Ruli Gao, Ph.D.

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The Center for Bioinformatics and
Computational Biology
Department of Cardiovascular Sciences
Houston Methodist Research Institute
6670 Bertner AVE, R10-217
Houston, TX, USA 77030

EDUCATION

2009.8 – 2014.5 **Ph.D. in Genetics and Genomics**
Graduate Program in Genetics and Genomics
Genetics Institute, College of Medicine
University of Florida, Gainesville, FL, USA
Mentor: Frederic Kaye, M.D.

2009.8 – 2013.12 **M.S. in Statistics**
Graduate Program in Statistics
College of Liberal Arts and Sciences
University of Florida, Gainesville, FL, USA
Mentor: Zhihua Su, Ph.D.

2004.9 – 2007.6 **M.S. in Biochemistry & Molecular Biology (Joint education)**
College of Bioscience and Biotechnology
Yangzhou University, Yangzhou, China
Shanghai Institutes for Biological Sciences (joint program)
Chinese Academy of Sciences, Shanghai, China

2000.9 – 2004 .6 **B.S. in Biotechnology**
College of Bioscience and Biotechnology
Yangzhou University, Yangzhou, China

RESEARCH EXPERIENCE

2019.11 – **Assistant Professor, Single Cell Genomics and Bioinformatics**
The Center for Bioinformatics and Computational Biology
Department of Cardiovascular Sciences
Houston Methodist Research Institute, Houston, TX, USA

2014.8 – 2019.11 **Postdoctoral Fellow, Computational Biology and Statistics**
Department of Genetics
The UT MD Anderson Cancer Center, Houston, TX, USA
Advisor: Nicholas Navin, Ph.D.

2009.8 – 2014.7 **Graduate Research Assistant, Genetics and Genomics**
Department of Hematology and Oncology
University of Florida, Gainesville, FL, USA
Advisor: Frederic Kaye, M.D.

2008.4 – 2009.6 **Project Manager, Gene-To-Structure Studies**
Shanghai Medicilon Inc., Shanghai, China
Supervisor: Peter Rehse, Ph.D.

TEACHING EXPERIENCE

2018.1 – 2019.11 **Texas Single Cell Research Workshop (Biweekly), Coordinator**
Department of Genetics
The UT MD Anderson Cancer Center, Houston, TX, USA

2018.1 – 2019.11 **Single Cell Computational Methods (Biweekly), Coordinator**
GSBS Graduate Course (GS01 1041)
Department of Bioinformatics and Computational Biology
The UT MD Anderson Cancer Center, Houston, TX, USA

ACADEMIC AWARDS

2018	Bayer Award of Translational Research (MD Anderson)
2017	Awards for Achievement (MD Anderson)
2016	Odyssey Outstanding Research Publication Award (MD Anderson)
2011	Certificate of Outstanding Achievement (UF)
2006	Award for Excellent Graduate Student (YZU)
2004	Mr. Zhu Jingwen Scholarship (YZU)
2004	Award for Excellent Undergraduate Student (YZU)
2003	First Grade Scholarship for Excellent Undergraduate Student (YZU)
2000	China Construction Bank Fellowship (YZU)

INVITED TALKS

1. **Gao R** (2020). Inferring copy number and clonal substructure in human tumors from single cell transcriptomes. **Gulf Coast Consortium: Single Cell Omics Symposium,** Houston, TX, USA

2. **Gao R** (2018). Delineating clonal evolution in breast cancer with single cell genomics. **Cold Spring Harbor Aisa: Frontiers in single cell genomics**, Suzhou, China.

3. **Gao R** (2018). Investigating phenotypic plasticity in breast cancer with high-throughput nanogrid single-nucleus RNA sequencing. **TaKaRa iCELL8 AACR workshop: single cell automation systems**, Chicago, IL.

4. **Gao R** (2016). Single cell sequencing revealed clonal stasis and punctuated copy number evolution in triple negative breast cancer patient. **Festival of genomics**, San Diego, CA.

SELECTED PUBLICATIONS

1. **Gao R**, Bai S, Henderson Y, Lin Y, Schalck A, Yan Y, Kumar T, Hu M, Sei E, Davis A, Wang F, Shaitelman S, Wang R, Chen K, Moulder S, Lai S, Navin N (2020). Inferring copy number and clonal substructure in human tumors from single cell transcriptomes. **Nature Biotechnology** (*In press*).

2. Davis A, **Gao R**, Navin N (2019). SCOPIT: sample size calculations for single-cell sequencing experiments. **BMC Bioinformatics**, 20(1): 566.

3. Kim C*, **Gao R***, Sei E, Brandt R, Hartman J, Hatschek T, Crosetto N, Foukakis T, Navin N (2018). Chemoresistance evolution in triple-negative breast cancer delineated by single cell sequencing. **Cell**, 173:879-893 (**equal contributions*).

4. Casasent A, Schalck A, **Gao R**, Sei E, Long A, Pangburn W, Casasent T, Meric-Bernstam F, Edgerton M, Navin N (2018). Multiclonal invasion in DCIS identified by topographic single cell DNA sequencing. **Cell**, 172: 205-217.

5. **Gao R***, Kim C*, Sei E, Foukakis T, Crosetto N, Chan L, Srinivasan M, Zhang H, Meric-Bernstam F, Navin N (2017). Nanogrid Single-Nucleus RNA Sequencing Reveals Phenotypic Diversity in Breast Cancer. **Nature Communications**, 8: 228 (**equal contributions*).

6. Davis A, **Gao R**, Navin N (2017). Tumor evolution: linear, branched, neutral or punctuated? **BBA-Rev on Cancer**, 1867 (2): 151-161.

7. Leung M*, Davis A*, **Gao R**, Casasent A, Wang Y, Sei E, Vilar E, Maru D, Kopetz S, Navin N (2017). Single cell DNA sequencing reveals a late dissemination model in metastatic colorectal cancer. **Genome Research**, 27: 1287-99 (**equal contributions*).

8. **Gao R**, Davis A, McDonald T, Sei E, Shi X, Wang Y, Tsai PC, Casasent A, Waters J, Zhang H, Meric-Bernstam F, Michor F and Navin N (2016). Punctuated copy number evolution and clonal stasis in triple-negative breast cancer. **Nature Genetics**, 48: 1119-30.

9. Leung M*, Wang Y*, Kim C, **Gao R**, Jiang J, Sei E, Navin N (2016). Highly-multiplexed targeted DNA sequencing of single nuclei. **Nature Protocols**, 11(2): 214-35 (**equal contributions*).

10. Cao C, **Gao R**, Zhang M, Amelio AL, Fallahi M, Chen Z, GU Y, Hu C, Welsh EA, Engel BE, Haura EB, Cress WD, Wu L, Zajac-Kaye M, Kaye FJ (2015). Role of LKB1-CRTC1 on glycosylated COX-2 and response to COX-2 inhibition in lung cancer. **Journal of National Cancer Institute**, 107(1): 1-11.