



Stephen Quake

Lee Otterson Professor in the School of Engineering and Professor of Bioengineering, of Applied Physics and, by courtesy, of Physics

CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Stephen Quake is the Lee Otterson Professor of Bioengineering and Professor of Applied Physics at Stanford University and is co-President of the Chan Zuckerberg Biohub. He received a B.S. in Physics and M.S. in Mathematics from Stanford University in 1991 and a doctorate in Theoretical Physics from the University of Oxford in 1994. Quake has invented many measurement tools for biology, including new DNA sequencing technologies that have enabled rapid analysis of the human genome and microfluidic automation that allows scientists to efficiently isolate individual cells and decipher their genetic code. Quake is also well known for inventing new diagnostic tools, including the first non-invasive prenatal test for Down syndrome and other aneuploidies. His test is rapidly replacing risky invasive approaches such as amniocentesis, and millions of women each year now benefit from this approach. His innovations have helped to radically accelerate the pace of biology and have made medicine safer by replacing invasive biopsies with simple blood tests.

ACADEMIC APPOINTMENTS

- Professor, Bioengineering
- Professor, Applied Physics
- Professor (By courtesy), Physics
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Member, Stanford Diabetes Research Center, (2018- present)
- Co-President, Chan Zuckerberg Biohub, (2016- present)

HONORS AND AWARDS

- Max Delbruck Prize in Biological Physics, American Physical Society (2016)
- Raymond and Beverly Sackler Prize for Convergence Research, National Academy of Sciences (2016)

- Gabbay Prize for Biotechnology and Medicine, . (2015)
- Elected Member, American Academy of Arts and Sciences (2014)
- Elected Member, National Academy of Inventors (2013)
- Elected Member, National Academy of Sciences (2013)
- Elected Member, National Academy of Engineering (2013)
- Inventor of the Year, Silicon Valley Intellectual Property Law Association (2013)
- Nakasone Prize of the Human Frontiers of Science Program, . (2013)
- Elected Member, Institute of Medicine (now National Academy of Medicine) (2012)
- Lemelson-MIT Prize for outstanding mid-career inventors, . (2012)
- Promega Biotechnology Research Award, American Society of Microbiology (2011)
- Raymond and Beverly Sackler International Prize in Biophysics, . (2011)
- Elected Fellow, The American Physical Society (2010)
- Pioneer of Miniaturization, Royal Society of Chemistry Publishing (2010)
- Pioneer of Miniaturization Award, The Royal Society of Chemistry (2010)
- Elected Fellow, The American Institute for Medical and Biological Engineering (AIMBE) (2007)
- Howard Hughes Medical Institute investigator, Howard Hughes Medical Institute (2007)
- National Institute of Health Director's Pioneer Award Fellow, American Institute for Medical and Biological Engineering (2007)
- NIH Director's Pioneer Award, NIH (2004)
- 100 Young Innovators that will create the future, MIT Tech Review Magazine (2002)
- Participant, NAS Symposium for Frontiers in Science (1999, 2000)
- Packard Fellow, Packard Foundation (1999)
- Career Award, NSF (1997)
- R29 "FIRST" Award, NIH (1997)

PROFESSIONAL EDUCATION

- Ph.D., University of Oxford , Physics (1994)
- M.S., Stanford University , Mathematics (1991)
- B.S., Stanford University , Physics (1991)

LINKS

- Quake Lab Site: <http://thebigone.stanford.edu/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Single molecule biophysics, precision force measurement, micro and nano fabrication with soft materials, integrated microfluidics and large scale biological automation.

Teaching

COURSES

2021-22

- Systems Medicine: BIOE 333 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Netra Rajesh, Eun Sun Song

Postdoctoral Faculty Sponsor

Jaeyoon Lee, Madhav Mantri, Wenfei Sun

Doctoral Dissertation Advisor (AC)

George Crowley, Marcus Forst, Douglas Henze, Jinho Kim, Shuyu Shi

Master's Program Advisor

Iris Hui

Doctoral Dissertation Co-Advisor (AC)

Jinho Kim, Sevahn Vorperian

Doctoral (Program)

Tyler Chen, George Crowley, Irene Martinez, Maya Sheth

Postdoctoral Research Mentor

Siyu He

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (Phd Program)
- Biophysics (Phd Program)
- Immunology (Phd Program)

