TIN TIN SU, Ph.D.

Professor & Chair, Dept. Molecular, Cellular & Developmental Biology | University of Colorado Boulder
Program Leader, Molecular & Cellular Oncology, University of Colorado Cancer Center

EDUCATION & TRAINING

1992–1998	Postdoctoral Fellow, UCSF; Patrick H. O'Farrell
1991	Ph.D., Carnegie Mellon University; William R. McClure
1984	B.A., Biochemistry, Mount Holyoke College, *magna cum laude*

RESEARCH FOCUS & EXPERTISE

Genetic and cellular mechanisms that determine DNA damage responses, cell death, regeneration, and cell-fate plasticity, using *Drosophila* and human cancer models.

GENETICS SOCIETY OF AMERICA LEADERSHIP & SERVICE

- Treasurer and Member, GSA Board of Directors, 2023–2025.
- Chair, Organizing Committee, Annual *Drosophila* Research Conference, 2018.
- Member, Larry Sandler Award Selection Committee, GSA, 2017.
- Co-organizer/Co-chair, Chemical Genetics and Drug Screening workshops, *Drosophila* Research Conference, 2010, 2011, 2014.
- Co-organizer/Co-chair, Cell Cycle Checkpoints workshops, Annual *Drosophila* Research Conference, 2002, 2004, 2005, 2007.
- Co-chair, Cell Cycle session, Annual *Drosophila* Research Conference, 2003.

LEADERSHIP IN THE DROSOPHILA & GENETICS COMMUNITIES

- President, *Drosophila* Board, 2021–2022; Board member, 2022–2025.
- Associate Editor, PLoS Genetics, 2024–present; Guest Editor, PLoS Genetics, 2015, 2019, 2024; Guest Editor, Annual Review of Genetics, 2013.
- NIH genetics peer-review leadership, including chairing Molecular Genetics B and R35 MIRA review panels.

CURRENT LEADERSHIP & ACADEMIC APPOINTMENTS

2026–present	Chair, Department of Molecular, Cellular & Developmental Biology, University of Colorado Boulder
2018–present	Program Leader, Molecular & Cellular Oncology Program, University of Colorado Cancer Center
1998–present	University of Colorado Boulder, MCDB: Assistant Professor (1998), Associate Professor (2005), Professor (2011–present)

SELECTED HONORS & RECOGNITION

- Elected Fellow, American Association for the Advancement of Science (AAAS), 2026.
- Elected Senior Member, National Academy of Inventors, 2021.
- College Scholar Award, University of Colorado Boulder, 2025.
- Outstanding Mentor Award, CU Boulder Undergraduate Research Opportunities Program, 2015; Honorable Mention, 2021.
- Leadership Alliance Mentoring Award, 2007

SELECTED PUBLICATIONS

Selected from 86 peer-reviewed publications (50 research papers; 36 invited reviews/book chapters), emphasizing genetics, *Drosophila*, regeneration, and translational work.

- Shiferaw M, Orr L, Hens K, Su TT. Matrix Metalloprotease 1 promotes epithelial-to-epithelial cell-fate change during regeneration after radiation damage in *Drosophila*. PLoS Genetics. 2026; Jul 30;22(7):e1012257.
- Orr L, Golding H, O'Brien E, Siauw J, Su TT. Pink1 represses apoptosis and allows proper morphogenesis after ionizing radiation in *Drosophila melanogaster*. Genetics. 2026;233:iyag066.
- Brown J, Su TT. E2F1, DIAP1, and a homologous chromosome promote while JNK inhibits radiation-induced loss of heterozygosity in *Drosophila melanogaster*. Genetics. 2024;226:iyad192.
- Ledru M et al., Su TT. Differential gene expression identifies determinants of cell-fate plasticity during radiation-induced regeneration in *Drosophila*. PLoS Genetics. 2022;18:e1009989.
- Brown J et al., Su TT. Cells with loss-of-heterozygosity after ionizing radiation are culled by p53-dependent and p53-independent mechanisms. PLoS Genetics. 2020;16:e1009056.
- Verghese S, Su TT. Ionizing radiation induces stem cell-like properties in a caspase-dependent manner in *Drosophila*. PLoS Genetics. 2018;14:e1007659.
- Verghese S, Su TT. *Drosophila* Wnt and STAT define apoptosis-resistant epithelial cells for tissue regeneration after irradiation. PLoS Biology. 2016;14:e1002536.
- Bilak A, Uyetake U, Su TT. Dying cells protect survivors from ionizing-radiation-induced cell death. PLoS Genetics. 2014;10:e1004220.
- Jaklevic B et al., Su TT. Contribution of growth and cell-cycle checkpoints to radiation survival in *Drosophila*. Genetics. 2006;174:1963–1972.
- Laurençon A et al., Su TT. Phenotypic analysis of separation-of-function alleles of MEI-41, *Drosophila* ATM/ATR. Genetics. 2003;164:589–601.
- Su TT. Cellular responses to DNA damage: one signal, multiple choices. Annual Review of Genetics. 2006;40:187–208.

