Eva C. González Díaz, Ph.D.

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EDUCATION

Stanford University — 2022
Doctorate (Ph.D.) in Bioengineering

University of Puerto Rico, Mayagüez — 2014
Bachelor of Science (B.S.) in Chemical Engineering
Certificates in Biotechnology, Environmental Engineering, and Process Design
Magna Cum Laude

RESEARCH EXPERIENCE

Postdoctoral Scholar — 2023-Present
Investigating the role of the gut microbiome in musculoskeletal tissue aging
Research Advisor: Christopher J. Hernandez | University of California, San Francisco

Graduate Researcher — 2016-2022
Thesis*: Tissue engineered 3D in vitro bone cancer models for elucidating drivers of cancer progression and drug discovery*
Stem Cell and Biomaterials Engineering Lab | PI: Fan Yang | Stanford University
Thesis reading committee: Nidhi Bhutani, Ph.D. , Yunzhi Peter Yang, Ph.D.
Thesis committee: Sarah Heilshorn, Ph.D. (Chair), Jennifer Cochran, Ph.D.

Engineering biomineralized synthetic scaffolds to direct endogenous stem cell-driven bone regeneration — 2015- 2016
Bioinspired Materials and Stem Cell Engineering Laboratory | PI: Shyni Varghese |University of California San Diego

Undergraduate Researcher — 2013-2014
Development of styrene-poly(isobutylene)-styrene (SIBS) membranes with carbon nanotubes to enhance proton exchange efficiency in fuel cells
Suleiman Research Group| PI: David Suleiman| University of Puerto Rico, Mayagüez

Research Intern, NSF Research Experience for Undergraduates (REU) — Summer 2013
Engineering thermally stable, polymeric nanovaccines for infectious diseases
Biomaterials and Nanomedicine Laboratories | PI: Balaji Narasimhan | Iowa State University

AWARDS AND HONORS

FELLOWSHIPS	Burroughs Wellcome Fund Postdoctoral Diversity Enrichment Program (PDEP) Award	2023
	UCSF Musculoskeletal Center Training Program Fellowship (NIH T32)	2023
	UCSF Sandler Fellows Program Finalist (1 out of 3)	2022
	Stanford Gerald J. Lieberman Fellowship	2021

	Stanford Diversifying Academia Recruiting Excellence (DARE) Fellowship	2019
	Howard Hughes Medical Institute (HHMI) Gilliam Fellowship Finalist	2019
	National Science Foundation Graduate Research Fellowship (NSF-GRFP)	2016
	Enhancing Diversity in Graduate Education (EDGE) Doctoral Fellowship	2016
	Stanford Weiland Fellowship	2016
AWARDS	NextProf Nexus , UC Berkeley | Univ. of Michigan | Georgia Tech	2022
	Stanford Alumni Association Community Impact Award	2020
	Stanford Centennial TA Award	2019
	Stanford Bio-X Travel Grant	2019, 2022
	Stanford Office for Graduate Education Travel Award	2019, 2022
	NIH Biotechnology Grant Traineeship	2018
	Amgen BioTalents Program Award	2014
	Engineering Honors Program	2010-2014
	NSF-CREST Undergraduate Research Assistantship	2013
	Chemical Engineering Academic Excellence Award	2013
	Honors Tuition Award	2009-2011, 2013

PUBLICATIONS

1. **González Díaz, E**, Tai, M, Monette, C, Wu, JY, Yang, F. "Spatially patterned 3D Model Mimics Key Features of Cancer Metastasis to Bone" *Biomaterials.* (2023)
2. **González Díaz, E**, Lee, A, Sayles, L, Feria, C, Sweet-Cordero, A, Yang, F. " A 3D Osteosarcoma Model with Bone-Mimicking Cues Reveals a Critical Role of Bone Mineral and Informs Drug Discovery" *Advanced Healthcare Materials*. (2022)
3. Liu, E, Zhu, D, **González Díaz, E,** Tong, X, Yang F. "Gradient Hydrogels for Optimizing Niche Cues to Enhance Cell-Based Cartilage Regeneration" *Tissue Engineering Part A.* (2020)
4. **González Díaz, E**, Sinha, D, Avedian, R, Yang F. "Tissue-engineered 3D Models for Elucidating Primary and Metastatic Bone Cancer Progression" *Acta Biomaterialia.* (2019)
5. **González Díaz, E***, Shih Y-RV*, Nakasaki M, Liu, M, Varghese S. "Mineralized biomaterials mediated repair of bone defects through endogenous cells" *Tissue Engineering Part A*. (2018)
6. **González Díaz, E**, Varghese, S. "Hydrogels as Extracellular Matrix Analogs" *Gels*. (2016)