Publications

PUBLICATIONS

- **Tuning MPL signaling to influence hematopoietic stem cell differentiation and inhibit essential thrombocythemia progenitors** *Proceedings of the National Academy of Sciences*
Wernig, G.
2021; 118 (2) (Jan 2021)
- **Self-assembling manifolds in single-cell RNA sequencing data.** *ELIFE*
Tarashansky, A. J., Xue, Y., Li, P., Quake, S. R., Wang, B.
2019; 8: e48994
- **Surgical and molecular characterization of primary and metastatic disease in a neuroendocrine tumor arising in a tailgut cyst.** *Cold Spring Harbor molecular case studies*
Erdrich, J., Schaberg, K., Khodadoust, M. S., Zhou, L., Shelton, A. A., Visser, B. C., Ford, J. M., Alizadeh, A. A., Quake, S. R., Kunz, P. L., Beausang, J. F.
2018
- **Noninvasive blood tests for fetal development predict gestational age and preterm delivery** *SCIENCE*
Ngo, T. M., Moufarrej, M. N., Rasmussen, M. H., Camunas-Soler, J., Pan, W., Okamoto, J., Neff, N. F., Liu, K., Wong, R. J., Downes, K., Tibshirani, R., Shaw, G. M., Skotte, et al
2018; 360 (6393): 1133–36
- **High fidelity hypothermic preservation of primary tissues in organ transplant preservative for single cell transcriptome analysis** *BMC GENOMICS*
Wang, W., Penland, L., Gokce, O., Croote, D., Quake, S. R.

2018; 19: 140

- **Noninvasive Prenatal Diagnosis of Single-Gene Disorders by Use of Droplet Digital PCR** *CLINICAL CHEMISTRY*
Camunas-Soler, J., Lee, H., Hudgins, L., Hintz, S. R., Blumenfeld, Y. J., El-Sayed, Y. Y., Quake, S. R.
2018; 64 (2): 336–45
- **Antigen Identification for Orphan T Cell Receptors Expressed on Tumor-Infiltrating Lymphocytes** *CELL*
Gee, M. H., Han, A., Lofgren, S. M., Beausang, J. F., Mendoza, J. L., Birnbaum, M. E., Bethune, M. T., Fischer, S., Yang, X., Gomez-Eerland, R., Bingham, D. B., Sibener, L. V., Fernandes, et al
2018; 172 (3): 549+
- **Single-cell transcriptional dynamics of flavivirus infection.** *eLife*
Zanini, F. n., Pu, S. Y., Bekerman, E. n., Einav, S. n., Quake, S. R.
2018; 7
- **Single-cell analysis of early progenitor cells that build coronary arteries.** *Nature*
Su, T. n., Stanley, G. n., Sinha, R. n., D'Amato, G. n., Das, S. n., Rhee, S. n., Chang, A. H., Poduri, A. n., Raftrey, B. n., Dinh, T. T., Roper, W. A., Li, G. n., Quinn, et al
2018
- **The Human Cell Atlas** *ELIFE*
Regev, A., Teichmann, S. A., Lander, E. S., Amt, I., Benoist, C., Birney, E., Bodenmiller, B., Campbell, P., Carninci, P., Clatworthy, M., Clevers, H., Deplancke, B., Dunham, et al
