PART I: General Information

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Place of Birth: Louisville, Kentucky

Education:

1964 B.A.	University of Louisville (Chemistry, with highest honors)
1968 M.D.	University of Louisville School of Medicine (with highest honors)
1984 M.S.	University of Louisville (Chemistry)
1984 M.A.	Harvard University (Honorary)
1984 D.Sc.	University of Louisville (Honoris Causa)
1990 D.Sc.	Universite de Paris Pierre et Marie Curie (Honoris Causa)
2000 D.Sc.	University of Geneva (Honoris Causa)
2008 D.Med.	University of Copenhagen (Honoris Causa)

Postdoctoral Training:

Internship/Residencies:

1968-1970 Intern and Resident, Ward Medicine, Barnes Hospital, St. Louis, MO

Research Fellowships:

1970-1973 Clinical Associate and Senior Clinical Associate, Clinical Endocrinology Branch, National Institutes of Arthritis, Metabolism and Digestive Diseases, NIH, Bethesda, MD

Licensure and Certification:

1968	Kentucky State Board of Medical Examiners, No. 15141
1973	American Board of Internal Medicine, No. 44765
1973	American Board of Internal Medicine, Subspecialty in Endocrinology and Metabolism, No. 44765
1981	Massachusetts State Medical Registration, No. 48036

Academic Appointments:

1980-1981 Adjunct Professor of Genetics, George Washington University, Washington, DC
1981-1984 Associate Professor of Medicine, Harvard Medical School, Boston, MA
1984- Professor of Medicine, Harvard Medical School, Boston, MA
1986- Mary K. Iacocca Professor of Medicine, Harvard Medical School, Boston, MA

Hospital or Affiliated Institution Appointments:

1972-1981 Admitting & Attending physician, National Institutes of Health, Clinical Center
1981-1991 Physician, Brigham and Women's Hospital, Boston, MA
1981-1992 Chief, Division of Diabetes and Metabolism, Department of Medicine, Brigham and Women's Hospital, Boston, MA
1985- Senior Staff, Joslin Clinic, Joslin Diabetes Center, Boston, MA
1981-1985 Associate Staff, Endocrinology/Internal Medicine, New England Deaconess Hospital, Boston, MA
1986-1995 Active Staff, Department of Medicine, Internal Medicine and Endocrinology, New England Deaconess Hospital, Boston, MA
1986-1992 Senior Physician, Brigham and Women's Hospital, Boston, MA
1993- Senior Consultant in Diabetes and Metabolism, Brigham and Women's Hospital, Boston, MA
1995- Active Staff, Department of Medicine, Beth Israel Deaconess Hospital, Boston, MA

Other Professional Positions and Major Visiting Appointments:

1973-1978 Senior Investigator, Diabetes Branch, National Institute of Arthritis, Metabolism and Digestive Diseases, NIH, Bethesda, MD
1979-1980 Visiting Scientist, Centre de Moleculaire, Centre National de la Recherche Scientifique, Gif-sur-Yvette, France
1979-1981 Chief, Section on Cellular and Molecular Physiology, Diabetes Branch, National Institute of Arthritis, Metabolism, and Digestive Disease, NIH, Bethesda, MD
1981 Clinical Associate Professor of Medicine, Uniformed Services University of Health Sciences, Bethesda, MD
1985 Overseas Visiting Professor, Royal Melbourne Hospital, Melbourne, Australia
1985 Visiting Professor, Royal Postgraduate Hospital, London, England
1985 Rosemary Sarver Visiting Professor in Endocrinology and Metabolism, The Hospital of the Good Samaritan, Los Angeles, CA
1990 Roerig Visiting Professorship in Diabetes, University of Colorado Health Sciences Center, Denver, CO
1990-1991 Visiting Scientist, Department of Cellular and Molecular Biology, Dana Farber Cancer Institute, Boston, MA
1998-Pres Visiting Research Scientist, Brandeis University, Waltham, MA
2005 Honorary Director and Professor of the Diabetes Center at Peking University, Beijing, China
2007 International Visiting Fellow, Garvan Institute, Sydney, Australia
2007 International Advisory Board, PhD School of Molecular Metabolism, University of Southern Denmark

Major Administrative Responsibilities:

