

# Carolina Vargas Martínez

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 carolinavargasphd

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Passionate about nutrigenomics and nutrigenetics as important determinants of individual health. Committed to the health of the population through the study of not only biological but also social determinants of health. Interested in translational science and implementation research, especially focused on nutrition during the first thousand days of life and childhood to contribute to a healthy life across the life span.

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## EDUCATION

**Tufts University Friedman School of Nutrition Science and Policy** | Boston, MA

*Doctor in Philosophy in Nutritional Biochemistry/Metabolism* 2007

Specialization in cellular and molecular nutrition

**Tufts University Friedman School of Nutrition Science and Policy** | Boston, MA

*Master of Science in Human Nutrition* 2000

Specialization in human nutrition

**Universidad Iberoamericana** | Mexico City

*Bachelor of Science in Nutrition and Food Science* 1997

Specialization in human nutrition

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## PROFESSIONAL EXPERIENCE

**Institute for Obesity Research at Tecnológico de Monterrey** 2022-present

*Postdoctoral researcher*

- Devise and design a research protocol to evaluate diet quality.
- Collaborate with different IOR investigators in the design of research protocols and in the writing of research grants.
- Collaborate with interdisciplinary research groups to develop project strategies and study interventions under different contexts for the study of obesity in Mexico.

**Instituto Nacional de Medicina Genómica** 2008-2011

*Postdoctoral researcher*

- Developed nutrigenetic studies of PUFAs and inflammatory markers in different health states.
- Carried out nutrigenomic studies related to obesity in children and adolescents.
- Coordinated clinical research tasks and activities.
- Prepared ethical and research documents.
- Coordinated communication with COFEPRIS to get exportation permits for human samples.

**USDA Human Nutrition Research Center on Aging at Tufts University** 1998-2006

*Graduate Research Assistant*

- Participated in research groups to explore the roles of vitamin B12 and folate in different health states. Specifically, studies on catabolism and bioavailability of folic acid.
- Carried out gene-nutrient interactions studies specifically related to lipoproteins and folic acid metabolism in relation to obesity, cardiovascular disease and cancer.

**Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán** 1995-1997

*Undergraduate Research Assistant*

- Studied BCAA metabolism under protein deprivation conditions during pregnancy and lactating states.

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## RESEARCH AREAS OF INTEREST

Nutrigenomics and nutrigenetics of non-communicable diseases  
Obesity  
Early childhood health and well-being  
Healthy diet  
Food and nutrition policies

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## PUBLICATIONS

- Arreola-Ornelas, H., Merino-Juárez, G.A., Contreras-Loya, D., Méndez-Carniado, O., Morales-Juárez, L., et. Al. La carga del sobrepeso y la obesidad en México de 1990 a 2021. *Gac Med Mex.* 2023;159:560-573 DOI: 10.24875/GMM.23000397
  - Binia, A., Vargas-Martínez, C., Ancira-Moreno, M., Gosoni, L.M., Montoliu, I. et. al. Improvement of cardiometabolic markers after fish oil intervention in young Mexican adults and the role of PPAR $\alpha$  L162V and PPAR $\gamma$ 2 P12A. *J Nutr Biochem* (2017) 43:98-106. DOI:10.1016/j.jnutbio.2017.02.002
  - Vargas-Martínez, C., Ordovas, JM., Wilson, PW., Selhub, J. The Glutamate Carboxypeptidase Gene II 1561 C>T Polymorphism Does Not Affect Folate Status In The Framingham Offspring Cohort. *J Nutr* (2002) 132: 1176-9. DOI:10.1093/jn/132.6.1176
  - Torres, N., Vargas, C., Hernandez-Pando, R., Orozco, H., Hutson, S. M., Tovar, A. R. Ontogeny and subcellular localization of rat liver mitochondrial branched chain amino-acid aminotransferase. *Eur J Biochem* (2001) 268: 6132-9. DOI: 10.1046/j.0014-2956.2001.02563.x
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## TEACHING EXPERIENCE

**Universidad Iberoamericana** | León, Gto 2021-2024  
Graduate program in Clinical nutrition. Adjunct professor of the following courses: Genetic and metabolic basis of nutrition science; Genetic basis of nutrition.

**Universidad Iberoamericana** | Mexico City 2015-2022  
Undergraduate program in Nutrition and food sciences. Adjunct professor of the following courses: Nutrition and food research strategies; Cell biology and genetics; Nutrition physiology.

**Escuela de Dietética y Nutrición** | Mexico City 2020-2022  
Graduate program in Clinical Nutrition. Adjunct professor of the following courses: Research seminar; Research project I; Research project II; Research project III.

**Universidad Anáhuac Norte** | Mexico City 2005  
Undergraduate program in Medicine, dentistry and nutrition sciences. Adjunct professor of the Health research methodology course.

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## VOLUNTARY WORK

**CISV International**, Mexico City chapter. Active global citizenship. CISV educates and inspires action for a more just and peaceful world. Risk Management team since April 2022.

**Mujeres Líderes en STEAM, US-Mexico Leaders Network**. Empowering Latino Women with STEM education. Mentor to high school women students interested in studying a degree in STEM areas since 2019.

**Universidad Iberoamericana**, Mexico City. Technical council of the Nutrition and Food Science undergraduate program in Universidad Iberoamericana. Council member since 2021.