BIOGRAPHICAL SKETCH

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NAME: Darrell M. Wilson, M.D

eRA COMMONS USER NAME (credential, e.g., agency login): Wilson.darrell

POSITION TITLE: Professor Emeritus-Active, Pediatric Endocrinology & Diabetes, Stanford University, CA

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of California, Davis, CA	BS	03/1973	Electrical Engineering
University of California, San Diego, CA	MD	06/1977	Medicine
Stanford University, Stanford, CA	Residency	06/1980	Pediatrics
Stanford University, Stanford, CA	Fellowship	06/1984	Pediatric Endocrinology

A. Personal Statement

For 25 years, I have served as the PI at Stanford University for the NIH funded, multi-center Type-1 Diabetes TrialNet Studies. My involvement in Type 1 diabetes prevention clinical research began with the formation of TrialNet's progenitor, the Diabetes Prevention Trial (DPT-1) network. The DPT-1 was initially assembled at the invitation of the NIH in 1993 to develop a protocol to determine if antigen-based therapies could prevent or delay autoimmune mediated T1D. Stanford University was one of the original ten national centers for the DPT-1, which evolved into TrialNet. Additionally, I have a longstanding clinical research interest in the prevention and treatment of obesity and Type 2 diabetes in children and adolescents. I was co-investigator on the GOALS trial with Dr. Robinson and we have collaborated on clinical trials directed at reducing obesity for two decades and 12 publications. I provided expertise on measurement of changes in growth, body composition, and glucose and insulin metabolism and supervised the methods and quality assurance aspects of the collection, processing and storage of biological samples for this trial. I served as the Principle Investigator of the multisite Glaser Foundation funded year-long trial of Metformin in obese adolescents, with included studies of the relationships among measures of regional fat and insulin resistance. I was co-investigator on the recently completed long running NIH funded, multi-center Diabetes Research in Children Network (DirecNet). Over the past decades, this group was initially devoted to testing how new technology such as glucose sensors could help children with diabetes, and has been extraordinarily productive. DirecNet continued as 5-center group testing the hypothesis that dysglycemia has an adverse impact on brain development in young children.

As PI of the JDRF funded Advancing a High Through-put, Ultrasensitive and Multiplex Auto Antibody Panel I collaborated with Enable Biosciences to help refine an assay system to quickly measure multiple diabetes related antibodies on extremely small samples with great accuracy. Further, I have been the co-investigator on several Juvenile Diabetes Research Foundation and Helmsley Foundation funded clinical investigations devoted to the development of artificial pancreas (JDRF Artificial Pancreas Project, the Continuous Glucose Sensor Human Clinical Trial, and the Artificial Pancreas Consortium). As an internationally known clinical researcher concentrating in the area of pediatric diabetes, I have published over 350 peer reviewed articles and chapters. I am a key member of Stanford University's clinical research infrastructure, serving as the Chair of one of Stanford's IRB panels, as well as a former member on the NIH funded CTRU advisory committee. I am very experienced in all aspects of clinical trials. I look forward to continuing my role as a consultant for TrialNet here at Stanford.

B. Positions, Scientific Appointments, and Honors

Positions and Scientific Appointments

2008-present	Member, Clinical Research Translation Unit Advisory Board
2004-present	Chair Panel 5 Stanford University Medical Committee for the Protection of Human Subjects
2001-present	Professor, Stanford University
2001-2008	General Clinical Research Center Safety Committee
1998-2015	Chief, Division of Pediatric Endocrinology and Diabetes, Stanford University
1994-2001	Associate Professor, Stanford University
1988-2008	General Clinical Research Center Advisory Committee
1987-1993	Assistant Professor, Stanford University
1984-2015	Director, Pediatric Diabetes Center, Packard Children's Hospital
1984-1987	Clinical Assistant Professor, Stanford University

Honors

2018	Distinguished Medical Staff Award, Packard Children's Hospital, Stanford
2009	Honoree, Juvenile Diabetes Research Foundation, San Francisco Chapter
2008	Honoree, Diabetes Society, Santa Clara, CA
2006-2022	Editorial board: Journal of Diabetes Science and Technology
2000-2019	Editorial board: Diabetes Technology and Therapeutics
2000-2008	Board of Directors, Juvenile Diabetes Research Foundation, Silicon Valley Palo Alto Chapter
1996-1998	Board of Directors, American Diabetes Association, Palo Alto Chapter
1989-1994	Board of Directors, Diabetes Society of Santa Clara Valley
1989-1993	Editorial board: Journal of Clinical Endocrinology and Metabolism