1981-2000	Director, Elliott P. Joslin Research Laboratory, Joslin Diabetes Center
1981-2002	Head Section on Cellular and Molecular Physiology, Joslin Diabetes Center
1997-2000	Executive Vice President and Director, Joslin Diabetes Center
2000-2007	President and Director, Joslin Diabetes Center
2000-2003	Member, Board of Directors, Care Group, Health Care System
2000-2007	Member, Board of Directors, Medical Academic and Scientific Community Organization (MASCO)
2002-2008	Head Section of Obesity and Hormone Action Research, Joslin Diabetes Center
2007-	Vice Chair, Board of Trustees, Joslin Diabetes Center
2008-	Head Section of Molecular Physiology and Hormone Action, Joslin Diabetes Center

Major Committee Assignments:

Medical School:

1985-1988	Member, Committee on Promotions and Appointments, Harvard Medical School
1987-1990	Member, Standing Committee on Faculty Fellowships, Harvard Medical School
1989-1994	Member, Appeals Board, Student Promotion Board, Faculty of Medicine, Harvard Medical School
1997-1998	Member, Faculty Council, Harvard Medical School
2005-	Member, Glenn Laboratories on Aging Research, Scientific Advisory Board

Affiliated Institutions:

1996-	Member, Scientific Advisory Committee, Boston Obesity Center, New England Medical Center, Boston, MA

Regional, National and International:

1977-1981	Quality Assurance Committee, National Institute of Health
1978	Co-Chairman, Organizing Committee, Fogarty International Conference on Hormones and Cancer, Bethesda, MD, (March 29-31)
1978-1980	Postgraduate Committee, Endocrine Society
1979-1982	Medical Science Advisory Board, Juvenile Diabetes Foundation
1981-1984	Nominating Committee, Endocrine Society
1982-1985	Research Committee, American Diabetes Association
1983	Vice Chairman, Organizing Committee, Hormone Action, Gordon Conference, Meriden, NH (August 7-12)
1983	Scientific Committee, Second International Symposium on Insulin Receptors and Insulin Action, Rome, Italy (August 31-September 3)
1983-1986	Medical Science Advisory Committee, Juvenile Diabetes Foundation
1984	Co-Chairman, Organizing Committee, UCLA Symposia on Molecular and Cellular Biology Membrane Receptors and Cellular Recognition, Park City, UT (March 25-30)

1984	Chairman, Organizing Committee, Gordon Conference on Hormone Action, Meriden, NH (August 5-10)
1985	Scientific Committee, Third International Symposium on Insulin Receptors and Insulin Action
1985	Chairman, Organizing Committee, Gordon Conference on Hormone Action, Meriden, NH (August 4-9)
1985	Organizing Committee, JDFI World Conference on Diabetes Research - Current Status and Future Directions, Monaco (November 4-6)
1986	Organizing Committee, Immunology of Diabetes - Immunity to Insulin and the Insulin Receptor, Edmonton, Canada (June 26-28)
1987-	Countdown Editorial Advisory Board, Juvenile Diabetes Foundation
1988	Chairman, Organizing Committee, Insulin and The Cell Membrane, Smolenine Castle, Czechoslovakia (June 27-30)
1988	Chairman, Organizing Committee, The Action of Insulin and Related Growth Factors in Diabetes Mellitus, Joslin Diabetes Center's 90th Anniversary Symposium, Boston,MA (October 10-13)
1988-1990	Medical Science Advisory Committee, Juvenile Diabetes Foundation
1990-1993	Council Member, Endocrine Society
1991	Organizing Committee, Keystone Symposia on Diabetes and Insulin Action, Park City, UT (January 18-24)
1992	Organizing Committee, FASEB Summer Conference on Receptors and Signal Transduction, Copper Mountain, CO (July 12-17)
1992-2000	Central Committee of International Society of Endocrinology
1992-1996	National Institutes of Health Reviewer's Reserve
1993-1994	Chair, Council on Molecular, Cellular and Biochemical Aspects of Diabetes, American Diabetes Association
1996	Organizing Committee, VIth International Symposium on Insulin Receptors and Insulin Action, Copenhagen, Denmark (May 6-10)
1996	Organizing Committee, 75th Anniversary of the Discovery of Insulin, Toronto, Canada (October 6-9)
1997	Member, Cardiovascular Advisory Board, Monsanto/Searle
1997	Organizing Committee, 16th International Diabetes Federation Congress, Helsinki, Finland (July 20-25)
1997-2000	Member, International Endocrine Society Steering Committee
1998	Co-Chair, Organizing Committee, Diabetes Mellitus: From Patients to Genes and Back, A symposium on the 100th Anniversary of the Joslin Diabetes Center, Boston, MA (October 21-23)
1998-	Member, External Advisory Committee, JDFI Program Project, Mount Sinai School of Medicine, New York, NY
1998-	Advisory Board, NRSA Training Grant, State University New York at Stony Brook
2000	Co-Chair, Organizer of Keystone Symposium on Diabetes, Taos, NM (February 16-22)
2003	Co-Chair, Proteomics in Diabetes Meeting, Bethesda, MD (April 24-25)
2003	Fellow, American Academy of Microbiology, Recognizing Scientific Excellence
2004-	Member, External Scientific Advisory Board, University of Geneva
2006-	Selection Committee, Luft Prize, Karolinska Institute, Stockholm, Sweden
2008	Co-Chair, NIDDK Workshop on Adipose Development, Bethesda, MD

