

Christian A. Maino Vieytes, M.S.

Doctoral Candidate | Division of Nutritional Sciences | The University of Illinois at Urbana-Champaign

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Education

The University of Illinois at Urbana-Champaign

Urbana, IL

PHD, NUTRITIONAL SCIENCES

Anticipated May 2023

- *Concentration:* Nutritional Epidemiology and Data Science
- Advisors: Dr. Anna Arthur, PhD (aarthur4@kumc.edu), MPH, RD and Dr. Zeynep Madak-Erdogan, PhD (zmadake2@illinois.edu)
- Dissertation Committee: Dr. Anna Arthur, PhD, MPH, RD, Dr. Zeynep Madak-Erdogan, PhD, Dr. Sandra Rodriguez-Zas PhD, Dr. Rebecca Smith, PhD

The University of Illinois at Urbana-Champaign

Urbana, IL

M.S., STATISTICS

2022

- GPA: 4.00

The Robert Wood Johnson Foundation's Health Policy Research Scholars

Urbana, IL

SCHOLAR AND AWARD RECIPIENT

2020-Present

- Health Policy Research Scholars is a national leadership program supported by the Robert Wood Johnson Foundation.
- It supports scholars from diverse disciplines and backgrounds in applying and advocating for policy changes that improve health and equity.
- Scholars receive interactive training in policy development and implementation.

The University of Maryland, College Park

College Park, MD

B.S., NUTRITIONAL SCIENCE (*Cum Laude*)

2015

- GPA: 3.83, Major GPA: 3.89
- Phi Kappa Phi Recognition

Experience

The Urban Institute

500 L'Enfant Plaza SW Wash., DC

DATA SCIENCE INTERN

Jun. 2022 - Present

20 hrs/week

- Developed an R package (*fiscal*) for computing fiscal health metrics for nonprofit organizations filing form 990 or form 990-EZ with the IRS.
- Mined, geocoded, and merged data from several public sources for a geospatial analysis of nonprofit density in the United States.
- Designed, created, and implemented a geospatial data dashboard using RShiny for visualizing nonprofit density in the U.S.
- Implemented the Agile/Scrum project management framework in all projects I led and collaborated on.
- Supervisor: Jesse Lecy (jlecy@urban.org)

The University of Illinois at Urbana-Champaign Division of Nutritional Sciences

1201 W. Gregory Drive

240 ERML

Urbana, IL

Aug. 2018 - Present

30 hrs/week

GRADUATE RESEARCH ASSISTANT

- Employ principles of epidemiology and tools from the fields of nutritional epidemiology, data science, and statistics to develop research questions and analytical strategies for my research projects.
- Evaluate the role of dietary patterns on prognostically-relevant health outcomes using data from a longitudinal cohort study of head-and-neck squamous cell carcinoma patients.
- Evaluate the role of food insecurity on dietary behaviors and health outcomes in subjects with a history of cancer by employing NHANES data for this arm of my research.
- Examine the role of food insecurity on health outcomes secondary to COVID-19 in the U.S. using a variety of data sources (USDA, Census Bureau, BEA, AHA, etc.).
- Mentor dietetic interns on a research project during the research rotation of their dietetic internship.
- Mentor undergraduate students taking on individual research projects in nutritional epidemiology.
- Serve as a peer-reviewer for several peer-reviewed journals in the fields of cancer biology and nutritional sciences.
- Supervisor: Anna Arthur (aarthur4@kumc.edu)

The University of Illinois at Urbana-Champaign
Dept. of Crop Sciences

1102 S. Goodwin Ave
AW-101 Turner Hall, MC-046
Urbana, IL

TEACHING ASSISTANT, CPSC540: APPLIED STATISTICAL METHODS II

Jan. 2021 - Present
15 hrs/week

- Hold a 2-hour weekly recitation/computer laboratory session during the Spring semester.
- Concepts taught are from the experimental design literature and include: linear models and ANOVA, block designs, variations of Latin Squares, logistic regression, and multilevel linear regression.
- Teach practical skills in RStudio (e.g., statistical analysis, data management with *dplyr*, plotting with *ggplot2*, and R Markdown for clarity of presentation).
- Other responsibilities include: holding office hours (1 hour, weekly), grading weekly assigned homework, formulating exam questions, grading exams, and leading lectures in place of the absent professor.
- Supervisor: Alexander Lipka (alipka@illinois.edu)

