# Hani Goodarzi

Associate Professor

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Contact

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### Academic

Appointments • 2022-present: Associate Professor.

Department of Biochemistry & Biophysics, Bakar Computational Health Sciences Institute, Helen Diller Family Comprehensive Cancer Center.

• 2016-2022: Assistant Professor. University of California, San Francisco

• 2012-2016: Postdoctoral Fellow in Cancer Genomics. Rockefeller University

### **EDUCATION**

Princeton University, Princeton, NJ USA

Molecular Biology, November 2010 University of Tehran, Tehran, Iran

B.S., Biotechnology, June 2006

# AWARDS AND Honors

- 2022: CZ Biohub Investigator
- 2022: Vilcek Prize for Creative Promise in Biomedical Sciences
- 2021: Mark Foundation ASPIRE Award
- 2020: AACR-MPM Oncology Foundation Transformative Cancer Research
- 2020: Breast Cancer Alliance Exceptional Project Award
- 2019: Mary Kay Foundation Award
- 2017: AAAS Martin and Rose Wachtel Cancer Research Award
- 2017: AACR NextGen Award for Transformative Cancer Research
- 2017: Sidney Kimmel Cancer Foundation Scholar Award
- 2015: Blavatnik Regional Award Winner for Life Sciences
- 2015: Tri-Institutional Breakout Prize for Junior Investigators
- 2015: NIH Pathway to Independence Award (K99/R00)
- 2014: Ruth L. Kirschstein National Research Service Award

# Professional ACTIVITY

- Study sections: Ad hoc member on Cancer Molecular Pathobiology (CAMP), Tumor Evolution, Heterogeneity and Metastasis (TEHM), Biodata Management and Analysis (BDMA), and Molecular Genetic B (MGB) study sections (NIH); RNA Mechanisms in Cancer committee at American Cancer Society.
- Journals: Ad hoc referee for the following journals: Science, Nature, Nature Communications, Nature Reviews Molecular Cell Biology, Molecular Biosystems, Frontiers in Physiology, European Urology, Computational and Structural Biotechnology Journal, Breast Cancer: Basic and Clinical Research,

Molecular Biology and Evolution, and BMC Cancer.

• **Teaching:** Dynamical Systems Modeling (BP205B) and Cancer Biology (BMS230).

# SELECTED PUBLICATIONS

Passarelli MC, et al, **Goodarzi H** $^{\dagger}$ , and Tavazoie SF $^{\dagger}$  (2022). Leucyl-tRNA synthetase is a tumour suppressor in breast cancer and regulates codon-dependent translation dynamics. *Nature Cell Biol*, 13(1):167  $^{\dagger}$ Corresponding authors

Fish L, Khoroshkin M, Navickas A, et al, **Goodarzi H** (2021). A prometastatic splicing program regulated by SNRPA1 interactions with structured RNA elements. *Science*, 372 (6543) eabc7531

Samuel RM, Majd H, Richter M, et al, Ott M, et al, **Goodarzi H** $^{\dagger}$ , and Fattahi F $^{\dagger}$  (2020). Androgen Signaling Regulates SARS-CoV-2 Receptor Levels and Is Associated with Severe COVID-19 Symptoms in Men. *Cell Stem Cell*, 27:876-889. $^{\dagger}$ Corresponding authors

Yu J, Navickas A, Asgharian H, et al, and **Goodarzi H** (2020). RBMS1 Suppresses Colon Cancer Metastasis through Targeted Stabilization of Its mRNA Regulon. *Cancer Discovery*, 10(9):1410.

Fish L, Navickas A, Culbertson B, et al, Ruggero D, and **Goodarzi H** (2018). Nuclear TARBP2 Drives Oncogenic Dysregulation of RNA Splicing and Decay. *Molecular Cell*, 75(5), 967-81.

Fish L, Zhang S, Yu J, Culbertson B, Zhou A, Goga A, Goodarzi H (2018). Cancer cells exploit an orphan RNA to drive metastatic progression. *Nature Medicine*, 24: 1743-51.

Goodarzi H<sup>†\*</sup>, Nguyen HCB\*, Zhang S, Dill BD, Molina H, Tavazoie SF<sup>†</sup> (2016). Abundance of specific tRNA species drives cancer progression. *Cell*, 165: 1416-1427. <sup>†</sup>Corresponding authors

**Goodarzi H**, Liu X, Nguyen HCB, Zhang S, Fish L, Tavazoie SF (2015). Endogenous tRNA-derived fragments suppress breast cancer progression via YBX1 displacement. *Cell*, 161: 790-802.

**Goodarzi H**, Zhang S, Buss CG, Fish L, Tavazoie S, Tavazoie SF (2014). Metastasis-suppressor transcript destabilization through TARBP2 binding of mRNA hairpins. *Nature* 513, 255-260.

Oikonomou P\*, **Goodarzi H**\*, Tavazoie S (2014). Systematic Identification of Regulatory Elements in Conserved 3' UTRs of Human Transcripts. *Cell Reports* 7(1): 281-292. \*Equal contribution

Freddolino PL\*, **Goodarzi H**\*, Tavazoie S (2012). Fitness landscape transformation through a single amino acid change in the Rho terminator. **PLoS Genet** 8(5), e1002744. \*Equal contribution

Goodarzi H, Najafabadi HS, Oikonomou P, Greco TM, Fish L, Salavati R, Cristea IM, Tavazoie S (2012). Systematic discovery of structural elements governing stability of mammalian messenger RNAs. *Nature* 485, 264-268.

Goodarzi H, Bennet BD, Amini S, Reaves ML, Hottes AK, Rabinowitz JD, Tavazoie S (2010). Regulatory and metabolic rewiring during laboratory evolution of ethanol tolerance in *E. coli. Mol Syst Biol* 6:378.

Goodarzi H, Elemento O, Tavazoie S (2009). Revealing Global Regulatory Perturbations across Human Cancers. *Mol Cell* 36: 900-911.

Goodarzi H, Hottes AK, Tavazoie S (2009). Global discovery of adaptive mutations. *Nature Methods* 6(8):581-3.

# INTELLECTUAL PROPERTY

Goodarzi H, Tavazoie SF (2016). Transfer RNA (tRNA) quantification. US patent Application No. 20170298433, Filed April 14, 2016.

**Goodarzi H** (2017). Non-coding RNA for Detection of Cancer. PCT/US18/060113, Filed November 09, 2018.

Goodarzi H (2021). System And Methods of Detection Of OncRNAs For Cancer Diagnosis. No. PCT/US21/46186.