2008- Member, Scientific Advisory Board, Cologne Cluster of Excellence on Cellular Stress Responses in Aging-associated Diseases (CECAD)

Assignments on National Commissions:

1981-1985 National Diabetes Advisory Board
1982-1985 Co-Chairman, Research Committee, National Diabetes Advisory Board
1995-1998 Member on the Endocrinology Study Section, Division of Research Grants, National Institutes of Health
1998-2002 NIDDK Board of Scientific Counselors
1998 Co-Chair, Workshop on Diabetes Research: Challenges and Opportunities, National Institutes of Health
1998-1999 Chair, Congressionally-mandated Diabetes Research Working Group (DRWG)
1998-2002 Member, National Diabetes and Digestive and Kidney Diseases Advisory Council, National Institutes of Health
2002-2007 Awards Committee, Endocrine Society, Bethesda, Maryland
2007-2011 Chair, Class IV Medical Sciences, National Academy of Science
2007-2009 Finance Committee, American Diabetes Association
2008-2009 NIDDK Diabetes Research Strategic Plan, Chair, Systems Biology Committee
2010- Research Policy Committee, American Diabetes Association

Professional Societies:

1963- Member, Alpha Epsilon Delta
1964- Member, Phi Kappa Phi
1965- Member, Alpha Omega Alpha
1966- Member, Sigma Xi
1972- Member, American Federation for Clinical Research
1975- Member, The Endocrine Society
1976- Member, American Diabetes Association
1979- Member, American Society for Clinical Investigation
1982- Member, American Society of Biological Chemistry
1983- Member, Association of American Physicians
1986- Member, National Council, American Society of Clinical Investigation
1987-1988 President-Elect, American Society of Clinical Investigation
1988-1989 President, American Society of Clinical Investigation
1991- Member, American Academy of Arts and Sciences
1994- Fellow, American Association for the Advancement of Science
1999- Member, National Academy of Science
1999- Member, Institute of Medicine
2005- Fellow, American College of Physicians
2005- Honorary Member, British Society for Endocrinology

Editorial Boards:

1977-1980 Journal of Clinical Endocrinology and Metabolism
1977-1984 Diabetes
1979-1984 American Journal of Medicine
1979-1984 Journal of Clinical Investigation

1980-1983	Journal Receptor Research
1980-1983	Hormone and Metabolic Research
1981-1985	Endocrinology
1983-1988	Journal of Biological Chemistry
1984-2002	Diabetes and Metabolism Reviews
1987-1990	ISI Atlas of Science Editorial Advisory Board
1989-	Receptor
1989-1990	Executive Editor, Trends in Endocrinology and Metabolism
1991-1996	Editorial Advisory Council, Journal of Endocrinological Investigation
1991-1995	Trends in Endocrinology and Metabolism
1992-1996	Consulting Editor, The Journal of Clinical Investigation
1992-2002	Journal of Receptor Research
1993-1994	Member, Board of Editors, Endocrine
1996-2001	Associate Editor, Diabetes
1996-1997	Member, Endocrine Reviews Advisory Board
1997-2002	Editorial Board, Proceedings of the Association of American Physicians
1998-2003	Consulting Editor, Journal of Clinical Investigation
1998-2003	Member, Editorial Board, American Journal of Medicine
2000-2005	Associate Editor, Endocrine Reviews
2001-2006	Editorial Board, American Journal of Physiology
2002-	Editorial Board, Diabetes/Metabolism Research and Reviews
2004-	Associate Editor, Cell Metabolism
2008-	Associate Editor, BMC Endocrine Disorders
2008-	Editorial Board, Journal of Clinical Endocrinology & Metabolism
2009-	Editorial Board, Journal of Diabetes Investigation