Champaign Public Health District

201 W. Kenyon Rd.
Champaign, IL

DATA ANALYST

Feb. 2021 - Jul. 2021
8 hrs/week

- Managed and analyzed survey data for a stakeholder analysis evaluating interest and feasibility of farm to school programs in school districts within the Champaign-Urbana region.
- Led the data management and analysis arm of the project.
- Prepared plots for a public presentation in *ggplot2*.
- Prepared and delivered a public presentation on the results of the analysis.
- Supervisor: Jennifer Lotton (jlotton@c-uphd.org)

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TEACHING ASSISTANT, CPSC440: APPLIED STATISTICAL METHODS I

Jan. 2019 - Present
20 hrs/week

- Hold one 2-hour weekly recitation/computer laboratory session where I lecture and lead review statistical concepts learned in the lecture component for up to 80 students.
- Practice and increase the students' familiarity with common statistical software packages (R and SAS, predominantly) through guided sessions that involve an introduction to coding/programming in R, application of statistical concepts in within software, and an introduction to LaTeX.
- Other responsibilities include: holding office hours (2 hours, weekly), grading weekly assigned homework, grading weekly quizzes, formulating exam questions, grading exams, and leading lectures in place of the absent professor.
- Supervisor: Alexander Lipka (alipka@illinois.edu)

The Military Families Learning Network

905 S. Goodwin
343 Bevier Hall
Urbana, IL

CONTRIBUTING AUTHOR, NUTRITION AND WELLNESS RESOURCES

Aug. 2018 - Sep. 2021
5 hrs/week

- Prepared evidence-based blog-posts concerning relevant and contemporary nutrition topics, ranging from different types of diets to describing nutrients of concern.
- Translated scientific literature into comprehensible discourse targeted for a lay audience, comprised predominantly of military service professionals and their families.
- Supervisor: Karen Chapman-Novakofski (kmc@illinois.edu)

Freelance

College Park, MD

BIOCHEMISTRY TUTOR

Oct. 2017 - Aug. 2018
30 hrs/week

- Tutored and mentored undergraduate students who sought additional help with coursework in biochemistry, metabolism, biology, or physiology at the University of Maryland, College Park.

The Manna Food Center

9311 Gaither Road
Gaithersburg, MD

NUTRITION EDUCATOR/GROCERY STORE TOUR LEADER AND WAREHOUSE VOLUNTEER

Jun. 2016 - Aug. 2018
15 hrs/week

- Led free nutrition classes at various grocery store settings in Montgomery County, primarily to a low socioeconomic-status (SES) audience.
- Implemented my background and proficiency in nutrition to communicate optimal methods for consuming healthy foods (to prevent chronic illness) while on a strict budget. ItemSorted "rescued produce" (food that would have otherwise been thrown away at local grocery stores) into containers as well as prepare bags of meat and legumes for distribution.
- Delivered and distributed food boxes to clients/members of the county, the grand majority of which are low socioeconomic status and on SNAP or other government assistance programs.
- Supervisor: Jackie DeCarlo (jackie@mannafood.org)

The University of Maryland, Dept. of Kinesiology

4200 Valley Drive

Suite 2242

College Park, MD

Sep. 2017 - Dec. 2017

RESEARCH ASSISTANT

20 hrs/week

- Discerned the role of calcium (Ca²⁺) and sodium (Na⁺) transport and downstream metabolic/energetic implications in both normal/healthy and compromised (heart failure) cardiac mitochondrial models.
- Employed SDS-Page and Western Blot in my methodology.
- Supervisor: Sarah Kuzmiak-Glancy (sglancy@umd.edu)

The University of Maryland, College Park

College Park, MD

Aug. 2017 - Dec. 2017

GETFRUVED HEALTHY CAMPUS ENVIRONMENTAL AUDIT (HCEA)

10 hrs/week

- Audited the food/dining services, built, and natural environments that serve the 37,000 students attending the University of Maryland using a survey methodology.
- Supervisor: Margaret Udahogora (mudahogo@umd.edu)

Scribe America, LLC and Arthritis and Rheumatism Associates, P.C.