2017; 6
- **Single-cell RNA sequencing reveals intrinsic and extrinsic regulatory heterogeneity in yeast responding to stress** *PLOS BIOLOGY*
Gasch, A. P., Yu, F., Hose, J., Escalante, L. E., Place, M., Bacher, R., Kanbar, J., Ciobanu, D., Sandor, L., Grigoriev, I. V., Kendziorski, C., Quake, S. R., McClean, et al
2017; 15 (12): e2004050
- **T cell receptor sequencing of early-stage breast cancer tumors identifies altered clonal structure of the T cell repertoire.** *Proceedings of the National Academy of Sciences of the United States of America*
Beausang, J. F., Wheeler, A. J., Chan, N. H., Hanft, V. R., Dirbas, F. M., Jeffrey, S. S., Quake, S. R.
2017
- **Simultaneously Monitoring Immune Response and Microbial Infections during Pregnancy through Plasma cfRNA Sequencing** *CLINICAL CHEMISTRY*
Pan, W., Ngo, T. M., Camunas-Soler, J., Song, C., Kowarsky, M., Blumenfeld, Y. J., Wong, R. J., Shaw, G. M., Stevenson, D. K., Quake, S. R.
2017; 63 (11): 1695–1704
- **Dynamics of the human antibody repertoire after B cell depletion in systemic sclerosis** *SCIENCE IMMUNOLOGY*
de Bourcy, C. A., Dekker, C. L., Davis, M. M., Nicolls, M. R., Quake, S. R.
2017; 2 (15)
- **Microfluidic-based mini-metagenomics enables discovery of novel microbial lineages from complex environmental samples** *ELIFE*
Yu, F., Blainey, P. C., Schulz, F., Woyke, T., Horowitz, M. A., Quake, S. R.
2017; 6
- **Quantitative Analysis of Synthetic Cell Lineage Tracing Using Nuclease Barcoding.** *ACS synthetic biology*
Schmidt, S. T., Zimmerman, S. M., Wang, J., Kim, S. K., Quake, S. R.
2017
- **Long-term microfluidic tracking of coccoid cyanobacterial cells reveals robust control of division timing** *BMC BIOLOGY*
Yu, F. B., Willis, L., Chau, R. M., Zambon, A., Horowitz, M., Bhaya, D., Huang, K. C., Quake, S. R.
2017; 15
- **Converting Adult Pancreatic Islet α Cells into β Cells by Targeting Both Dnmt1 and Arx.** *Cell metabolism*
Chakravarthy, H., Gu, X., Enge, M., Dai, X., Wang, Y., Diamond, N., Downie, C., Liu, K., Wang, J., Xing, Y., Chera, S., Thorel, F., Quake, et al
2017
- **Sanativo Wound Healing Product Does Not Accelerate Reepithelialization in a Mouse Cutaneous Wound Healing Model.** *Plastic and reconstructive surgery*
Marshall, C. D., Hu, M. S., Leavitt, T., Barnes, L. A., Cheung, A. T., Malhotra, S., Lorenz, H. P., Delp, S. L., Quake, S. R., Longaker, M. T.