Awards and Honors:

Undergraduate:	Woodcock Honor Society; Phi Lambda Upsilon; Alpha Epsilon Delta; Phi Kappa Phi Honor Society; Graduate with Highest Honors
Medical School:	Saunder's Award for Biochemistry; Mosby Award; Upjohn Award for Medicine; Alpha Omega Alpha; Sigma Xi; Vice President, Junior Class; President Senior Class; Graduate with Highest Honors
Professional:	
1977	David Rumbough Memorial Award for Scientific Achievement, Juvenile Diabetes Foundation
1979	Laurentian Hormone Conference
1981	Eli Lilly Award for Research, American Diabetes Association
1981	CIBA-Geigy Drew Award for Biochemical Research
1982	Mary Jane Kugel Award, Juvenile Diabetes Foundation
1983	American Federation for Clinical Research (AFCR) Award for Outstanding Clinical Research Under Age 40
1983	Sol Berson Memorial Lectureship, National Institutes of Health
1984	Hahnemann Lecture in Pharmacology, University of California, San Francisco
1984	Artium Magistrum (Honorary), Harvard University
1984	Doctor of Science (Honoris Causa), University of Louisville
1984	Rachmiel Levine Lectureship, New York Medical College
1985	Carl V. Moore Memorial Lecture, Washington University School of Medicine

1986	Kelly West Lecture, University of Oklahoma School of Medicine
1986-	Mary K. Iacocca Professor of Medicine, Harvard Medical School
1986	Pfizer Biomedical Research Award, Pfizer, Inc., Groton, Connecticut
1987	Sixty-Eighth Mellon Lecture, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
1987	Ninth Annual Steve Broidy Lectureship in Diabetes, Cedars-Sinai Medical Center, Los Angeles, California
1987	Edwin B. Astwood Lecturer, The Endocrine Society
1987	McGill Novo Nordisk Lecturer, McGill University, Montreal, Canada
1988	Gifford Lectureship, Southwestern Medical Center, Dallas, Texas
1988	Cristobal Diaz Award, International Diabetes Federation
1989	Otto Brandman Award, American Diabetes Association New Jersey Affiliate
1989	Elliott P. Joslin Medal, American Diabetes Association, Massachusetts Affiliate
1990	Doctor of Science (Honoris Causa), Universite de Paris Pierre et Marie Curie, Paris, France
1990	Top 100 Most-Cited Scientists for 1973-1984 and 1981-1988, The Scientist, March 19 and October 1, 1990
1991-	Fellow, American Academy of Arts and Sciences
1993-	Alumni Fellow, University of Louisville
1993	Banting Medal for Distinguished Scientific Achievement, American Diabetes Association
1994	Edwin Krebs Lecture, University of Washington
1994	Pincus Taft Lecturer in Clinical Endocrinology, Australian Endocrine Society
1995	Fellow, American Association for the Advancement of Science
1995	Kroc Lecturer, University of California, Irvine
1995	Bates Lecturer, State University of New York, Syracuse
1996	Invited Lecturer, Symposium in Honor of the 100th Birthday of Carl Cori and Gerty Cori, Harvard Medical School, Boston, MA
1997	Distinguished Scientist Award, Clinical Ligand Assay Society
1997	Solomon Berson Distinguished Lecture, American Physiological Society
1998	Albert Renold Award, American Diabetes Association
1998	Lewis Memorial Lecture, Mount Sinai School of Medicine
1998	209th Eli Lilly Lecturer, Eli Lilly Company
1999	Dorothy Hodgkin Award, British Diabetes Association
1999-	Elected Member, National Academy of Sciences
1999-	Elected Member, Institutes of Medicine, National Academy of Sciences
1999	Nelson Medical Lectureship, University of California Davis School of Medicine
2000	Fred Conrad Koch Award for Distinguished Contributions to Endocrinology, Endocrine Society
2000	Hamden Award for Medical Research, United Arab Emirates
2001	Lawson Wilkins Lecture, Pediatric Endocrine Society and International Pediatric Endocrine Society, Toronto, Canada
2001	Donald W. Seldin Lecture, American Society of Nephology and International Society of Nephrology, San Francisco, CA
2001	Rolf Luft Award Lecture, Karolinska Institute, Stockholm, Sweden

