David-Erick Lafontant

Department of Biostatistics

College of Public Health

University of Iowa

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University of Iowa Profile

LinkedIn Profile

NCBI (PubMed) Profile

EDUCATION/TRAINING

Institution	Degree	MM/YYYY	Field of Study
University of Iowa, Iowa City, IA	Ph.D.	12/2024	Biostatistics
University of Iowa, Iowa City, IA	M.S.	05/2013	Biostatistics
Kean University, Union NJ	B.A.	05/2011	Mathematical Sciences (Cum Laude)
	Minor	05/2011	Computer Science (Cum Laude)

PROFESSIONAL APPOINTMENTS

Clinical Assistant Professor, University of Iowa,   2024-Present

- Several projects at the Clinical Trials Statistical and Data Management Center (CTSDMC)
- Lead statistician for biomarker analyses in Parkinson's Progression Marker's Initiative
- Co-principal investigator in a Michael J Fox Foundation Grant
- Manage several Michael J. Fox Foundation projects.
- Platform trial in Parkinson's disease
- Provide statistical insights to study design teams
- Engage with investigators, data managers, and statisticians across CTSDMC projects.

Biostatistician, U of Iowa, Clinical Trials Statistical and Data Management Center   2013-2024

- Lead statistician for the Write Now initiative from the Michael J. Fox foundation. This initiative helps promote young investigators to do research in Parkinson's disease with the end goal of publishing in high impact journals.
- Lead statistician for the biomarker strategy group to help identify promising biomarkers for neuronal synuclein disease.
- Collaborate with investigators and prepare statistical analysis plans for observational studies.
- Assist in the statistical design and analysis of clinical trials, including sample size calculation using intraclass correlation coefficient for cluster randomized trials and interim analyses.
- Conduct advanced statistical analyses, including longitudinal data analysis, survival analysis, generalized linear models, and mixed-effects models for clinical trials and observational studies.
- Collaborate with other statisticians, data managers and regulatory affairs, to ensure the integrity and accuracy of data interpretation.
- Develop and validate statistical programs in SAS to automate data processing, analysis, and reporting for the Food and Drug Administration (FDA), National Institute of Health (NIH), Data Safety Monitoring Board (DSMB), Principal investigators (PI), and others.
- Assist in the writing reports, including interim clinical study reports, final study reports, and manufacturing reports.
- Present findings and statistical methodologies to internal and external collaborators at scientific conferences and weekly study team meetings.
- Assist in training new hires, delegate tasks to appropriate coworkers, and oversee their work.
- Assist in planning of exploratory research calls to invite national and international investigators to present their research to a broad group of highly respected researchers.

- Create and review weekly and monthly reports to track enrollment, provide insight on where effort is needed, and identify outliers and errors to ensure accuracy of data. Review safety reports and provide a memo identifying new trends.

Statistician/Biostatistician, U of Iowa, College of Dentistry (*Part Time, Temporary*) 2013
- Engages in federally-funded oral health research.
- Perform statistical analyses and report findings to principal investigators.

Programmer/Analyst, Research Assistant, U of Iowa, Center for Public Health Statistics 2012-2013
- Engage in federally-funded research projects in several areas of public health.
- Collaborate with researchers and other parties at the community and national levels

Teaching Assistant, Biostatistics, University of Iowa, College of Public Health 2011-2012
- Graduate level Intro to Biostatistics course. Application of statistical techniques to biological data, including descriptive statistics; probability; normal, binomial, and Poisson distributions; sampling distributions; tests of significance; confidence intervals; analysis of frequency data

Academic Specialist, *Tutor and Mentor,* Project Adelante, Kean University 2011-2011
- Pre-College Bound Programs at Kean University. Designed to reduce high school dropout rate of Latino students, increase their academic skills, and encourage them to pursue higher education.

Summer Internship, Electronic Data Patterns in Vehicles Involved in Unsafe Outcomes 2010
- Assess the possibility of implementing an electronic device in vehicles to alarm drivers in high-risk situation of having an accident.

Mathematics Tutor, Exceptional Educational Opportunity (EEO), Kean University 2008-2009
- Undergraduate level math courses. Algebra, Pre-calculus and Calculus.