2017; 139 (2): 343-352

- **Phylogenetic analysis of the human antibody repertoire reveals quantitative signatures of immune senescence and aging** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
de Bourcy, C. F., Angel, C. J., Vollmers, C., Dekker, C. L., Davis, M. M., Quake, S. R.
2017; 114 (5): 1105-1110
- **B cell repertoires in HLA-sensitized kidney transplant candidates undergoing desensitization therapy** *JOURNAL OF TRANSLATIONAL MEDICINE*
Beausang, J. F., Fan, H. C., Sit, R., Hutchins, M. U., Jirage, K., Curtis, R., Hutchins, E., Quake, S. R., Yabu, J. M.
2017; 15
- **5-Hydroxymethylcytosine signatures in cell-free DNA provide information about tumor types and stages.** *Cell research*
Song, C. X., Yin, S. n., Ma, L. n., Wheeler, A. n., Chen, Y. n., Zhang, Y. n., Liu, B. n., Xiong, J. n., Zhang, W. n., Hu, J. n., Zhou, Z. n., Dong, B. n., Tian, et al
2017
- **Dynamics of the human antibody repertoire after B cell depletion in systemic sclerosis** *Dynamics of the human antibody repertoire after B cell depletion in systemic sclerosis*
de Bourcy, C. F., Dekker, C. L., Davis, M. M., Nicolls, M. R., Quake, S. R.
2017; 2 (15)
- **High-throughput full-length single-cell mRNA-seq of rare cells.** *PloS one*
Ooi, C. C., Mantalas, G. L., Koh, W. n., Neff, N. F., Fuchigami, T. n., Wong, D. J., Wilson, R. J., Park, S. M., Gambhir, S. S., Quake, S. R., Wang, S. X.
2017; 12 (11): e0188510
- **Role of epithelial to mesenchymal transition associated genes in mammary gland regeneration and breast tumorigenesis.** *Nature communications*
Sikandar, S. S., Kuo, A. H., Kalisky, T. n., Cai, S. n., Zabala, M. n., Hsieh, R. W., Lobo, N. A., Scheeren, F. A., Sim, S. n., Qian, D. n., Dirbas, F. M., Somlo, G. n., Quake, et al
2017; 8 (1): 1669
- **Risky Business: Meeting the Structural Needs of Transdisciplinary Science.** *The Journal of pediatrics*
Wise, P. H., Shaw, G. M., Druzin, M. L., Darmstadt, G. L., Quaintance, C. n., Mäkinen, E. n., Relman, D. A., Quake, S. R., Butte, A. J., Angst, M. S., Muglia, L. J., Macones, G. n., Driscoll, et al
2017; 191: 255-58
- **Classifying Drosophila Olfactory Projection Neuron Subtypes by Single-Cell RNA Sequencing.** *Cell*
Li, H. n., Horns, F. n., Wu, B. n., Xie, Q. n., Li, J. n., Li, T. n., Luginbuhl, D. J., Quake, S. R., Luo, L. n.
2017; 171 (5): 1206-20.e22
- **Single-Cell RNA-Seq Analysis of Infiltrating Neoplastic Cells at the Migrating Front of Human Glioblastoma.** *Cell reports*
Darmanis, S. n., Sloan, S. A., Croote, D. n., Mignardi, M. n., Chernikova, S. n., Samghabadi, P. n., Zhang, Y. n., Neff, N. n., Kowarsky, M. n., Caneda, C. n., Li, G. n., Chang, S. D., Connolly, et al
2017; 21 (5): 1399-1410
- **Transcriptomic Profiling Maps Anatomically Patterned Subpopulations among Single Embryonic Cardiac Cells** *DEVELOPMENTAL CELL*
Li, G., Xu, A., Sim, S., Priest, J. R., Tian, X., Khan, T., Quertermous, T., Zhou, B., Tsao, P. S., Quake, S. R., Wu, S. M.
2016; 39 (4): 491-507
- **Molecular-level analysis of the serum antibody repertoire in young adults before and after seasonal influenza vaccination.** *Nature medicine*
Lee, J., Boutz, D. R., Chromikova, V., Joyce, M. G., Vollmers, C., Leung, K., Horton, A. P., DeKosky, B. J., Lee, C., Lavinder, J. J., Murrin, E. M., Chrysostomou, C., Hoi, et al
2016
- **Early somatic mosaicism is a rare cause of long-QT syndrome** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Priest, J. R., Gawad, C., Kahlig, K. M., Yu, J. K., O'Hara, T., Boyle, P. M., Rajamani, S., Clark, M. J., Garcia, S. T., Ceresnak, S., Harris, J., Boyle, S., Dewey, et al
2016; 113 (41): 11555-11560
- **Single-cell multimodal profiling reveals cellular epigenetic heterogeneity** *NATURE METHODS*
Cheow, L. F., Courtois, E. T., Tan, Y., Viswanathan, R., Xing, Q., Tan, R. Z., Tan, D. S., Robson, P., Loh, Y., Quake, S. R., Burkholder, W. F.
2016; 13 (10): 833-?

