; Genova, Italy
- Keynote Speaker. Symposium of the Regional Assembly of the Italian Diabetes Association, Turin, Italy
- 2003 Plenary Lecture. 18th International Diabetes Federation Congress, Paris, France
- Honor Lecture. 700th Anniversary of The University of Rome “La Sapienza” Rome, Italy
- 2004 Honor Lecture. Symposium “Cellular and Molecular Biology in the Study of Diabetic Microangiopathy” Istituto Superiore di Sanita, Rome, Italy
- a2. Invited Lectures, Seminars, Grand Rounds (selected list)*

- 1980 Seminar. University of California San Francisco Department of Laboratory Medicine, San Francisco, CA
- 1984 Lecture. Workshop of the 31st Postgraduate Course of the American Diabetes Association, Los Angeles, CA
- 1985 Lecture. 4th European Symposium on Metabolism, Padova, Italy
- 1986 Seminar. Medical Societies of Imperia and Genova, Italy
- Seminar. Eye Research Institute, Boston, MA
- 1988 Lecture. Istituto Scientifico di Medicina Interna, University of Genova, Italy

Lecture. Symposium on Cellular Aspects of the Etiology of Diabetic Vascular Complications, 13th International Diabetes Federation Congress, Sidney, Australia

Lecture. Symposium on Endothelial Cell Function in Diabetic Microangiopathy, Melbourne, Australia

1989 Seminar. The Rockefeller University, New York, NY

Lecture. International Symposium on Circulating Regulatory Factors and Neuroendocrine Function, Bratislava, Czechoslovakia

Lecture. 15th World Congress of the International Union of Angiology, Rome, Italy

1990 Lecture. International Symposium on Diabetic Complications: Epidemiology and Pathogenetic Mechanisms, Lisbon, Portugal

Endocrine Grand Rounds, Case Western Reserve University School of Medicine, Cleveland, OH

Pathology Grand Rounds, Case Western Reserve University School of Medicine, Cleveland, OH

Lecture. VI Vitreo-Retinal Symposium, Fontainebleau, France

Lecture. 25th International Research Symposium of the American Diabetes Association, Woods Hole, MA

Endocrine Grand Rounds, Rhode Island Hospital, Brown University, Providence, RI

1991 Visiting Scholar, Vision Science Research Center, University of Alabama, Birmingham, AL

Seminar. Department of Medicine, University of Genova, Italy

Lecture. European Association for the Study of Diabetes - Study group on Diabetic Eye Disease, Hammersmith Hospital, London, England

Lecture. University of Pennsylvania Symposium on Diabetic Complications, Scheie Eye Institute, University of Pennsylvania Philadelphia, PA

Lecture. Seminars on Diabetes, University of Minnesota Diabetes Center, Minneapolis, MN

- 1992 Seminar. Department of Medicine, University of Genova, Italy
- Lecture. Symposium on Age-Related Macular Degeneration and Diabetic Retinopathy. Palm Beach, FL
- 1993 Lecture. The First International Workshop “Diabetic Retinopathy: What Do We Really Know?” The Milton S. Hershey Medical Center, Penn State College of Medicine, Hershey, PA
- Visiting Professor. Department of Internal Medicine, University of Vienna, Austria
- 1994 Seminar. Shiga University of Medical Science, Otsu, Japan
- Lecture. Workshop on Diabetic Angiopathy of the European Society for Clinical Investigation, Toledo, Spain
- 1995 Seminar. Ospedale San Raffaele University of Milano, Italy
- 1996 Seminar. Department of Medicine, University of Genova, Italy
- 1997 Lecture. International Diabetes Conference on Molecular and Cell Biology of Type II Diabetes and its Complications, Turin, Italy
- Lecture. Retina 2000 Conference of the Schepens International Society, Boston, MA
- Lecture. 16th International Diabetes Federation Congress, Helsinki, Finland
- Lecture. Oxford Workshop on Diabetic Retinopathy, Oxford, England
- Lecture. Symposium on “Acarbose - Challenges and Opportunities,” Orlando, FL
- 1998 Visiting Professor, Center for Clinical Neuroscience and Ophthalmology, Michigan State University
- 1999 Lecture. Children’s Hospital Medical Center, Cincinnati, OH
- Lecture. Department of Nutrition, Harvard School of Public Health, Boston, MA
- Lecture. Meeting on Endothelial Cell Function in Diabetes Mellitus, Wellcome Trust, Genome Campus, Hinxton Hall, England
- Lecture. VIII Diabetes Meeting of the Medical Academy of Pistoia; Pistoia, Italy