RESEARCH

Grant Activity
The Michael J Fox Foundation $166,117.33 2025-Present
Principal Investigators: Michael Schwarzschild, David-Erick Lafontant, Eric Macklin
"Accelerating Biological Understanding and Translational Approaches for PD Program - Biomarkers"

Interest
Applications: biostatistical support across, Parkinson's Disease, Fibromyalgia, Diabetes, and various other areas.
Statistical Methodology: Clinical Trials, Platform Trials, Longitudinal Observational Studies, Causal Inference, Precision Medicine, Clustering and Machine Learning, Dynamic Treatment Regimes.

PhD Dissertation
- Assessment of Dynamic Treatment Regimens Effects on Longitudinal Outcomes through Clustering and Causal inference (Dec 2024, Advisor: Hyunkeun Ryan Cho)

PhD Thesis Committee Member (Name, Department, Defense Date)
- Eric Boonstra, Biostatistics, TBD

Publications
1. Brooker, S. M., Pasquini, J., Choi, S. H., **Lafontant, D.-E.**, Fereshtehnejad, S.-M., Zeighami, Y., Grillo, P., Riboldi, G. M., Azizi, H., Moqadam, R., Kang, U. J., Nudelman, K. N. H., Siderowf, A., Tanner, C. M., Tropea, T. F., Foroud, T., Chahine, L. M., Mollenhauer, B., Merchant, K. M., Galasko, D., Coffey, C. S., Dobkin, R. D., Brown, E. G., Alcalay, R. N., Weintraub, D., Marek, K., Simuni, T., Gonzalez Latapi, P., Pavese, N., & Poston, K. L. (n.d.). *Clinical and imaging characteristics of Parkinson's disease with negative alpha-synuclein seed amplification assay. Movement Disorders.*
2. Gonzalez-Latapi, P., Gochanour, C., Cho, H., Choi, S. H., Caspell-Garcia, C., Coffey, C., Brumm, M., **Lafontant, D.-E.**, Xiao, Y., Tropea, T., Seibyl, J., Tanner, C., Venuto, C., Kieburtz, K., Chahine, L.,

Poston, K., Siderowf, A., Marek, K., & Simuni, T. (n.d.). *5-year disease progression in synuclein seeding positive sporadic Parkinson's disease*, Annals of Clinical and Translational Neurology.

3. Vance, K. G., Pedelty, J., Van Gorp, B. J., Vance, C. G. T., Johnson, E. M., Jiang, F., **Lafontant, D.-E**, Koepp, M., Post, A. A., Bayman, E., Chimenti, R. L., Dailey, D. L., Crofford, L. J., Reisinger, H., & Sluka, K. A. (2025). Community engagement strategies improve recruitment and enrollment in a pragmatic clinical trial. Journal of Clinical and Translational Science.

4. Feuerstein, J., Brown, E., Chahine, L., Gochanour, C., **Lafontant, D.-E.,** Marshall, M., Simuni, T., Weintraub, D., & Amara, A. (2025). Biological characteristics of individuals with RBD: A multicenter prospective longitudinal cohort (P2-5.001). Neurology, 104(7 Suppl. 1), 3574. https://doi.org/10.1212/WNL.0000000000211092

5. Vizcarra, J. A., Hefter, K., **Lafontant, D.-E.,** Tran Duong, M., Ertefaie, A., Litt, B., Bassett, D. S., & Siderowf, A. (2025). Fall frequency, risk factors, and outcomes in Parkinson's disease: A cross-sectional analysis. medRxiv. https://doi.org/10.1101/2025.08.05.25332959

6. Barbosa W, Schneider RB, Choi SH, Marshall MJ, **Lafontant DE**, Caspell-Garcia C, Coffey CS, Ross J, Siderowf A, Marek K, Simuni T; Parkinson's Progression Markers Initiative (PPMI). Safety and Feasibility of Serial Lumbar Punctures: Long-term Results from the Parkinson's Progression Markers Initiative. Clin Park Relat Disord. 2025 Aug 13;13:100385. doi: 10.1016/j.prdoa.2025.100385. PMID: 40895170; PMCID: PMC12391599.