2001 Naomi Berrie Award for Outstanding Achievement in Diabetes Research, Columbia University, New York, NY
2002 Societa'Italiana Di Diabetologia Mentor Award, Italy
2002 Steven C. Beering Award for Advancement of Biomedical Science
2002 J. Allyn Taylor International Prize in Medicine for Diabetes
2002 Jacobeus Prize, Novo-Nordisk Foundation, Lund, Sweden
2002 Dean's Distinguished Lecture, University of Colorado School of Medicine
2002 Fellow American Academy of Microbiology
2002 Fast Breaking Paper in the field of Multidisciplinary as determined by the Thompson-ISI Web of Science database
2003 Gordon Wilson Lecture, Transactions of the American Clinical and Climatological Association
2003 Stapleton Lecture, University of Colorado School of Medicine
2004 9th Annual Dundee Signaling Lecture, Scotland
2004 Claude Bernard Medal awarded by the European Association for the Study of Diabetes (EASD), Munich, Germany
2004 Bristol Myers Squibb Award for Distinguished Achievement in Metabolic Research
2005 Dale Medal Lecture, British Society for Endocrinology
2005 Honorary Director and Professor of the Diabetes Center of Peking University, Beijing, China
2005 Dean's Lecture, Mount Sinai School of Medicine, New York, NY
2006 Heskett Lecture, Northwestern University Feinberg School of Medicine
2006 Honorary Member, British Society for Endocrinology
2006 Banting Memorial Lecture, British Diabetic Association, Birmingham, UK
2006 Baxter Lecture, Yale University School of Medicine
2006 Best Doctors in America and Best Doctors in Boston for 2005-2006
2007 Best Doctors in American 2006-2007
2007 International Visiting Fellow, Garvan Institute, Sydney, Australia
2008 Mary Shorb Lecture, University of Maryland
2008 Robert B. Greenblatt Distinguished Lecture, Medical College of Georgia
2008 Louis-Jeantet Foundation 25th Anniversary Symposium, Geneva, Switzerland
2008 Banting and Best Lecture, Canadian Diabetes Association, Montreal, Canada
2008 Johns Hopkins 100th Anniversary Symposium for Department of Biochemisty, Baltimore, Maryland
2008 Honorary Doctor in Medicine, University of Copenhagen, Denmark
2008 Presidential Distinguished Lecture, University of San Antonio Health Science Center, San Antonio, Texas
2008 Dewitt Goodman Lecture, Columbia University School of Medicine, New York, NY
2009 Lydia J. Roberts Lecture, University of Chicago and Chicago Nutrition Society, Chicago, IL
2009 Inaugural Recipient Manpei Suzuki International Prize, Tokyo, Japan
2009 Distinguished Visiting International Lecturer, University of Toronto
2009 Hans Falk Memorial Lecture, National Institute of Environmental Health Science, Research Triangle Park, NC
2010 Presidential Lecture, Memorial Sloan Kettering Cancer Institute, New York
2010 David Seegal Alpha Omega Alpha Visiting Professor, Columbia University Medical School, New York, NY

PART II: Research, Teaching and Clinical Contributions

A. Narrative report of Research, Teaching and Clinical Contributions.

My laboratory is focused in four highly related and integrated areas: 1) mechanisms of insulin receptor signaling in control of metabolism and growth; 2) how insulin signaling is altered in insulin resistant states such as type 2 diabetes and obesity; 3) the development of adipose tissue and its relationship to insulin resistance; and 4) what is the impact of genetics, environment and aging on these processes.