PATENTS

González Díaz, E and Yang, F. "Tissue Engineered 3D Models for Cancer Metastasis" U.S. Patent Publication No. 2022/0390434

PRESENTATIONS

Conference Talks

- **González Díaz, E**, Tai, M, Monette, C, Wu, J, Yang, F. "Spatially patterned, 3D in vitro models of cancer metastasis to bone for elucidating key drivers of metastasis and drug discovery" Musculoskeletal Biology and Bioengineering Gordon Research Conference. Andover, NH. 2022 (invited talk)
- **González Díaz, E**, Tai, M, Monette, C, Wu, J, Yang, F. "Spatially patterned, 3D in vitro models of cancer metastasis to bone for elucidating key drivers of metastasis and drug discovery" American Association for Cancer Research (AACR) Annual Meeting. New Orleans, LA. 2022
- **González Díaz, E** and Yang, F. "Mimicking breast cancer bone metastases using spatially patterned microribbon hydrogels" Stanford Biotechnology Training Program Annual Symposium. 2020 (virtual presentation)

- **González Díaz, E** and Yang, F. "A bioengineered 3D model of osteosarcoma reveals important role of bone mineral in modulating osteosarcoma signaling and drug responses" Biomedical Engineering Society (BMES) Annual Conference. Philadelphia, PA. 2019
- **González Díaz, E** and Yang, F. "Bioengineered 3D in vitro bone cancer models: from primary bone cancer to breast cancer-bone metastasis" Stanford Bioengineering Annual Retreat. Santa Cruz, CA. 2019
- **González Díaz, E** and Yang, F. "Building bone tumors in a dish using 3D biomaterials". Stanford Biotechnology Training Program Annual Symposium. Stanford, CA. 2019
- **González Díaz, E** and Yang, F. "A Bioengineered 3D Model of Osteosarcoma Using Gelatin-based Microribbon Scaffolds" Orthopaedic Research Society (ORS) Annual Meeting. Austin, TX. 2019

Poster Presentations

- **González Díaz, E,** Cyphert, EL, Liu, C, Kaya, S, Morales, A, Nixon, J, Garcia, M, Jimenez, G, Natsoulas, N, DeFelice, BC, Gray, I, Elias, J, Alliston, T, Hernandez, CJ. "The Gut Microbiome Regulates Transcription in Bone in a Sexually Dimorphic Manner". Chan Zuckerberg Biohub San Francisco Confab Meeting, San Francisco, CA. 2023.
- **González Díaz, E**, Tai, M, Monette, C, Wu, J, Yang, F. "Spatially patterned, 3D in vitro models of cancer metastasis to bone for elucidating key drivers of metastasis and drug discovery". Signal Transduction by Engineered Extracellular Matrices Gordon Research Symposium. Manchester, NH. 2022
- **González Díaz, E**, Tai, M, Monette, C, Wu, J, Yang, F. "Spatially patterned, 3D in vitro models of cancer metastasis to bone for elucidating key drivers of metastasis and drug discovery" Stanford Bioengineering Annual Retreat. Stanford, CA. 2022
- **González Díaz, E**, Tai, M, Monette, C, Wu, J, Yang, F. "Spatially patterned, 3D in vitro models of cancer metastasis to bone for elucidating key drivers of metastasis and drug discovery" Stanford Biotechnology Training Program Symposium. Stanford, CA. 2022
- **González Díaz, E,** Lee, A, Sayles, L, Sweet-Cordero, A, Yang, F. "Tissue engineered 3D models of osteosarcoma with in vivo-mimicking phenotype for drug discovery" Orthopaedic Research Society (ORS) Annual Meeting. 2021 (virtual presentation)
- **González Díaz, E** and Yang, F. "Mimicking breast cancer-bone metastases using spatially patterned microribbon-based hydrogels" Orthopaedic Research Society (ORS) Annual Meeting. 2021 (virtual presentation)
- **González Díaz, E** and Yang, F. "Building bone tumors in a dish using 3D biomaterials: A bioengineered 3D model of osteosarcoma using gelatin-based microribbon scaffolds" Stanford Biotechnology Training Program Annual Symposium. Stanford, CA. 2019
- **González Díaz, E,** García I, and Yang F. "Elucidating the Role of Bone Matrix and Molecular Subtype in Modulating Breast Cancer-Bone Metastasis using Tissue Engineered 3D in vitro Models" Orthopaedic Research Society Annual Meeting. Austin, TX. 2019
- **González Díaz, E** and Yang, F. "A Bioengineered 3D Model of Osteosarcoma Using Gelatin-based Microribbon Scaffolds" Bio-X Research Symposium. Stanford, CA. 2019
- **González Díaz, E** and Yang F. "A Bioengineered 3D Model of Osteosarcoma Using Gelatin-based Microribbon Scaffolds" American Institute for Chemical Engineering (AIChE) Rock Stars of Regenerative Engineering Conference. San Francisco, CA. 2019
- **González Díaz, E** and Yang F. "A Bioengineered 3D Model of Osteosarcoma Using Gelatin-based Microribbon Scaffolds" American Institute for Chemical Engineering (AIChE) Rock Stars of Regenerative Engineering Conference. San Francisco, CA. 2019
- **González Díaz, E,** García I, and Yang F. "A bioengineered 3D *in vitro* model to mimic breast cancer-bone metastases using spatially patterned microribbon hydrogels" Stanford Bioengineering Annual Retreat. Santa Cruz, CA. 2018