7. Chahine, L. M., Lafontant, D.-E., Choi, S. H., Iwaki, H., Blauwendraat, C., Singleton, A. B., Brumm, M. C., Alcalay, R. N., Merchant, K., Nudelman, K. N. H., Dagher, A., Vo, A., Tao, Q., Venuto, C. S., Kieburtz, K., Poston, K. L., Bressman, S., Gonzalez-Latapi, P., Avants, B., Coffey, C., Jennings, D., Tolosa, E., Siderowf, A., Marek, K., Simuni, T., & Parkinson's Progression Markers Initiative. (2024). LRRK2-associated parkinsonism with and without in vivo evidence of alpha-synuclein aggregates. Brain Communications. https://doi.org/10.1093/braincomms/fcaf103

8. Andrew A. Post · **David-Erick Lafontant** · Megan E. McCabe · Emine O. Bayman · Dana L. Dailey · Ruth L. Chimenti · Michele Costigan · Carla Franck · Trevis Huff · Elizabeth Johnson · Maxine Koepp · Tina Neill-Hudson · Carol GT Vance · Barbara Van Gorp · Bridget M. Zimmerman · Dixie Ecklund · Leslie J. Crofford · Kathleen A. Sluka "Movement-Evoked And Resting Pain Are Each Associated With Disease Impact In Individuals With Fibromyalgia" *Pain, Movement, & Rehabilitation Science*, April 2023, 81-82. DOI: 10.1016/j.jpain.2023.02.236

9. **David-Erick Lafontant**, Megan McCabe, Patrick Heagerty, Elizabeth Turner, M. Bridget Zimmerman, Emine O. Bayman". Interim Reassessment of Sample Size in Cluster Randomized Trials". *The Living Textbook*, Jan 2024. DOI: 10.28929/259

10. ****Andrew Siderowf, Luis Concha-Marambio, **David-Erick Lafontant**, Carly M. Farris, Yihua Ma, et al. "Assessment of heterogeneity and disease onset in the Parkinson's Progression Markers Initiative (PPMI) cohort using the α-synuclein seed amplification assay: a cross-sectional study." *Lancet Neurology*, May 2023. DOI: 10.1101/2023.02.27.23286156 (**Top 10 for multiple days in a row**)

11. Michael C Brumm, Kerri A Pierz, **David-Erick Lafontant**, Chelsea Caspell-Garcia, Christopher S Coffey, Andrew Siderowf, Kenneth Marek "Updated Percentiles for the University of Pennsylvania Smell Identification Test in Adults 50 Years of Age and Older." *Neurology*, February 2023. DOI: 10.1212/WNL.0000000000207077

12. Marina Picillo, **David-Erick Lafontant**, Susan Bressman, Chelsea Caspell-Garcia, Christopher Coffey, Hyunkeun Ryan Cho, Elliot L. Burghardt, Nabila Dahodwala, Rachel Saunders-Pullman, Caroline M Tanner, Amy W Amara; for the Parkinson's Progression Markers Initiative "Sex-Related Longitudinal Change of Motor, Non-Motor, and Biological Features in Early Parkinson's Disease." *Journal of Parkinson's Disease*, January 1, 2022, 421–436. DOI: 10.3233/JPD-212892

13. Marco J. Russo, Christina D. Orru, Luis Concha-Marambio, Simone Giaisi, Bradley R. Groveman, Carly M. Farris, Bret Holguin, Andrew G. Hughson, **David-Erick Lafontant**, Chelsea Caspell-Garcia, Christopher S. Coffey, Jennifer Mollon, Samantha J. Hutten, Kalpana Merchant, Roland G. Heym, Claudio Soto, Byron Caughey & Un Jung Kang "High diagnostic performance of independent alpha-

synuclein seed amplification assays for detection of early Parkinson's disease." *Acta Neuropathologica Communications*, 9(1), 179, 2021. DOI: [10.1186/s40478-021-01282-8](10.1186/s40478-021-01282-8)

14. Tanya Simuni, Brian Fiske, Kalpana Merchant, Christopher S Coffey, Elizabeth Klingner, Chelsea Caspell-Garcia, **David-Erick Lafontant** "Efficacy of Nilotinib in Patients With Moderately Advanced Parkinson Disease: A Randomized Clinical Trial." *Journal of the American Medical Association*, March 1, 2021, 78(3), 312-320. DOI: 10.1001/jamaneurol.2020.4725