In early work, we discovered that the insulin receptor is an insulin-stimulated receptor tyrosine kinase which initiates a complex intracellular network leading to the multiple actions of insulin on the cell. Following activation of the receptor kinase, several intracellular substrates become tyrosine phosphorylated, the best studied of which are termed insulin receptor substrates-1, 2, 3 and 4 (IRS-1 thru -4). These phosphorylated IRS proteins serve as intracellular messengers by docking to other intracellular signaling proteins that contain SH2 domains. This links insulin to two major intracellular cascades - one mediated by the enzyme phosphatidylinositol 3-kinase (PI 3-kinase) and the other mediated by the Ras-MAP kinase pathway. These form a series of critical nodes in the insulin signaling network and are important points of diversion in insulin signaling. We have shown that both the receptor itself and many of its downstream signaling events are important points of regulation in normal physiology and disease states.

Using a wide range of genetic and biochemical approaches, as well as cellular, animal and human systems, my laboratory is working to define the specific pathways that lead to each of insulin's actions and how they are modified in insulin resistant states. This includes defining the roles of each of the IRS-proteins, isoforms of PI 3-kinase and their downstream kinases (Akt and atypical PKCs), in insulin signaling and insulin resistance through the creation of cell lines and animal models in which these proteins are either eliminated by a genetic "knock-out" or knocked-down using RNAi. This also includes studies utilizing the technique of tissue specific gene inactivation to determine the role of insulin in various tissues of the body, including classical target tissues for insulin action such as liver, muscle and fat, as well as non-classical targets such as the brain, endothelial cell and beta cell. We also study mechanisms of insulin resistance, including the role of regulation of insulin receptor, IRS proteins, different catalytic and regulatory subunits of PI 3- kinase, as well as other molecules that can act directly or indirectly as inhibitors of insulin action, such as some forms of protein kinase C and the sirtuin protein deacetylases.

To identify genetic alterations that might contribute to the development of type 2 diabetes in humans and rodents, we have assessed gene expression and function using microarray analysis, proteomics and other techniques. This has allowed us to answer questions about which components of the insulin signaling cascade are involved in regulation of different pathways and to dissect insulin vs. diabetes regulated events. More recently, we have added the study of microRNAs as targets and regulators of insulin action.

The biology of adipocytes and their special role in insulin resistance is another major area of interest. Here we are focused on understanding the role of various fat depots in insulin resistance, and what determines fat distribution and the nature of adipocyte lineages, including

the formation of brown vs. white fat and subcutaneous vs. intra-abdominal fat. We have found important roles for a variety of fundamental developmental genes, and are exploring these through the creation of knockout and knockdown mouse and cellular models.

Finally, we are also interested in the problem of aging and the relationship between insulin action, obesity and lifespan. Again we have taken advantage of some of our genetic models to define better the physiological connections between these events. We are now studying several pathways involved in the connection between aging and metabolism at the molecular level. In this area, we also have been studying the role of sirtuins, especially Sirt2 and Sirt3, in aging and metabolic control.

B. Funding Information (present and recent)

Present:

1980- 2015	National Institutes of Health	Prin. Invest.	Insulin Receptor Structure and Turnover
1988-2013	National Institutes of Health	Prin. Invest.	Insulin Receptor Phosphorylation and Insulin Action
1992-2011	American Diabetes Association	Prog. Dir.	ADA Mentor-based Grant
1999-2012	National Institutes of Health	Prin. Invest.	Role of PI 3-kinase Isoforms in Insulin Action
2002-2009	National Institutes of Health	Prin. Invest.	Diabetes Genome Anatomy Project (DGAP)
2009-2014	National Institutes of Health	Prin. Invest.	Developmental Genes and the Origin of Fat
2009-2011	National Institutes of Health	Prin. Invest.	Imaging Strategies to Measure Brown Fat and its Activity
1996-2001	National Institutes of Health	Prog. Dir.	Diabetes and Endocrinology Research Center
1981-2001	National Institutes of Health	Prog. Dir.	Training in Diabetes and Metabolism
1998-2003	Juvenile Diabetes Foundation (JDF Center for Islet Transplantation at HMS)	Investigator	Search for Islet Growth Factors in Animal Models of Insulin Resistance