C. Contributions to Science

1. **Type 1 Diabetes Prevention:** The overarching goal of the NIH funded TrialNet study group is to develop and test intervention to prevent Type 1 diabetes mellitus (T1DM). As a charter member of DPT-1, I have led Stanford in this endeavor for over two and a half decades. During these 25 plus years, Stanford has contributed extensively to all aspects of TrialNet's missions. Many promising interventions must be tested in a safe and efficient manner in order to achieve this goal. A well-organized cooperative network of capable institutions, the Type 1 Diabetes TrialNet group, has greatly facilitated the prompt completion of the many clinical trials needed to test these potential interventions. Stanford has taken the lead on the design and conduct of some of these studies and have enrolled subjects in all of the TrialNet studies, both studies directed at high risk pre-diabetes and new onset diabetes. The Stanford team is very experienced in the day-to-day conduct of trials, collecting and interpreting data, as well as preparing and reviewing publications.
    a. Haller MJ, Schatz DA, Skyler JS, Krischer JP, Bundy BN, Miller JL, Atkinson MA, Becker DJ, Baidal D, DiMeglio LA, Gitelman SE, Goland R, Gottlieb PA, Herold KC, Marks JB, Moran A, Rodriguez H, Russell W, **Wilson DM**, Greenbaum CJ and the Type 1 Diabetes TrialNet ATG-GCSF Study Group. Low-Dose Anti-Thymocyte Globulin (ATG) Preserves β-Cell Function and Improves HbA1c in New-Onset Type 1 Diabetes. Diabetes Care published ahead of print July 16, 2018,:10.2337/dc18-0494
    b. Haller MJ, Long SA, Blanchfield JL, Schatz DA, Skyler JS, Krischer JP, Bundy BN, Geyer SM, Warnock MV, Miller JL, Atkinson MA, Becker DJ, Baidal DA, DiMeglio LA, Gitelman SE, Goland R, Gottlieb PA, Herold KC, Marks JB, Moran A, Rodriguez H, Russell WE, **Wilson DM,** Greenbaum CJ; Type 1 Diabetes TrialNet ATG-GCSF Study Group. Low-Dose Anti-Thymocyte Globulin Preserves C-Peptide, Reduces HbA1c, and Increases Regulatory to Conventional T-Cell Ratios in New-Onset Type 1 Diabetes: Two-Year Clinical Trial Data. Diabetes. 2019 Jun;68(6):1267-1276. 2019 Apr 9. PMID: 30967424
    c. Greenbaum CJ, Sert E[2], Lambert K, Weiner LJ, Kanaparthi S,Lord S, Gitelman SE, **Wilson DM,** Gaglia L, Griffin KJ, Russell WE, Raskin P, Moran A, Willi SM, Tsalikian E, DiMeglio LA, Herold KC, Moore WV, Goland R, Harris M, Craig ME, Schatz DA, Baidal DA, Rodriguez H, Utzschneider KM, Nel HJ, Soppe SL, Boyle KD, Cerosaletti K, Keyes-Elstein L, Long SA, Thomas R, McNamara JG, Buckner JH, Sanda S for the ITN058AI EXTEND Study Team, IL-6 receptor blockade does not slow β-cell loss in new onset type 1 diabetes, JCI 2021 PMID: 34747368

d. Russell WE, Bundy BN, Anderson MS, Cooney LA, Gitelman SE, Goland RS, Gottlieb PA, Greenbaum CJ, Haller MJ, Krischer JP, Libman IM, Linsley PS, Long SA, Lord SM, Moore DJ, Moore WV, Moran AM, Muir AB, Raskin P, Skyler JS, Wentworth JM, Wherrett DJ, **Wilson DM,** Ziegler AG, Herold KC, and the Type 1 Diabetes TrialNet Study Group* Abatacept for Delay of Type 1 Diabetes Progression in Stage 1 Relatives at Risk:A Randomized, Double-Masked, Controlled Trial . Diabetes Care 2023;46(5):1005–1013 PMID: 36920087

