

Anna-Marie Finger

POSTDOC

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PROFILE SUMMARY

Dedicated scientist with a PhD in molecular biology and 9+ years of experience in molecular, cell, and computational biology applied to the fields of cancer and circadian rhythm research. I have worked in top-notch international research environments and forged dynamic partnerships with academic and industry collaborators. This enabled me to build an excellent scientific repertoire, including profound expertise with patient-/animal-derived cell culture models, cell line engineering, cell-based and immuno-assays, molecular biology techniques, bioinformatic analyses, and *in vivo* models, as well as allowed me to develop excellent problem-solving, communication, and leadership skills. Throughout my career, I maintained a high level of productivity and contributed to groundbreaking discoveries; distinguished by impactful publications, invitations as conference speaker, and success in securing scholarly honors. Apart from my academic achievements, I could deepen my project management and leadership skills by organizing scientific events, coordinating a collaborative research grant, and supervising/mentoring of 5+ (under)graduate students. I feel passionate about driving innovation through scientific excellence, experimental rigor, and creating inclusive environments that foster creativity and exchange.

SKILLS

CELL BIOLOGY	2D cell culture 3D cell culture isolation/culture of primary cells, cell lines, and patient-derived organoids handling tissue explants/biopsies gene editing viral gene delivery cell line engineering (transfection, transduction, overexpression, knock-out/in, single cell cloning) cell-based assays (viability, proliferation, bioluminescence, and fluorescence reporter assays, high-throughput screens) immuno-assays (spectral flow cytometry, ELISA, immunofluorescence) live cell imaging
MOLECULAR BIOLOGY	RNA, DNA, and plasmid isolation RT-PCR PCR RT-qPCR gel electrophoresis traditional and Gateway cloning transformation Western Blotting bulk and scRNA-Seq CRISPR/Cas9 RNAi
IN VIVO	colony management genotyping tail vein and IP injection <i>in vivo</i> bioluminescence imaging xenograft models understanding of transgenic/knock-out/conditional/tissue-specific mouse models
COMPUTATIONAL	R language transcriptomics data analysis (bulk, timeseries, and scRNA-Seq) circadian rhythm analysis spectral flow data analysis (FlowJo and R) image analysis (ImageJ, Fiji) statistical analysis (Prism, R) differential gene expression analysis dimensionality reduction
SOFT SKILLS	excellent communication analytical problem-solving project management strategic planning process improvement collaboration supervision and mentoring scientific writing and presentation

WORK EXPERIENCE

POSTDOCTORAL RESEARCHER

UCSF | San Francisco, CA | since Aug 2022

- Implemented workflows to build a biobank of clinical samples and matched organoid/fibroblast lines from patient tumors
- Developed and characterized assembloid models of patient tumors to improve predictive value of organoids in human cancer
- Designed and validated 3+ spectral flow and IF panels targeting epithelial and stromal cells of patient tumors
- Developed a computational pipeline for spectral flow data visualization by dimensionality reduction
- Identified novel cell-cell interactions underlying metastatic CRC progression by scRNA-Seq analysis of patient biopsies
- Led a collaborative partnership with Senti Biosciences to enhance their CAR-NK cell therapy approach

SCIENTIFIC COORDINATOR

Charité Berlin | Berlin | Jul 2021 - Feb 2022

- Managed the scientific development and writing process of the consortium grant "Foundations of Circadian Medicine"
- Reviewed and revised 10+ pioneering research projects in the emerging field of circadian medicine
- Effectively communicated with participating investigators to drive successful submission and acceptance of the grant proposal

DOCTORAL AND POSTDOCTORAL RESEARCHER

Charité Berlin | Berlin | Oct 2016 - Jul 2022

- Developed 2D, spheroid, organoid, and tissue explant models of human and mouse circadian clocks
- Engineered 10+ reporter, knock-out/in/down, overexpression cells lines to drive validation of molecular target pathways
- Unraveled circadian dynamics of cellular crosstalk via live cell and real-time *in vivo* imaging
- Generated and colony managed 3+ transgenic mouse strains and performed tail vein inject for adenovirus gene delivery
- Identified the TGF β /SMAD pathway as novel regulator of circadian rhythms by timeseries RNA-Seq analysis of human cell and mouse tissue samples
- forged a dynamic partnership with the MPI for Infection Biology to analyze the secretome of human osteosarcoma cells

GRADUATE RESEARCH ASSISTANT

Charité Berlin | Berlin | Jun 2015 - Aug 2016

- Developed and implemented workflows for lentiviral gene delivery in a high-throughput format
- Delivered new candidates for regulation of human circadian rhythms via high-throughput RNAi and pharmacological screens
- Implemented gene expression analysis and reporter cell assays to validate molecular target pathways
- Developed computational models of a "circadian immune clock" by timeseries RNA-Seq analysis of mouse tissue samples

POSTBACCALAUREATE RESEARCH ASSISTANT

UVA | Charlottesville, VA | May 2013 - Oct 2014

- Colony managed 2 transgenic mouse model of NSCLC and developed genotyping workflows
- Implemented NSCLC xenograft models and protein expression analysis to assesses drug efficiencies

PUBLICATIONS

CONFERENCE PRESENTATIONS

- 5 conference talks (invited or selected from abstract submission)
- 3 invited lectures (seminar series and summer schools)
- 6 conference posters (2 received awards for scientific excellence)