15. Camillo Ricordi; Julia S. Goldstein; A.N. Balamurugan; Gregory L. Szot; Tatsuya Kin; Chengyang Liu; Christine W. Czarniecki; Barbara Barbaro; Nancy D. Bridges; Jose Cano; William R. Clarke; Thomas L. Eggerman; Lawrence G. Hunsicker; Dixon B. Kaufman; Aisha Khan; **David-Erick Lafontant;** Elina Linetsky; Xunrong Luo; James F. Markmann; Ali Naji; Olle Korsgren; Jose Oberholzer; Nicole A. Turgeon; Daniel Brandhorst; Xiaojuan Chen; Andrew S. Friberg; Ji Lei; Ling-jia Wang; Joshua J. Wilhelm; Jamie Willits; Xiaomin Zhang; Bernhard J. Hering; Andrew M. Posselt; Peter G. Stock; A.M. James Shapiro "National Institutes of Health–Sponsored Clinical Islet Transplantation Consortium Phase 3 Trial: Manufacture of a Complex Cellular Product at Eight Processing Facilities." *Diabetes* 2016;65(11):3418–3428. DOI: https://doi.org/10.2337/db16-0234

16. Goutam Chakraborty, Soma Thumpayil, **David-Erick Lafontant**, Wintana Woubneh, Jay H. Toney "Age-dependence of glucose tolerance in adult KK-Ay mice: a model of non-insulin-dependent diabetes mellitus." *Lab Animal*, 38, 364-368, 2009. DOI: https://doi.org/10.1038/laban1109-364 (Article featured on journal cover)

PROJECTS

Path to Prevention (P2P)   2025-Present
Path to Prevention study is a platform trial in its early stage looking to test several drugs to help slow progression in participants with early Parkinson's disease, giving them a chance to continue to live their lives as would a healthy participant.
Duties: Assist in cluster analyses to help identify ideal participants for inclusion, and power and sample size calculations

The Fibromyalgia Transcutaneous Electrical Nerve Stimulation in Physical Therapy Study (FM-TIPS)
                                                                                        2021-2025
FM-TIPS is a pragmatic clinical trial sponsored by the National Institutes of Health (NIH). The study is conducted in the patient's normal healthcare setting with five healthcare systems and 29 physical therapy clinics to complete this study.
Duties: Biostatistician, prepare reports, run analyses, data management and cleaning.

Nilotinib in Parkinson's Disease (NILO-PD)   2017-2019
The purpose of this study is to determine if nilotinib is safe, if it can be tolerated by patients with Parkinson's disease (PD) and to learn if nilotinib has the possibility of effectively treating PD symptoms.
Duties: Perform analyses, Prepared Safety data for the Data Safety Monitoring Board (DSMB).

Parkinson's Progression Markers Initiative (PPMI)   2017-Present
PPMI is a landmark observational clinical study to comprehensively evaluate cohorts of significant interest using advanced imaging, biologic sampling and clinical and behavioral assessments to identify biomarkers of Parkinson's disease progression. This study is sponsored by The Michael J. Fox Foundation for Parkinson's Research.
Duties: Perform various analyses for observational data.

Clinical Islet Transplantation Consortium   2013-2018
The Clinical Islet Transplantation (CIT) Consortium is a network of clinical centers and a data coordinating center established in 2004 to conduct studies of islet transplantation in patients with type 1 diabetes. It

focuses on improving the safety and long-term success of methods for transplanting islets, the insulin-producing cells of the pancreas, in people whose own islets have been destroyed by the autoimmune process that characterizes type 1 diabetes. The CIT Consortium was created by the National Institutes of Health (NIH).
Duties: Perform various analyses for various clinical and manufacturing data.

Care for Yourself 2011-2013
The Care for Yourself program services are part of a national program that helps reduce risks from breast, cervical, and cardiovascular health issues.
Duties: Updated and ran monthly reports for various sites to obtain funding.

Data Patterns of Simulator Training in Drivers with Parkinson's Disease 2012- 2013
Determine if a rehabilitation program using a driving simulator for participants with Parkinson's disease is promising.
Duties: Performed longitudinal analyses on a massive driving simulator data.

Iowa Health Factbook 2011-2013
The Iowa Health Fact Book has been produced as a collaborative effort between The University of Iowa College of Public Health, Iowa Department of Public Health, and other interested partners working to improve the health of Iowans. Information is presented for each of Iowa's 99 counties and includes demographics and vital statistics, data on disease incidence and mortality, health and social determinants of health, health resources, and environmental factors
Duties: Tabulated frequencies and rates for the Iowa Health Fact Book.

Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) 2011-2013
The WISEWOMAN program was created to help women understand and reduce their risk for heart disease and stroke by providing services to promote lasting heart-healthy lifestyles. The WISEWOMAN program is administered through CDC's Division for Heart Disease and Stroke Prevention (DHDSP).
Duties: Created and ran monthly reports for various sites to obtain funding.