C. Report of Teaching Experience:

1976-1978	Course director, "Correlations between the basic sciences and internal medicine," Foundation for Advanced Education in the Sciences, NIH.
1967-1981	Lecturer, Courses in Internal Medicine and Endocrinology, Foundation for Advanced Education in Sciences, NIH.
1977-1979	Course developer and coordinator, "Endocrinology Board Review Course," Foundation for Advanced Education in the Sciences, NIH.
1978-1981	Thesis supervisor for Ph.D. in genetics for J.M. Podskalny, George Washington University
1974	Participation in a variety of CME courses throughout the U.S.
1984	Research Supervisor, Cell and Developmental Biology Program, Harvard Medical School
1987	Thesis Committee for Ph.D. in Cell Biology, Laird D. Madison, Yale University
1981-present	Physiology, Cell Biology and Human Systems Courses at Harvard Medical

	School and MIT.
1985-present	HST-060/061 Endocrinology Course, Massachusetts Institute of Technology
1986-present	HST-140/141 Molecular Medicine Course
1989-1994	Thesis supervisor, Harvard Cell and Developmental Biology Program
1989-1992	Appeals Board, Student Promotions Board, Faculty of Medicine, Harvard Medical School
1994- present	Graduate Faculty of BBS, Harvard Medical School
2002-2006	Thesis supervisor for Ph.D. in Cell Biology C. Taniguchi, Harvard Medical School

D. Report of Clinical Activities:

1981-1990	Chief, Division of Diabetes and Metabolism, Brigham and Women's Hospital, Boston, MA -one month per year attending on Endocrine service
1987-	Active Staff, Beth Israel Deaconess Medical Center, Boston, MA

PART III: Bibliography

Original Reports:

1. Kahn CR, Huseby RM, Murray M. The use of infrared dichronic absorption spectra in the study of the structure of bovine fibrinogen and fibrin. Life Sci. 1970; 9:1125-1132.

2. Freychet P, Kahn CR, Roth J, Neville DM, Jr. Insulin interactions with liver plasma membranes: Independence of binding and degradation. J Biol Chem. 1972; 247:3953-3961.

3. Kahn CR, Neville DM, Jr., Gorden P, Freychet P, Roth J. Insulin receptor defect in insulin resistance: Studies in the obese hyperglycemic mouse. Biophys Biochem Res Commun. 1972; 48:135-142.

4. Freychet P, Laudat MH, Laudat P, Rosselin G, Kahn CR, Gorden P, Roth J. Impairment of insulin binding to the fat cell membrane in the obese hyperglycemic mouse. FEBS Lett. 1972; 25:339-342.

5. Kahn CR, Neville DM, Jr., Roth J. Insulin-receptor interactions in the obese-hyperglycemic mouse: A model for insulin resistance. J Biol Chem. 1973; 248:244-250.

6. Freychet P, Kahn CR, Roth J, Neville DM, Jr. Insulin receptor in liver cell plasma membranes. In: Scow R, ed. Endocrinology: Proceedings of the IV International Congress of Endocrinology. New York: Excerpta Medica (ICS #273). NY, 1973:335-340.

7. Schein P, Kahn CR, Gorden P, Wells S, DeVita V. Streptozotocin therapy of malignant insulinoma and carcinoid tumor. Arch Intern Med. 1973; 132:555-561.

8. Pilch B, Kahn CR, Ketcham A, Henson D. Thyroid cancer after radioactive iodine diagnostic procedures in childhood. Pediatrics. 1973; 51:898-902.

9. Schein PS, DeLellis RA, Kahn CR, Gorden P, Kraft AR. Islet cell tumors: Current concepts and management. Ann Intern Med. 1973; 79:239-257.

10. Goldfine ID, Kahn CR, Neville DM, Jr., Roth J, Garrison MM, Bates RW. Decreased binding of insulin to its receptors in rats with hormone induced insulin resistance. Biochem Biophys Res Commun. 1973; 53:852-857.

11. Butcher RW, Crofford OB, Gammeltoft S, Gliemann J, Gavin JR III, Goldfine ID, Kahn CR, Rodbell M, Roth J. Insulin activity: The solid matrix. Science. 1973; 182:396-397.

12. Kahn CR, Freychet P, Neville DM, Jr., Roth J. Quantitative aspects of the insulin-receptor interaction in liver plasma membranes. J Biol Chem. 1974; 249:2249-2257.