- **González Díaz, E** and Yang, F. "Taking the cancer niche to the third dimension: Bioengineered 3D in vitro bone cancer models using macroporous matrices" Stanford Bioengineering Annual Retreat. Santa Cruz, CA. 2017
- **González Díaz, E**, Nakasaki M, and Varghese S. "Biomineralized material-directed healing of critical-sized bone defects" Jacobs Research Expo. La Jolla, CA 2016
- **González Díaz, E,** Brenza, T, Boggiatto, P, Narasimhan, B. "Assessing the biodistribution and transport mechanisms of polyanhydride nanoparticles", American Institute for Chemical Engineering (AIChE) National Conference, San Francisco, CA. 2013

RESEARCH MENTORSHIP EXPERIENCE

Undergraduate Research Mentor 2019-2020
Bio-X Undergraduate Research Program (USRP) | Summer 2019
Omeed Miraftab-Salo | Department of Bioengineering | Stanford University

Rotation Project/ Junior Graduate Student Mentor Multiple years
Michelle Tai (2021) | Department of Bioengineering | Stanford University
Callan Monette (2020) | Department of Bioengineering | Stanford University
Angel Kuo (2019) | Department of Chemistry | Stanford University
Jimmy Xu (2018) | Department of Bioengineering | Stanford University

High School Student Research Mentor Multiple years
Raising Interest in Science and Engineering (RISE) Summer Program | Stanford Univ.
Criselle Feria (2019) | American High School, Fremont, CA
Issamar García (2018) | Mt. Eden High School, Hayward, CA

TEACHING EXPERIENCE

Workshop Instructor 2018-2019
Stanford Summer Research Internship Program (SSRIP)

Teaching Assistant and Lab Instructor 2018-2019
Course: Tissue Engineering | Dept: Bioengineering | Stanford University

Teaching Assistant 2016
Course: Mass Transfer | Dept: Bioengineering | University of California, San Diego
Course: Statistics and Probability | Dept: Nanoengineering | University of California, San Diego 2015

Teaching Assistant and Project Advisor 2015
Course: Senior Design I | Dept: Nanoengineering | University of California, San Diego
Course: Senior Design II | Dept: Nanoengineering | University of California, San Diego 2015

Teaching Assistant 2014
Course: Process Dynamics and Controls | Dept: Nanoengineering | University of California, San Diego

LEADERSHIP AND SERVICE

Retreat Chair, Junior Investigator Committee, Core Center for Musculoskeletal Biology and Medicine, UCSF 2023-Present
Reviewer, ACS Biomaterials Science and Engineering Journal 2021
Panelist, Ohlone College Outreach Seminar 2021
Student Reader and Interviewer, Bioengineering PhD Graduate Admissions Committee 2019-2021
Graduate Student Coordinator, Stanford Bioengineering Department 2019-2020

Workshop Instructor, Object Program	2019
Guest Speaker, RISE Summer Program	2019
Panelist, Stanford Summer Research Program (SSRP)	2019
Panelist, Society of Latinx Engineers (SOLE)	2018
Junior Graduate Student Mentor, SBSA NSF Mentorship Program	2016-2018
Undergraduate Student Mentor, Jacobs Undergraduate Mentorship Program (JUMP)	2014-2016
Volunteer, Proyecto Desarrollo de Comunidades	2013-2014