14995 Shady Grove Road

Suite 250

Rockville, MD

May. 2016 - Jun. 2017

MEDICAL SCRIBE

30 hrs/week

- Served as the personal medical scribe for Dr. Evan Siegel MD.
- Tasks included precise and real-time documentation of patient history, physical exam findings, medical decision-making, differential diagnoses as well as the ordering of lab orders, diagnostic imaging, and assignment of billing codes for each patient encounter.
- Attended several lectures/seminars led by Dr. Siegel and other physicians on the treatment and care of patients with rheumatoid arthritis, psoriatic arthritis, and ankylosing spondylitis with appropriate medical interventions.
- Supervisor: Evan Siegel

Institute for Bioscience and Biotechnology Research (IBBR)

9600 Gudelsky Dr.

Rockville, MD

Feb. 2016 - Jun. 2016

RESEARCH ASSISTANT

30 hrs/week

- Developed compounds (fumagillin derivatives) for the treatment of acute giardiasis.
- Implemented protein purification, enzymatic kinetics assays, bacterial transformation, crystallization/structure resolution, and compound-target characterization as the primary methodological tools.
- Supervisor: Oznat Herzberg (oznat@umd.edu)

The University of Maryland, Dept. of Nutrition and Food Science

0112 Skinner Building

University of Maryland, College Park

College Park, MD

Jan. 2015 - May. 2015

RESEARCH ASSISTANT

10 hrs/week

- Studied the dose-dependent effects of folic acid on colorectal carcinogenesis and colorectal cancer chemoprevention. Methods employed: cell culture, MTT assay, SDS-PAGE, and western blot
- Supervisor: Seong-Ho Lee (slee2000@umd.edu)

Scribe America, LLC

Doctors Community Hospital

8118 Good Luck Rd

Lanham, MD

Nov. 2014 - Mar. 2015

EMERGENCY DEPARTMENT MEDICAL SCRIBE

30 hrs/week

- Aided Emergency Department physicians and nurse practitioners accurately document patient visit and chart information.
- Carried out precise and real-time documentation of patient history.
- Recorded physical exam findings, medical decision-making, differential diagnoses, and prepared patients for Emergency Department discharge or hospital admission, as instructed by the attending physician.

The University of Washington, Dept. of Pharmaceutics

H272 Health Science Building
Box 357610
Seattle, WA

SUMMER RESEARCH FELLOW (PHARMACOLOGICAL SCIENCES SUMMER DIVERSITY PROGRAM)

Nov. 2014 - Mar. 2015
40 hrs/week

- Optimized novel compounds targeted for ALDH1a2 inhibition; suppression of retinoic acid biosynthesis.
- Specific tasks included conducting compound synthesis and characterization via 1H-NMR and Mass Spectrometry.
- collected kinetic data for the synthesized compounds to test their efficacy by conducting in-vitro experiments.
- Assisted with pharmacokinetic studies in mice.
- Supervisor: John Amory (jamory@uw.edu)

Scribe America, LLC

INOVA Mt. Vernon Hospital
2501 Parkers Ln.
Alexandria, VA

EMERGENCY DEPARTMENT MEDICAL SCRIBE

May. 2013 - Nov. 2013
30 hrs/week

- Aided Emergency Department physicians and nurse practitioners accurately document patient visit and chart information.
- Carried out precise and real-time documentation of patient history.
- Recorded physical exam findings, medical decision-making, differential diagnoses, and prepared patients for Emergency Department discharge or hospital admission, as instructed by the attending physician.

The University of Maryland, Dept. of Nutrition and Food Science

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University of Maryland, College Park
College Park, MD

RESEARCH ASSISTANT

Aug. 2012 - Feb. 2013
15 hrs/week

- Tested the hypothesis that preadipocyte senescence is mediated by ATM and DNA-PKCS by conducting in vitro experiments.
- Employed techniques included cell culture, fluorescence microscopy, flow cytometry, and Oil-Red-O staining.
- Supervisor: Caroline Rocourt

Publications

Maino Vieytes CA, Smith RL, Gany F, Arthur AE. County-level Food Insecurity and COVID-19 Mortality: An Ecological Analysis. 2022. (Manuscript in preparation for publication).

Palsgaard P, **Maino Vieytes CA**, Peterson N, Francis SL, Monroe-Lord L, Sahyoun N, Ventura-Marra M, Weidauer L, Xu F, Arthur AE. Modeling Health Professionals' Views and Knowledge of the Aging Process. (Submitted for publication)

Maino Vieytes CA, Zhu R, Gany F, Burton-Obanla A, Arthur AE. Empirical Dietary Patterns Associated with Food Insecurity in U.S. Cancer Survivors: NHANES 1999-2018. *International Journal of Environmental Research and Public Health*. 2022, 18, 14062. doi: 10.3390/ijerph192114062.