PRESENTATIONS

Oral & Conference Presentations
- **Identification of Dynamic Treatment Regimes and Evaluation of Their Effect on Clinical Outcomes**
  Joint Statistical Meetings (JSM), 2024
- **Recursive Clustering by Heterogeneity of Repeated Measures**
  ENAR, 2024
- **PROC REPORT: A Better Way to Display Data**
  University of Iowa, College of Public Health, 2015
- **PROC Templates: The Best Way to Produce Reports**
  University of Iowa, College of Public Health, 2014
- **PROC REPORT: A Better Way to Display Data**
  2014
- **Introduction to the Tidyverse (R)**
  University of Iowa, College of Public Health, CTSDMC, 2019
- **Preceptorship Presentation**
  University of Iowa, College of Public Health, 2013
- **Electronic Data Patterns in Vehicles Involved in Unsafe Outcomes**
  Iowa Summer Institute in Biostatistics (ISIB), 2010

- **Statistical Analysis of Genetic Data**
  Sixth Annual National McNair Scholars Research Conference, University of Delaware, Newark, DE, 2008

Poster & Conference Presentations

- **Data Patterns of Simulator Training in Drivers with Parkinson's Disease**
  Fourth Annual Iowa Mathematical Field of Dreams Conference, 2010
- **Electronic Data Patterns in Vehicles Involved in Unsafe Outcomes**
  Society of Hispanic Professional Engineers (SHPE) Conference, Cincinnati, OH, 2010
- **Analysis of the Design and Efficiency of the Umbrella and Panel Solar Cookers: An Application of Science in Human Rights**
  American Association for the Advancement of Science (AAAS), 2009
- **Analysis of the Design and Efficiency of the Umbrella and Panel Solar Cookers: An Application of Science in Human Rights**
  Society of Hispanic Professional Engineers (SHPE) Conference, Washington, DC, Washington Convention Center, 2009
- **Statistical Analysis of Genetic Data**
  Annual Ronald E. McNair Commemorative Symposium, North Carolina A&T State University, Greensboro, NC, 2009
- **Statistical Analysis of Genetic Data**
  We Care Conference, Kean University, Union, NJ, 2008

PROFESSIONAL SERVICE

Department of Biostatistics, University of Iowa

- Student Award committee	2025 – Present
- Statistically Significant Award Committee	2025 – Present
- Course Evaluator, Intro to Biostatistics	2025

ACADEMIC AND PROFESSIONAL HONORS

Awarded, Advancing Graduate Student Success Award	2024
Awarded, Dr. Carol S. Gleich Development Award	2024
Publication, named one of the two top picks of the year for advances in Movement Disorders by the editors of Neurology Present	2023
Awarded, Society for Clinical Trials Travel Award	2022
Awarded, Statistically Significant Staff Award	2017
Selected, Delta Omega Honorary Society in Public Health	2017
Selected, Who's Who Among Students in American Universities and Colleges	2011
Recognized, Lambda Alpha Sigma Honors (ΛΑΣ)	SP/FA-2010
Third Place, Undergraduate Poster Competition SHPE Conference	2010
Awarded, Alliance Scholarship	2010
Achievement, Honors List Certificate, Exceptional Educational Opportunities Pgrm.	2007-2010
Awarded, Patricia M. Barksdale Scholarship	2009-2011

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SCHOLARLY PROGRAMS/SOCIETY MEMBERSHIPS

Member, The University of Iowa, Alumni Advisory Board	2016-2019
Scholar, Ronal E. McNair Post-Baccalaureate Achievement Program	2009-2011
Scholar, Math Alliance Scholar, Iowa Summer Institute in Biostatistics (ISIB)	2010-2011
Member, Society of Hispanic Professional Engineers (SHPE)	2009-2010
Member, American Statistical Association	2009-2010

TECHNICAL SKILLS

Statistical Analysis Software:	SAS, R, RStudio
Text Editor	LaTeX
Microsoft Office:	Word, Access, Excel, PowerPoint, Publisher
Operating Systems:	Windows, Linux/Unix

LANGUAGES

French Fluent in written and conversational French (bilingual/bicultural)

English Fluent in written and conversational English (bilingual/bicultural)

Spanish Basic in reading Spanish

Haitian Creole Fluent in written and conversational Creole