Jonah Weigand-Whittier

PhD Student · UC Berkeley-UCSF Graduate Program in Bioengeering

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Education

University of California Berkeley *Berkeley, CA, USA*

PhD Bioengineering *August 2023 - Present*

- Advisor: Dr. Moriel Vandsburger

University of Massachusetts Amherst *Amherst, MA, USA*

BS Physics *May 2018*

- Relevant coursework: Quantum Mechanics, Statistical Mechanics, Electricity & Magnetism, Techniques in Theoretical Physics, Ordinary Differential Equations

Professional Experience

2020-2023 **Preclinical PET/MRI Systems Lab Manager**, A.A. Martinos Center for Biomedical Imaging

2020-2023 **Research Technician, Farrar Lab**, A.A. Martinos Center for Biomedical Imaging

2017-2020 **Veterinary Technician**, The Cat Hospital

2018 **Research Assistant, Felder Lab**, Smith College

Publications

Published

Ma H, Esfahani SA, Krishna S, Ataeinia B, Zhou IY, Rotile NJ, **Weigand-Whittier J**, et al. Allysine-Targeted Molecular MRI Enables Early Prediction of Chemotherapy Response in Pancreatic Cancer. Cancer Research, 2024.

Mandeville J, Efthimiou N, **Weigand-Whittier J**, et al. Partial volume correction of PET image data using geometric transfer matrices based on uniform B-splines. Physics in Medicine & Biology, 69(5): 1000-1100, 2024.

Mandeville J, **Weigand-Whittier J**, Wey HY, Chen YCI. Amphetamine pretreatment blunts dopamine-induced D2/D3-receptor occupancy by an arrestin-mediated mechanism: A PET study in internalization compromised mice. Neuroimage, 283: 120416, 2024.

Borgula IM, Shuvaev S, Abston E, Rotile NJ, **Weigand-Whittier J**, et al. Detection of Pulmonary Fibrosis with a Collagen-Mimetic Peptide. ACS Sensors, 8(11): 4008-4013, 2023.

Shuvaev S, Knipe RS, Drummond M, Rotile NJ, Ay I, **Weigand-Whittier J** et al. Optimization of an Allysine-Targeted PET Probe for Quantifying Fibrogenesis in a Mouse Model of Pulmonary Fibrosis. Molecular Imaging and Biology, 25(5): 944-953, 2023.

Ma H, Zhou IY, Chen YI, Rotile NJ, Ay I, Akam EA, Wang H, Knipe RS, Hariri LP, Zhang Caiyuan, Drummond M, Pantazopoulos P, Moon BF, Boice AT, Zygmont SE, **Weigand-Whittier J**, et al. Tailored chemical reactivity probes for systemic imaging of aldehydes in fibroproliferative diseases. Journal of the American Chemical Society, 145(38): 20825-20836, 2023.

Weigand-Whittier J, Sedykh M, Herz K, et al. Accelerated and quantitative three-dimensional molecular MRI using a generative adversarial network. Magnetic Resonance in Medicine, 89(5): 1901-1914, 2023.

Morais A, Locascio JJ, Sansing LH, Lamb J, Nagarkatti K, Imai T, van Leyen K, Aronowski J, Koenig JI, Bosetti F, Lyden P, Ayata C, and on behalf of the **SPAN Investigators**. Embracing heterogeneity in the multicenter Stroke Preclinical Assessment Network (SPAN) trial. Stroke, 54(2): 620-631, 2023.

Lyden PD, Bosetti F, Diniz MA, et al., and on behalf of the **SPAN Investigators**. The stroke preclinical assessment network: rationale, design, feasibility, and stage 1 results. Stroke, 53(5): 1802-1812, 2022.

Khalifa A, **Weigand-Whittier J**, Farrar CT, Cash S. Tracking the Migration of Injectable Microdevices in the Rodent Brain Using a 9.4T Magnetic Resonance Imaging Scanner. Frontiers in Neuroscience, 15: 738589, 2021.

Under Review & In Advanced Prep

Weigand-Whittier J, Vandsburger MH. Radial FLASH with segmented saturation for ungated, preclinical cardiac CEST-MRI.

Moon BF, Zhou IY, Ning Y, Chen YC, Le Fur M, Shuvaev S, Akam-Baxter E, Ma H, Solsona CM, **Weigand-Whittier J**, et al. Simultaneous PET and molecular MR imaging of cardiopulmonary fibrosis in a mouse model of left ventricular dysfunction. bioRxiv preprint: https://www.biorxiv.org/content/10.1101/2023.12.15.571959v1/

Yurista SR, Guarin Bedoya DO, Eder RA, Chen S, Jiang W, Welsh A, Liu F, **Weigand-Whittier J**, et al. Synergistic effects of empagliflozin and oral ketone ester in heart failure with preserved ejection fraction: a cardiac MRI and hyperpolarized [1-13]C pyruvate MRSI study.

Other Contributions

Solutions for Ch. 4: Partial Derivatives in *Mathematical Methods in Engineering and Physics*, Gary N. Felder and Kenny M. Felder, Publisher: Wiley, Hoboken, NJ, USA.

Awards, Fellowships, & Grants

2024 **International Travel Award**, 10th International Workshop on CEST Imaging

2022 **Travel Award**, 9th International Workshop on CEST Imaging

Presentations

** presenting author*

Refereed Conference Abstracts

Weigand-Whittier J, Wendland M, Vandsburger MH. Upcoming. Radial FLASH with segmented saturation for ungated, preclinical cardiac CEST-MRI. Accepted for oral presentation: 10th International Workshop on CEST Imaging, Nuremberg, Bavaria, Germany.

Weigand-Whittier J, Wendland M, Vandsburger MH. Upcoming. Radial FLASH with segmented saturation for ungated, preclinical cardiac CEST-MRI. Accepted for oral presentation: 2024 SCMR Mid-Year Meeting, Chicago, IL.

Weigand-Whittier J, Sedykh M, Herz K, Coll-Font J, Foster AN, Gerstner ER, Nguyen C, Zaiss M, Farrar CT, Perlman O. 2022. A Generative Adversarial Network for Accelerated and Quantitative 3D Semisolid MT/CEST MRI: A Multi-Center Brain and Leg Human Study. Oral presentation: 9th International Workshop on CEST Imaging, Atlanta, GA, USA.

Weigand-Whittier J, Sedykh M, Herz K, Coll-Font J, Nguyen C, Zaiss M, Farrar CT, Perlman O. 2022. Acceleration of Quantitative Semisolid MT/CEST Imaging Using a Generative Adversarial Network. Poster: Internation Society for Magnetic Resonance in Medicine Annual Meeting, London, England, UK.

Weigand-Whittier J, Sedykh M, Herz K, Coll-Font J, Foster AN, Gerstner ER, Nguyen C, Zaiss M, Farrar CT, Perlman O*. 2022. A Generative Adversarial Network for Accelerated and Quantitative 3D Semisolid MT/CEST MRI: A Multi-Center Brain and Leg Human Study. Oral presentation: World Molecular Imaging Congress, Miami, FL, USA.

Mentoring

2023-Present **Emma Bellman**, Undergraduate, University of California Berkeley

Outreach & Professional Development

Professional Memberships

Society for Cardiovascular Magnetic Resonance