2000 Lecture. Seminars in Vascular Biology, Children's Hospital, Harvard Medical School, Boston, MA

Lecture. Department of Medicine, Massachusetts General Hospital, Boston, MA

Lecture. Workshop on Genetics of Diabetic Retinopathy, National Eye Institute, Bethesda, MD

2001 Lecture. University of Padova; Padova, Italy.

Lecture. Special Interest Group meeting; annual meeting of the Association for Research in Vision and Ophthalmology; Ft. Lauderdale, FL

- Lecture. Endocrine Unit, Massachusetts General Hospital, Boston, MA
- Lecture. Mount Sinai Diabetes Meeting, Mount Sinai School of Medicine, New York, NY
- 2002 Lecture. Vascular Biology Institute, University of Miami School of Medicine, Miami, FL
- 2003 Lecture. DCCT/EDIC 20th Anniversary Symposium; NIH Campus, Bethesda, MD
- Seminar. Pediatric Endocrinology, Massachusetts General Hospital, Boston, MA
- Seminar. Pfizer Central Research, Groton, CT
- 2004 Lecture. International Polyol Pathway Conference, Kona, Hawaii
- Lecture. Istituto Gaslini for Pediatric Diabetes, University of Genova; Genova, Italy
- 2005 Seminar, Bausch & Lomb, Rochester, NY
- b. Professional leadership roles
- 1993 Organizing Committee of the First International Workshop “Diabetic Retinopathy : What do we really know?” Penn State College of Medicine, Hershey, PA
- 1997 Scientific Committee and Co-Editor of the Proceedings of the International Diabetes Conference on Molecular and Cell Biology of Type II Diabetes and its Complications; Turin, Italy
- Co-Chair and co-organizer of the Oxford Workshop on Diabetic Retinopathy sponsored by the European Association for the Study of Diabetes and the Juvenile Diabetes Foundation International; Oxford, England
- 1998 Program Committee of the Diabetic Complications Conference sponsored by the Joslin Diabetes Center; Boston, MA
- 1999 Steering Committee of the Council on Complications of the American Diabetes Association

E. REPORT OF CLINICAL ACTIVITIES

1988- Diabetes Center, Massachusetts General Hospital, one-half day per week.
Patients with diabetes, other endocrine disorders, and chronic diseases.

Part III: Bibliography

ORIGINAL ARTICLES

1. Gerich JE, Lorenzi M, Schneider V, Karam JH, Rivier J, Guillemin R, Forsham PH. Effects of somatostatin on plasma glucose and glucagon levels in human diabetes mellitus: pathophysiologic and therapeutic implications. *N Engl J Med.* 1974;291:544-547.
2. Gerich JE, Lorenzi M, Schneider V, Forsham PH. Effect of somatostatin on plasma glucose and insulin responses to glucagon and tolbutamide in man. *J Clin Endocrinol Metab.* 1974;39:1057-1060.
3. Gerich JE, Lorenzi M, Schneider V, Kwan CW, Karam JH, Guillemin R, Forsham PH. Inhibition of pancreatic glucagon responses to arginine by somatostatin in normal man and in insulin-dependent diabetics. *Diabetes.* 1974;23:876-880.
4. Gerich JE, Lorenzi M, Hane S, Gustafson G, Guillemin R, Forsham PH. Evidence for a physiologic role of pancreatic glucagon in human glucose homeostasis: studies with somatostatin. *Metabolism.* 1975;24:175-182.
5. Gerich JE, Lorenzi M, Karam JH, Schneider V, Forsham PH. Abnormal pancreatic glucagon secretion and postprandial hyperglycemia in diabetes mellitus. *JAMA.* 1975;234:159-165.
6. Gerich JE, Tsalikian E, Lorenzi M, Karam JH, Bier DM. Plasma glucagon and alanine responses to acute insulin deficiency in man. *J Clin Endocrinol Metab.* 1975;40:526-529.
7. Gerich JE, Lorenzi M, Bier DM, Schneider V, Tsalikian E, Karam JH, Forsham PH. Prevention of human diabetic ketoacidosis by somatostatin: evidence for an essential role of glucagon. *N Engl J Med.* 1975;292:985-989.
8. Lorenzi M, Gerich JE, Karam JH, Forsham PH. Failure of somatostatin to inhibit tolbutamide-induced insulin secretion in patients with insulinomas: a possible diagnostic tool. *J Clin Endocrinol Metab.* 1975;40:1121-1124.
9. Tyrrell JB, Lorenzi M, Gerich JE, Forsham PH. Inhibition by somatostatin of ACTH secretion in Nelson's syndrome. *J Clin Endocrinol Metab.* 1975;40:1125-1127.
10. Mielke CH Jr, Gerich JE, Lorenzi M, Tsalikian E, Rodvien R, Forsham PH. The effect of somatostatin on coagulation and platelet function in man. *N Engl J Med.* 1975;293:480-483.
11. Gerich JE, Tsalikian E, Lorenzi M, Schneider V, Bohannon NV, Gustafson G, Karam JH. Normalization of fasting hyperglucagonemia and excessive glucagon responses to intravenous arginine in human diabetes mellitus by prolonged infusion of insulin. *J Clin Endocrinol Metab.* 1975;41:1178-1180.