2. **Adolescent Obesity:** Obesity in childhood, particularly during adolescence, is associated with significant future morbidity and mortality. Obesity greatly increases the risk for type 2 diabetes mellitus, hypertension, and cardiovascular disease. It is imperative that effective prevention and treatment modalities be identified to address the epidemic of childhood and adolescent obesity. Throughout my career, I have conducted trials of medical and lifestyle inventions designed to prevent and reverse obesity, including a large multi-site year long trial of metformin in obese adolescents.
   a. Robinson TN, Matheson DM, Kraemer HC, **Wilson DM,** Obarzanek, E, Thompson NS, Alhassan,S, Spencer, TR, Haydel KF, Fujimoto M, Varady A, Killen JD. A Randomized controlled trial of culturally-tailored dance and reducing screen time to prevent weight gain in low-Income African-American girls: Stanford GEMS. Arch Pediatr Adolesc Med. 2010;164(11):995-1004
   b. Robinson TN, Matheson D, Desai M, **Wilson DM**, Weintraub DL, Haskell WL, McClain A, McClure S, Banda JA, Sanders LM, Haydel KF, Killen JD. Family, Community and Clinic Collaboration to Treat Overweight and Obese Children: Stanford GOALS -- a Randomized Controlled Trial of a Three-Year, Multi-Component, Multi-Level, Multi-Setting Intervention. Contemporary Clinical Trials Contemporary Clinical Trials 36 (2013) 421–435 PMID: 24028942
   c. Shah S, **Wilson DM,** Bachrach LK. Large Doses of Vitamin D Fail to Increase 25-Hydroxyvitamin D Levels or to Alter Cardiovascular Risk Factors in Obese Adolescents: A Pilot Study. J Adolesc Health. 2015 Apr 11. S1054-139. PMID: 25873553
   d. Robinson TN, Matheson D, **Wilson DM,** Weintraub DL, Banda JA, McClain A, Sanders LM, Haskell WL, Haydel KF, Kapphahn KI, Pratt C, Truesdale KP, Stevens J, Desai M. A community-based, multi-level, multi-setting,multi-component intervention to reduce weight gain among low socioeconomic status Latinx children with overweight or obesity: The Stanford GOALS randomized controlled trial www.thelancet.com/diabetes-endocrinology Lancet Diabetes Endocrinol 2021 Jun;9(6):336-349 PMID: 33933181

3. **Evaluation of Diabetes Technology (Devices and Assays):**
   Devices are increasingly important in the management of diabetes, particularly in children and adolescents. Glucose meters, glucose sensors, insulin infusion pumps, and integration devices such as smart phones now play a major role in diabetes management. Additionally, assays for hemoglobin A1c, C-peptide, and fructosamine are essential for monitoring and achieving good glycemic control. I conduct studies examining the accuracy and utility of these devices and assays in those with diabetes and their utility in different patient populations. Recently, my laboratory completed an extensive collection of blood, urine, and saliva for the JDRF funded study of a novel antibody assay system in collaboration with Enable Biosciences that can quickly measure multiple diabetes related antibodies on extremely small samples with great accuracy.
   a. **Wilson DM**, Beck RW, Tamborlane WV, Dontchev MJ, Kollman C, Chase P, Fox LA, Ruedy KJ, Tsalikian E, Weinzimer SA. The Accuracy of the FreeStyle Navigator Continuous Glucose Monitoring System in Children With Type 1 Diabetes. Diabetes Care. 30:59-64, 2007 PMID: 17192334
   b. Nally LM, Bondy N, Doiev J, Buckingham BA, **Wilson DM**. A Feasibility Study to Detect Neonatal Hypoglycemia in Infants of Diabetic Mothers Using Real-Time Continuous Glucose Monitoring. Diabetes Technol Ther. 2019 Apr;21(4):170-176 PMID: 30839229
   c. Cortez F, Gebhart D, Robinson PV, Seftel D, Pourmandi N, Owyoung J, Bertozzi CR, **Wilson DM**, Maahs DM, Buckingham BA, Mills JD, Roforth MM, Pittock SJ, McKeon A, Page K, Wolf WA, Sanda S, Speake C, Greenbaum CJ, Tsai CT. Sensitive detection of multiple islet autoantibodies in type 1 diabetes using small sample volumes by agglutination-PCR. PLoS One 2020 Nov 13;15(11):e0242049 PMID: 33186361
   d. Cortez FdJ, Gebhart D, Tandel D, Robinson PV, Seftel D, **Wilson DM**, Maahs DM, Buckingham BA, Kevin KWP, Tsai C. Automation of a Multiplex Agglutination-PCR (ADAP) Type 1 Diabetes

