

BIOGRAPHICAL SKETCH

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NAME: William Andres Vasquez Espinosa

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

POSITION TITLE: Nephrology Fellow

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 <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
Colegio San Gabriel, Quito, Ecuador	BS	08/2010	Chemistry and Biology
Universidad Central del Ecuador, Quito, Ecuador	MD	10/2016	Medicine
Saint Peter's University Hospital – Rutgers Robert Wood Jonhson, New Brunswick, NJ	Residency	06/2023	Internal Medicine
Stanford University	Fellowship	Current	Nephrology

A. Personal Statement

Growing up in Ecuador, I was surrounded by a rich tradition of natural healing practices. While my grandmother's remedies didn't always work, they ignited a curiosity within me, prompting me to seek evidence-based explanations for the world around me. This pursuit of knowledge led me to become the first physician in my family. My curiosity expanded as I confronted the vastness of unanswered questions in medicine. This realization kindled within me a desire to embark on a research journey and contribute to the expansion of medical knowledge. With unwavering determination, I made the difficult decision to leave my homeland after completing medical school to seek opportunities in the United States, where I could acquire the necessary expertise that would lead me towards the path of creating new knowledge.

My journey into research began under the mentorship of Dr. Efrain Riveros at the Medical College of Georgia at Augusta University. During my time in Dr. Riveros's lab, I gained invaluable hands-on experience in the intricacies of research methodology, including protocol development, data collection and analysis, patient recruitment, and IRB approval processes. Our research focused on clinical investigation of physiological changes induced by anesthesia. I worked on projects assessing the alterations in the diameter of the inferior vena cava induced by epidural anesthesia in pregnant patients, examining variations in gastric diameter based on fasting times, and implementing a mannequin model to evaluate how its use enhances the confidence of residents in performing medical procedures. During the course of these projects, I recruited and consented participants, collected gastric fluid, performed the ultrasonography of the inferior vena cava, and analyzed data. This initial immersion in research and physiology along with my love for direct patient care ignited my passion for internal medicine.

I then completed my internal medicine residency training at the Saint Peter's University Hospital - Rutgers Robert Wood Johnson, where I honed my clinical skills while continuously contributing to science by publishing articles focused on clinical case reports/series and quality improvement. During this enriching period, my passion for nephrology blossomed. Moved by the plight of patients with kidney failure and the vast potential of research in this field, I set my sights on pursuing a research career in nephrology. I am currently in my first year of nephrology fellowship at Stanford University and will have the opportunity to join the research group of Dr. Tammy Sirich, a leading researcher in the fields of uremia, dialysis kinetics, and mass spectrometry.

Confident in my skills and the mentorship of Dr. Sirich, I am ready for this next stage of my academic career. This year, I am completing my clinical nephrology training. I am allotted two elective months during this first

year, which I will spend learning the basics of laboratory techniques including mass spectrometry in Dr. Sirich's lab. During my nephrology research fellowship, which starts next academic year, I will have at least 80% of my time dedicated to research training. I will focus on investigating the role of the amino acid derivative ergothioneine, a potent anti-oxidant, which under normal conditions is reabsorbed by the kidney. Patients undergoing kidney replacement therapies may lose this potentially valuable solute as we believe that it is efficiently removed by these therapies. My goal is to elucidate the importance of this solute and shed light on the consequences of its depletion in patients with kidney disease.

Though at the nascent stages of my academic career, I am confident that this burgeoning environment, coupled with my perseverance and dedication, will enable me to forge a meaningful career as a clinician-scientist, leaving my indelible Latino mark on the scientific landscape.

B. Positions, Scientific Appointments, and Honors

Positions

2020 – Present	Member, American Society of Nephrology
2022	Completed NephSim Internship
2022	Completed NSMC 2022 Internship
2021 – 2023	Quality Improvement Fellow, Department of Medicine, Saint Peter's University Hospital – Rutgers Robert Wood Johnson
2023	Internal Medicine, Board Certification
2023 – Present	Stanford Nephrology Fellow, Palo Alto, California

Honors

2010	Magna cum Laude. Bachelors of Science "Colegio San Gabriel" High School. Quito, Ecuador.
2013-2014	Top-ranked medical student. "Universidad Central del Ecuador". Quito, Ecuador.
2015	Best score during Internal Medicine Internship, "Universidad Central del Ecuador". Quito, Ecuador.
2016	Top-ranked medical student. "Universidad Central del Ecuador". Quito, Ecuador.
2021	STARS Recipient, American Society of Nephrology

C. Contributions to Science

1. During internal medicine residency training, I encountered many diverse nephrology cases that resulted in case report publications and poster presentations.

