Dr. Juan Emmanuel Martínez Ledesma
Researcher at the Integrative Biology Unit
National System of Researchers Level II

Contact:

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https://tec.mx/en/research/institute-obesity-research/integrative-biology-unit

Degrees:

- Postdoctoral Fellow – Genomic Medicine Department and Neuro Oncology Department, The University of Texas MD Anderson Cancer Center (2014-2018)
- PhD. Computer Science – Tecnológico de Monterrey (2013)
- M.S. in Intelligent Systems – Tecnológico de Monterrey (2004)
- B.S. Electronics and Telecommunications – Tecnológico de Monterrey (2001)

Research areas:

- Computational Biology and Genomics
- Artificial Intelligence for Medicine
- Data Analysis

Selected publications:

1. Nezhadmoghadam F, Tamez-Peña JG, Martinez-Ledesma E. Exploring the intersection of obesity and gender in COVID-19 outcomes in hospitalized Mexican patients: a comparative analysis of risk profiles using unsupervised machine learning. Front Public Health (2024)
2. Samir Amin…, E Martinez-Ledesma, et. al. Comparative molecular life history of spontaneous canine and human gliomas. Cancer Cell. Volume 37, Issue 2, 2020.
3. Yonathan Lissanu Deribe,.., E Martinez-Ledesma, et al. Mutations in the SWI/SNF chromatin remodeling complex induce metabolic rewiring and dependence on oxidative phosphorylation. Nature Medicine. Jul;24(7):1047-1057, 2018.
4. Cancer Genome Atlas Research Network. Integrated genomic and molecular characterization of cervical cancer. Nature 543 (7645), 378-384, 2017.
5. P Barthel, .., E Martinez-Ledesma, et al. Systematic analysis of telomere length and somatic alterations in 31 cancer types. Nature Genetics 49 (3), 349-357, 2017.

Awards and recognitions:

- Sistema Nacional de Investigadores e Investigadoras, Level 2

Current projects:

- Machine Learning for predicting metabolic health and disease in the oriGen cohort using lipidomic, genetic, and epidemiologic data
- Meta-analysis of genomic and epidemiological public data
- Leveraging Molecular Embeddings and Nano-GPT for Molecule Generation