PAPERS, REVIEWS, BOOK CHAPTERS

1. Schmal C, Maier B, Ashwal-Fluss R, Bartok O, [Finger AM](#), Bange T, Koutsouli S, Robles MS, Kadener S, Herzel H, Kramer A. Alternative polyadenylation factor CPSF6 regulates temperature compensation of the mammalian circadian clock. **PLoS Biol** 2023
2. [Finger AM](#). In Vitro Assays for Measuring Intercellular Coupling Among Peripheral Circadian Oscillators. **Methods Mol Biol** 2022
3. Kramer A, Lange T, Spies C, [Finger AM](#), Berg D, Oster H. Foundations of circadian medicine. **PLoS Biol** 2022
4. [Finger AM](#), Jäschke S, Del Olmo M, Hurwitz R, Granada AE, Herzel H, Kramer A. Intercellular coupling between peripheral circadian oscillators by TGF- β signaling. **Sci Adv** 2021
5. [Finger AM](#), Kramer A. Peripheral clocks tick independently of their master. **Genes Dev** 2021
6. Maier B, Lorenzen S, [Finger AM](#), Herzel H, Kramer A. Searching Novel Clock Genes Using RNAi-Based Screening. **Methods Mol Biol** 2021
7. [Finger AM](#), Kramer A. Mammalian circadian systems: Organization and modern life challenges. **Acta Physiol (Oxf)** 2020
8. [Finger AM](#), Dibner C, Kramer A. Coupled network of the circadian clocks: a driving force of rhythmic physiology. **FEBS Lett** 2020

MANUSCRIPTS IN PREPARATION

1. Ector C, Schmal C, Didier J, De Landtsheer S, [Finger AM](#), Müller-Marquardt F, Schulte J, Sauter T, Keilholz U, Herzel H, Kramer A, Granada AE. Uncovering time-of-day sensitivity in cancer models. **Nature Methods (under review)**
2. [Finger AM](#) & Hendley A, Roose JP, Gonzales H, Weaver VM. The Extracellular Matrix and Cancer Cell Stemness. **Trends in Cancer (invited review, submitted)**
3. Karra L, [Finger AM](#), Krush M, Prinz M, Shechtman L, Tennvooren L, Bahl K, Hysienaj L, Combes AJ, Gonzalez H, Argüello RJ, Spitzer M & Roose JP. Single cell proteomics characterization of hematopoiesis impacted by aberrant Ras signaling. **Cell (submitted)**
4. [Finger AM](#), Hartig PY, Stern ML, Trenkle RA, Torres M, Körber A, Grudzieki A, Maier B, Kramer A. The Role of SMAD signaling for circadian entrainment and rhythmic liver function. **In preparation**

ACHIEVEMENTS & VOLUNTEER EXPERIENCE

FELLOWSHIPS AND AWARDS

- Momentum Fellowship, The Mark Foundation of Cancer Research Aug 2022 - Dec 2023
- Add-On Fellowship for Interdisciplinary Life Sciences, Joachim Herz Foundation Jul 2018 - Jul 2021
- "Deutschlandstipendium", Amgen Germany Apr 2016 - Sep 2016
- Excellence Award for Scientific Abstracts, Society for Research on Biological Rhythms Conference Jun 2020
- FEBS Letters Poster Award, Chronobiology Gordon Research Conference 2019

ORGANIZATION OF SCIENTIFIC EVENTS

- 2023 Chronobiology Gordon Research Seminar, chair
- 2022 - 2023 Endeavor Consortium for Cancer Metastasis seminar series, coordinator
- 2021 - 2022 Society Endeavor for Research on Biological Rhythms Global Talk Series, coordinator and host
- 2021 Chronobiology Summer School, chair

SUPERVISION AND MENTORING

- Supervised 2 BSc, 2 MSc, and 2 PhD rotation students
- Mentored 1MSc thesis candidate
- Lecturer at 2 chronobiology summer schools

VOLUNTEER ACTIVITIES

- Leadership team, UCSF Women in Life Sciences community group
- Classroom teacher, UCSF Science & Health Education Partnership program
- Active member, PANDA Women Leadership Network
- Reviewer, the Journal of Mol Biol, Scientific Reports, and eLife

EDUCATION

- DR. RER. NAT. (PHD), MOLECULAR BIOLOGY** | Humboldt University of Berlin, Berlin, GER Oct 2016 - Jun 2020
- MASTER OF SCIENCE, MOLECULAR MEDICINE** | Charité Berlin, Berlin, GER Oct 2014 - Jul 2016
- BACHELOR OF ARTS, BIOLOGY** | University of Virginia, Charlottesville, VA, USA Jan 2012 - May 2014
- MEDICAL DOCTOR** | Charité Berlin, Berlin, GER Oct 2010 - Dec 2011
transferred to University of Virginia, BA program

PROFESSIONAL DEVELOPMENT

- SPECTRAL FLOW TRAINING** Sep 2022
Cytek Biosciences
- LEADERSHIP ACADEMY 6** Sep 2022 - Feb 2023
German Scholars Organization
- ADVANCED SCIENCE CAREER DEVELOPMENT PROGRAM FOR INNOVATION AND RESEARCH** Jun 2021 - Jun 2022
Max Delbrück Center Berlin
- FU:STAT STATISTICS COURSE** March 2018
Free University Berlin
- ANIMAL HANDLER ACCREDITATIONS** Jul 2014, Apr 2016
IACUC and FELASA