Maino Vieytes CA, Rodriguez-Zas SL, Madak-Erdogan Z, Smith RL, Zarins KR, Wolf GT, Rozek LS, Mondul AM, Arthur AE. Adherence to a priori-defined Diet Quality Indices Throughout the Early Disease Course is Associated with Survival in Head and Neck Cancer Survivors: An Application Involving Marginal Structural Models. *Frontiers in Nutrition*. 2022, 9, 791141. doi: 10.3389/fnut.2022.791141.

Maino Vieytes CA, Mondul AM, Crowder SL, Zarins KR, Edwards CG, Davis EC, Wolf GT, Rozek LS, Arthur AE. Pretreatment Adherence to a priori-Defined Dietary Patterns Is Associated with Decreased Nutrition Impact Symptom Burden in Head and Neck Cancer Survivors. *Nutrients*. 2021, 13, 3149. doi: 10.3390/nu13093149.

Maino Vieytes CA, Mondul AM, Zarins KR, Wolf GT, Rozek LS, Arthur AE. Associations Between a Priori-Defined Diet Quality Indices and Survival in a Longitudinal Cohort Study of Head and Neck Squamous Cell Carcinoma Patients. *Current Developments in Nutrition*. 2020, 4, Issue Supplement 2, 336. doi: .

Maino Vieytes CA, Mondul AM, Li Z, Zarins KR, Wolf GT, Rozek LS, Arthur AE. Dietary Fiber, Whole Grains, and Head and Neck Cancer Prognosis: Findings from a Prospective Cohort Study. *Nutrients*. 2019, 11 (10), 2304. doi: 10.3390/nu11102304.

Maino Vieytes CA, Taha HM, Burton-Obanla AA, Douglas KG, Arthur AE. Carbohydrate Nutrition and the Risk of Cancer. *Current Nutrition Reports*. 2019, 8, 230-239. doi: 10.1007/s13668-019-0264-3.

Maino Vieytes, CA, Amory JK. Aldehyde Dehydrogenase-1A2: A Target for Male Contraception. 2014 SACNAS National Conference: Research Presentation Abstracts. FRI-331.

Software Publications

Lecy J, **Maino Vieytes CA**. *fiscal*: Computation of Non-Profit Organization Fiscal Health Metrics. *The Urban Institute*. <https://github.com/Nonprofit-Open-Data-Collective/fiscal>

Funding

2020	Robert Wood Johnson Health Policy Research Scholars (Amt: \$124,000) , Robert Wood Johnson Foundation	Urbana, IL
2020	Margin of Excellence Program (Amt: \$2,000) , Univ. of Illinois at Urbana-Champaign	Urbana, IL
2019	Toshiro Nishida Research Award (Amt: \$800) , Univ. of Illinois at Urbana-Champaign	Urbana, IL
2015	Robert Facchina Scholarship , Univ. of Maryland, College Park	College Park, MD
2014	Travel Scholarship Award for the SACNAS National Conference , SACNAS	College Park, MD

Awards

2019	Excellent Teaching Assistant Recognition (Ranked By Students, Spring 2019) , University of Illinois at Urbana-Champaign	Urbana, IL
2012-2015	Dean's List , Univ. of Maryland, College Park	College Park, MD
2011	Certificate of Meritorious Service , Maryland State Dept. of Education	Rockville, MD

Software and Language

Programming	R/RStudio, RShiny, SAS, LaTeX
Statistical Analysis	R/RStudio, SAS, SPSS, SQL
Languages	Spanish, English

Presentations

05/2019	Dietary Fiber and Head and Neck Cancer Prognosis: A Prospective Cohort Study , American Institute for Cancer Research (AICR) Conference	Chapel Hill, NC
10/2014	Aldehyde Dehydrogenase-1A2: A Target for Male Contraception , U54 U01 Steering Committee Annual Meeting Contraceptive Discovery and Development Branch (NIH)	Bethesda, MD
10/2014	Aldehyde Dehydrogenase-1A2: A Target for Male Contraception , SACNAS National Conference	Los Angeles, CA
08/2014	Aldehyde Dehydrogenase-1A2: A Target for Male Contraception , University of Washington Summer Research Symposium	Seattle, WA

Professional Memberships

2022	AcademyHealth
2020	The American Society for Nutrition
2018	The Academy of Nutrition and Dietetics
2015	Phi Kappa Phi
2014	Society for Advancement of Chicanos and Native Americans in Science (SACNAS)

References

Anna Arthur, PhD, MPH, RD aarthur4@kumc.edu
Alexander Lipka, PhD alipka@illinois.edu
Francesca Gany, MD, ganyf@mskcc.org
Zeynep Madak-Erdogan, PhD, madake2@illinois.edu