

Hani Goodarzi

Associate Professor

University of California, San Francisco

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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:** American Cancer Society Discovery Gala Scientific Honoree
- **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:

- Gene Regulation in Cancer (GRIC; NIH): standing member
- RNA Mechanisms in Cancer (ACS): co-chair
- *Ad hoc* member, Tumor Evolution, Heterogeneity and Metastasis (TEHM), Biodata Management and Analysis (BDMA), and Molecular Genetic B (MGB)

Committees:

- Community outreach and engagement liaison; Helen Diller Cancer Center
- Program for Breakthrough Biomedical Research

- Committee on Research Technology (IT Governance)

Teaching:

- Dynamical Systems Modeling (BP205B)
- Cancer Biology (BMS230).

SELECTED

PUBLICATIONS

Culbertson B*, Garcia K*, Markett D, Asgharian H, Chen L, Fish L, Navickas A, Yu J, Woo B, Nanda S, Rabinowitz J, and **Goodarzi H** (2023). A sense-antisense RNA interaction promotes breast cancer metastasis via regulation of NQO1 expression. *Nature Cancer* 4, 682698.

Navickas A*, Asgharian H*, Winkler J, Fish L, Garcia K, Markett D, Dodel M, Culbertson B, Miglani S, Joshi T, Nguyen P, Zhang S, Stevers N, Hwang H, Mardakheh F, Goga A, and **Goodarzi H** (2023). An mRNA processing pathway suppresses metastasis by governing translational control from the nucleus. *Nature Cell Bio* 10.1038/s41556-023-01141-9

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

Fish L, Khoroshkin M, Navickas A, et al, **Goodarzi H** (2021). A pro-metastatic 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**[†], and Fattahi F[†] (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. [†]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^{†*}, Nguyen HCB*, Zhang S, Dill BD, Molina H, Tavazoie SF[†] (2016). Abundance of specific tRNA species drives cancer progression. *Cell*, 165: 1416-1427. [†]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.