13. Gorden P, Roth J, Hendricks CM, Kahn CR. The plasma proinsulin-like components. Isr J Med Sci. 1974; 10:1212-1221.

14. Megyesi K, Kahn CR, Roth J, Froesch ER, Humbel RE, Zapf J, Neville DM, Jr. Insulin

and non-suppressible insulin-like activity (NSILA-s): Evidence for separate plasma membrane receptor sites. Biochem Biophys Res Commun. 1974; 57:307-315.

15. Megyesi I, Kahn CR, Roth J, Gorden P. Hypoglycemia in association with extrapancreatic tumors: Demonstration of elevated plasma NSILA-s by a new radio-receptor assay. J Clin Endocrinol Metab. 1974; 38:931-934.

16. McGuffin WL, Jr., Sherman BM, Roth J, Gorden P, Kahn CR, Roberts WC, Frommer PL. Acromegaly and cardiovascular disorders: A prospective study. Ann Intern Med. 1974; 81:11-18.

17. Soll AH, Goldfine ID, Roth J, Kahn CR, Neville DM, Jr. Thymic lymphocytes in obese (ob/ob) mice: Mirror of the insulin receptor defect in liver and fat. J Biol Chem. 1974; 249:4127-4131.

18. Thomas DW, Rosen SW, Kahn CR, Temple R, Papadopoulous NM. Macromolecular lactic acid dehydrogenase: A cause of increased serum lactate dehydrogenase activity. Ann Intern Med. 1974; 81:434-439.

19. Soll AH, Kahn CR, Neville DM, Jr. Insulin binding to liver plasma membranes in the obese hyperglycemic (ob/ob) mouse: Demonstration of a decreased number of functionally normal receptors. J Biol Chem. 1975; 250:7402-7407.

20. Kahn CR, Levy AG, Gardner JD, Miller JV, Gorden P, Schein P. Pancreatic cholera: Beneficial effects of treatment with streptozotocin. N Engl J Med. 1975; 292:941-945.

21. Megyesi K, Kahn CR, Roth J, Gorden P. Circulating NSILA-s in man: Preliminary studies of stimuli in vivo and of binding to plasma components. J Clin Endocrinol Metab. 1975; 41:475-484.

22. Schwartz RH, Bianco AR, Handwerger BS, Kahn CR. Demonstration that monocytes rather than lymphocytes are the insulin-binding cells in preparations of human peripheral mononuclear leukocytes: Implications for studies of insulin resistant states in man. Proc Natl Acad Sci. USA 1975; 72:474-478.

23. Gavin JR, III, Kahn CR, Gorden P, Roth J, Neville DM, Jr., Radioreceptor assay of insulin: Comparison of plasma and pancreatic insulins and proinsulins. J Clin Endocrinol Metab. 1975; 41:438-445.

24. Soll AH, Kahn CR, Neville DM, Jr., Roth J. Insulin receptor deficiency in genetic and acquired obesity. J Clin Invest. 1975; 56:769-780.

25. Megyesi K, Kahn CR, Roth J, Neville DM, Jr., Nissley SP, Humbel RE, Froesch ER. The NSILA-s receptor in liver plasma membranes: Characterization and comparison with the insulin receptor. J Biol Chem. 1975; 250:8990-8996

26. Flier JS, Kahn CR, Roth J, Bar RS. Antibodies that impair insulin receptor binding in an unusual diabetic syndrome with severe insulin resistance. Science. 1975; 190:63-65.

27. Kibata M, Hiramatsu K, Shimizu Y, Fuchimoto T, Sasaki N, Shimono M, Miyake K, Flier JS, Kahn CR. Insulin receptor antibody found in a case of Sjogren's syndrome associated with extreme insulin-resistant diabetes. Proceedings of the Symposium on Chemical Physiology and Pathology. (Japan) 1975; 15:58-63.

28. Kahn CR, Megyesi K. Roth J. Nonsuppressible insulin-like activity of human serum: A potent inhibitor of insulin degradation. J Clin Invest. 1976; 57:526-529.

29. Kahn CR, Flier JS, Bar RS, Archer JA, Gorden P, Martin MM, Roth J. The syndromes of insulin resistance and acanthosis nigricans: Insulin receptor disorders in man. N Engl J Med. 1976; 294:739-745.

30. Ginsberg BH, Kahn CR, Roth J. The insulin receptor of the turkey erythrocyte: Purification and characterization of the membrane bound receptor. Biochem Biophys Acta. 1976; 443:227-242.

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