SELECTED COMPETITIVE FUNDING

- NIH R35 MIRA, Cellular Plasticity and Regeneration after Radiation Damage in *Drosophila* — PI; renewed through 2029.
- Anschutz Acceleration Initiative, Targeting Protein Translation Elongation to Treat Cancer Patients — multi-PI, 2024–2028.
- NIH R01, Consequences of Cell Death in *Drosophila*, 2014–2018; NIH R01, Regulation of Radiation-Induced Cell Death in *Drosophila*, 2009–2014; NIH R01, Cell Cycle Regulation by Checkpoints in *Drosophila*, 2002–2007.
- NIH R21 awards for radiation sensitizer discovery and cell growth/radiation survival in *Drosophila*; American Cancer Society Research Scholar support; Department of Defense and state translational awards.

TRANSLATION & INNOVATION

- 2010–present Co-founder and Chief Scientific Officer, SuviCa, Inc.
- Lead inventor on three issued U.S. patents and one issued EU patent
- Led NCI SBIR 4 Phase I/II contracts translating *Drosophila* discoveries toward cancer therapeutics.

MENTORING & TRAINING

- Mentored more than 40 undergraduate researchers through UROP, SMART, BURST, URAP, BSI, honors research, Cancer Center programs, and related pathways; eight undergraduate mentees became co-authors.
- Principal graduate advisor to 10 Ph.D./M.S. trainees; served on 76 Ph.D. thesis committees; postdoctoral mentoring spanning academic, industry, regulatory, and legal careers.
- Associate Director, Signaling and Cell Regulation T32 Graduate Training Grant, 2025–present; Steering Committee member, 2006–2025.
- Long record of service on graduate thesis, comprehensive-exam, admissions, and mentoring committees.

TEACHING

- Principles of Genetics — repeated offerings, including classes of more than 500 undergraduate students.
- Cell Biology of Poisons — 2016, 2020–2027.
- Graduate Core, Methods & Logic, Responsible Conduct of Research, and Signaling & Cell Regulation.

PROFESSIONAL & SCIENTIFIC SERVICE

- Extensive NIH peer-review service: invited to chair seven study sections/panels, including R35 MIRA and Molecular Genetics B; served on numerous NIH, NCI, international, and foundation panels.
- External Advisory Board, NIH INBRE Program, University of Wyoming, 2020–2026.
- Invited consultant, United Nations–International Atomic Energy Agency, 2018, on harmonizing methods to test radiation effects on human cells.
- Associate Editor, PLoS Genetics; Reviewing Editor, eLife; Editorial Board, Open Biology; Editorial Board, Current Biology, 2005–2024.
- University leadership in faculty mentoring, graduate education, research misconduct, postdoctoral affairs, faculty salary procedures, intellectual property, and research administration.

SELECTED GSA & DROSOPHILA SCIENTIFIC ENGAGEMENT

- 2023 — Platform presentation, Annual *Drosophila* Research Conference (graduate trainee presentation).
- 2022 — Invited Drug Screening workshop talk and trainee platform talk, Annual *Drosophila* Research Conference.
- 2021 — Annual *Drosophila* Research Conference presentation by lab member.
- 2020 & 2019 — Talks selected from abstracts, Annual *Drosophila* Research Conference.
- 2016 — Platform talk, The Allied Genetics Conference, presented by postdoctoral trainee.
- 2002 — Invited platform talk, Annual *Drosophila* Research Conference.

SELECTED COMMUNITY ENGAGEMENT

- CU Community Perspectives “listen and learn” tour to rural Colorado, 2022.
- NCI SBIR outreach video encouraging participation of women and underrepresented entrepreneurs, 2020.
- Public science talks and K–12/community outreach on genetics, cells, chromosomes, radiation, and cancer.