12. Gerich JE, Schneider VS, Lorenzi M, Tsalikian E, Karam JH, Bier DM, Forsham PH. Role of glucagon in human diabetic ketoacidosis: studies using somatostatin. *Clin Endocrinol.* 1976;5(Suppl):299s-305s.
13. Gerich JE, Lorenzi M, Tsalikian E, Karam JH. Studies on the mechanism of epinephrine-induced hyperglycemia in man: evidence for participation of pancreatic glucagon secretion. *Diabetes.* 1976;25:65-71.
14. Karam JH, Rosenthal M, O'Donnell JJ, Tsalikian E, Lorenzi M, Gerich JE, Siperstein MD, Forsham PH. Discordance of diabetic microangiopathy in identical twins. *Diabetes.* 1976; 25:24-28.
15. Gerich JE, Lorenzi M, Bier DM, Tsalikian E, Schneider V, Karam JH, Forsham PH. Effects of physiologic levels of glucagon and growth hormone on human carbohydrate and lipid metabolism: studies involving administration of exogenous hormone during suppression of endogenous hormone secretion with somatostatin. *J Clin Invest.* 1976;57:875-884.
16. Gerich JE, Langlois M, Noacco C, Lorenzi M, Karam JH, Forsham PH, Gustafson G. Comparison of the suppressive effects of elevated plasma glucose and free fatty acid levels on glucagon secretion in normal and insulin-dependent diabetic subjects: evidence for selective alpha-cell insensitivity to glucose in diabetes mellitus. *J Clin Invest.* 1976;58:320-325.
17. Gerich JE, Lorenzi M, Tsalikian E, Bohannon NV, Schneider V, Karam JH, Forsham PH. Effects of acute insulin withdrawal and administration on plasma glucagon responses to intravenous arginine in insulin-dependent diabetic subjects. *Diabetes.* 1976;25:955-960.
18. Gerich JE, Karam JH, Lorenzi M. Diabetes without glucagon. *Lancet.* 1976;1:855.
19. Deftos LJ, Lorenzi M, Bohannon N, Tsalikian E, Schneider V, Gerich JE. Somatostatin does not suppress plasma parathyroid hormone. *J Clin Endocrinol Metab.* 1976;43:205-207.
20. Tsalikian E, Dunphy TW, Bohannon NV, Lorenzi M, Gerich JE, Forsham PH, Kane JP, Karam JH. The effect of chronic oral antidiabetic therapy on insulin and glucagon responses to a meal. *Diabetes.* 1977; 26:314-321.
21. Tyrrell JB, Wiener-Kronish J, Lorenzi M, Brooks RM, Forsham PH. Cushing's disease: growth hormone response to hypoglycemia after correction of hypercortisolism. *J Clin Endocrinol Metab.* 1977; 44:218-221.
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