(T1D) Assay for the Rapid Analysis of Islet Autoantibodies SLAS Technology SLAS Technol. 2022 Feb;27(1):26-31. PMID: 35058202

4. **Evaluation of Continuous Glucose Data in Predictions of Diabetes:**
   With the increasing availability of accurate CGM data, we have been able to improve the prediction of Stage 3 type 1 diabetes in those at risk with positive antibodies.
   a. **Wilson DM,** Pietropaolo SL, Acevedo-Calado M, Huang S, Anyaiwe D, Scheinker D, Steck AK, Vasudevan MM, McKay SV, Sherr JL, Herold KC, Dunne JL, Greenbaum CJ, SM Lord, Haller MJ, Schatz DA, Atkinson MA, Nelson PW, Pietropaolo. CGM Metrics Identify Dysglycemic States in Subjects from the TrialNet Pathway to Prevention Study Type 1 Diabetes TrialNet Study Group Diabetes Care. 2023 Mar 1;46(3):526-534. doi: 10.2337/dc22-1297. PMID: 36730530 PMID: 36730530
   b. Ylescupidez A, Speake C, Pietropaolo SL, **Wilson DM**, Steck AK, Sherr JL, Gaglia JL, Bender C, Lord S, Greenbaum CJ. OGTT metrics surpass continuous glucose monitoring data for T1D prediction in multiple-autoantibody-positive individuals. J Clin Endocrinol Metab. 2023 Aug 13: Volume 109, Issue 1, January 2024, Pages 57–67. PMID: 37572381
   c. Calhoun P, Spanbauer C, Steck AK, Frohnert BI, Herman MA, Keymeulen B, Veijola R, Toppari J, Desouter A, Gorus F, Atkinson M, **Wilson DM,** Pietropaolo S, Beck RW. Continuous glucose monitor metrics from five studies identify participants at risk for type 1 diabetes development. Diabetologia. 2025 Feb 11. PMID: 39934369

5. **Development of the Artificial Pancreas:** The management of insulin dependent diabetes is particularly challenging for children, adolescents and their families. Given my undergraduate degree in Electrical Engineering, I have had a particular interest in the automatic control of insulin delivery based on glucose sensor data. I have been an investigator on many studies designed to develop and test algorithms, safety features, and hardware essential for practical artificial pancreas systems.
   a. **Wilson DM,** Calhoun P, Maahs MA, Chase HP, Messer L, Buckingham BA, Aye T, Clinton P, Hramiak I, Kollman C, Beck RW for the In Home Closed Loop Study Group Factors Associated With Nocturnal Hypoglycemia in at Risk Adolescents and Young Adults with Type 1 Diabetes, Diabetes Technology and Therapeutics 2015 17(6):385-91. PMID:25761202 PMCID: PMC4432491
   e. Lal RA, Basina M, Maahs DM, Hood K, Buckingham B, **Wilson DM**. One Year Clinical Experience of the First Commercial Hybrid Closed-Loop. Diabetes Care. 2019 Sep 23. pii: dc190855.. PMID: 31548247
   f. Forlenza GP, Vigers T, Berget C, Messer L, Lal RA, Basina M, Maahs DM, Hood K, Buckingham BA, **Wilson DM**, Wadwa RP, Driscoll KP, Pyle L; Predicting Success with a First-Generation Hybrid Closed Loop Artificial Pancreas System among Children, Adolescents, and Young Adults with Type 1 Diabetes: a Model Development and Validation Study, Diabetes Technol Ther. 2022 Mar;24(3):157-166. PMID: 34780306

Complete List of Published Work in MyBibliography:
https://www.ncbi.nlm.nih.gov/myncbi/1N7q5-ROe7ao7v/bibliography/public/
Personal data http://med.stanford.edu/profiles/endocrinology/researcher/Darrell_Wilson/
Divisional website http://dped.stanford.edu
ORCID https://orcid.org/0000-0001-9589-6011