- **Vasquez Espinosa W A**, Santos Argueta A, Hurtado Tandazo V A, et al. (May 31, 2022) A Case Report of a Young Female With Renal Infarction Secondary to Breakthrough COVID Infection. *Cureus* 14(5): e25527. doi:10.7759/cureus.25527
- Gahona CCT, Bharadwaj AK, Shah M, Bhagat U, Stermann P, **Vasquez W**. Treatment of Lethal Caffeine Overdose with Haemodialysis: A Case Report and Review. *J Crit Care Med (Targu Mures)*. 2022 Nov 12;8(4):279-287. doi: 10.2478/jccm-2022-0019. PMID: 36474616; PMCID: PMC9682922.
- **Vasquez Espinosa, W A.**; Joshi, A. A.; Puri, M.; Gahona, C. C. T.; Espinosa, C. F. V.; Dwivedi, S. A. Osmotic demyelination syndrome and COVID-19, *Journal of the American Society of Nephrology*, 33:334-335, 2022. Poster Presented at ASN Kidney Week 2022.
- Joshi, A. A.; **Espinosa, W. A.** V.; Arabi, N. The mosaic of autoimmunity, *Journal of the American Society of Nephrology* ; 33:339, 2022. Poster Presented at ASN Kidney Week 2022.
- **Vasquez-Espinosa, W**; Santos, A; Hurtado, V; Vasquez-Espinosa, C; Dwivedi, S, Primary Hyperaldosteronism in a Patient with Bilateral Adrenal Adenomas. Poster presented at Research Day in Saint Peters University Hospital-Rutgers Robert Wood Johnson.

2. During internal medicine residency training, I had the opportunity to conduct several quality improvement projects as the Quality Improvement Fellow in the Department of Medicine of Saint Peter's University Hospital - Rutgers Robert Wood Johnson. One of the projects (below) was recognized in the New Jersey ACP meetings and accepted to be presented at the National Association for Healthcare Quality (NAHQ)

- **Vasquez-Espinosa, W**; Doukas, S; Sharma, S; Calderon, A; Mohan, J, Automating Blood Pressure Holding Parameters to Reduce Antihypertensive-Related Hypotensive Events in the Hospital Setting. American College of Physicians, 2021. Oral Presentation at NJ ACP 2022. Research day at SPUH, Poster at the National Association for Healthcare Quality (NAHQ)

3. I have contributed to a number of other articles and presented posters unrelated to nephrology.

- Hurtado V, Dar T, **Vasquez W**, Roman S, Parellada N, Benitez M, Calfa M. UNPREDICTABLE DELETERIOUS EFFECTS OF SARS-COV 2 ON HEART CONDUCTION. J Am Coll Cardiol. 2022 Mar 8;79(9):3328. doi: 10.1016/S0735-1097(22)04319-4. Epub 2022 Apr 1. PMID: PMC8972511.
- Hurtado, V; **Vasquez-Espinoza, W**; Vasquez-Espinoza, C; Snow, K; Acute heart failure as initial presentation of Marfan syndrome: The importance of extra-aortic cardiac disease, Poster presented at the Research Day – Miller School of Medicine - Miami University.
- Rommel, E; **Vasquez-Espinoza, W**; Hurtado, V; Vasquez-Espinoza, C, Unusual Cause of Bradycardia: COVID-19 Vaccination and Atrioventricular Heart Block, Poster presented at the Research Day in SPUH-Rutgers RWJ.
- Hurtado, V; **Vasquez-Espinoza, W**; Vasquez-Espinoza; Diaz, I; Isolated primary mesenteric adenitis in acute HIV retroviral syndrome, American College of Physicians, 2021 Dec. Poster presented at the Research Day – Miller School of Medicine - Miami University.
- Puri M, **Vasquez Espinosa W A**, Tobiasson M, et al. (July 14, 2022) Erythema Multiforme: A Presentation of COVID-19 Pneumonia. Cureus 14(7): e26835. doi:10.7759/cureus.26835.