- **Single-cell RNAseq reveals cell adhesion molecule profiles in electrophysiologically defined neurons.** *Proceedings of the National Academy of Sciences of the United States of America*
Földy, C., Darmanis, S., Aoto, J., Malenka, R. C., Quake, S. R., Südhof, T. C.
2016; 113 (35): E5222-31
- **Cellular Taxonomy of the Mouse Striatum as Revealed by Single-Cell RNA-Seq** *CELL REPORTS*
Gokce, O., Stanley, G. M., Treutlein, B., Neff, N. F., Camp, J. G., Malenka, R. C., Rothwell, P. E., Fuccillo, M. V., Südhof, T. C., Quake, S. R.
2016; 16 (4): 1126-1137
- **Dissecting direct reprogramming from fibroblast to neuron using single-cell RNA-seq** *NATURE*
Treutlein, B., Lee, Q. Y., Camp, J. G., Mall, M., Koh, W., Shariati, S. A., Sim, S., Neff, N. F., Skotheim, J. M., Wernig, M., Quake, S. R.
2016; 534 (7607): 391-?
- **Developmental cell death programs license cytotoxic cells to eliminate histocompatible partners** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Corey, D. M., Rosenthal, B., Kowarsky, M., Sinha, R., Ishizuka, K. J., Palmeri, K. J., Quake, S. R., Voskoboynik, A., Weissman, I. L.
2016; 113 (23): 6520-6525
- **Tumor DNA in cerebral spinal fluid reflects clinical course in a patient with melanoma leptomeningeal brain metastases** *JOURNAL OF NEURO-ONCOLOGY*
Li, Y., Pan, W., Connolly, I. D., Reddy, S., Nagpal, S., Quake, S., Gephart, M. H.
2016; 128 (1): 93-100
- **Simultaneous single-molecule epigenetic imaging of DNA methylation and hydroxymethylation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Song, C., Diao, J., Brunger, A. T., Quake, S. R.
2016; 113 (16): 4338-4343
- **Voices of biotech.** *Nature biotechnology*
Amit, I., Baker, D., Barker, R., Berger, B., Bertozzi, C., Bhatia, S., Biffi, A., Demichelis, F., Doudna, J., Dowdy, S. F., Endy, D., Helmstaedter, M., Junca, et al
2016; 34 (3): 270-275
- **Single-cell genome sequencing: current state of the science** *NATURE REVIEWS GENETICS*
Gawad, C., Koh, W., Quake, S. R.
2016; 17 (3): 175-188
- **High-dimensional immune profiling of total and rotavirus VP6-specific intestinal and circulating B cells by mass cytometry** *MUCOSAL IMMUNOLOGY*
Nair, N., Newell, E. W., Vollmers, C., Quake, S. R., Morton, J. M., DAVIS, M. M., He, X. S., Greenberg, H. B.
2016; 9 (1): 68-82
- **Lineage tracing of human B cells reveals the in vivo landscape of human antibody class switching.** *eLife*
Horns, F., Vollmers, C., Croote, D., Mackey, S. F., Swan, G. E., Dekker, C. L., Davis, M. M., Quake, S. R.
2016; 5
- **A reusable microfluidic device provides continuous measurement capability and improves the detection limit of digital biology** *LAB ON A CHIP*
Araci, I. E., Robles, M., Quake, S. R.
2016; 16 (9): 1573-1578
- **Tools for the Microbiome: Nano and Beyond** *ACS NANO*
Biteen, J. S., Blainey, P. C., Cardon, Z. G., Chun, M., Church, G. M., Dorrestein, P. C., Fraser, S. E., Gilbert, J. A., Jansson, J. K., Knight, R., Miller, J. F., Ozcan, A., Prather, et al
2016; 10 (1): 6-37
- **Microfluidics Technologies for Low Cell Number Chromatin Immunoprecipitation.** *Cold Spring Harbor protocols*
Wu, A. R., Quake, S. R.
2016; 2016 (4): pdb prot084996-?
- **Noninvasive monitoring of infection and rejection after lung transplantation.** *Proceedings of the National Academy of Sciences of the United States of America*
De Vlaminck, I., Martin, L., Kertesz, M., Patel, K., Kowarsky, M., Strehl, C., Cohen, G., Luikart, H., Neff, N. F., Okamoto, J., Nicolls, M. R., Cornfield, D., Weill, et al

2015; 112 (43): 13336-13341

- **Digital signaling decouples activation probability and population heterogeneity** *ELIFE*
Kellogg, R. A., Tian, C., Lipniacki, T., Quake, S. R., Tay, S.
2015; 4
- **Monitoring Pharmacologically Induced Immunosuppression by Immune Repertoire Sequencing to Detect Acute Allograft Rejection in Heart Transplant Patients: A Proof-of-Concept Diagnostic Accuracy Study** *PLOS MEDICINE*
Vollmers, C., De Vlaminck, I., Valantine, H. A., Penland, L., Luikart, H., Strehl, C., Cohen, G., Khush, K. K., Quake, S. R.
2015; 12 (10)
- **KIT Signaling Promotes Growth of Colon Xenograft Tumors in Mice and Is Up-Regulated in a Subset of Human Colon Cancers.** *Gastroenterology*
Chen, E. C., Karl, T. A., Kalisky, T., Gupta, S. K., O'Brien, C. A., Longacre, T. A., van de Rijn, M., Quake, S. R., Clarke, M. F., Rothenberg, M. E.
2015; 149 (3): 705-17 e2
- **KIT Signaling Promotes Growth of Colon Xenograft Tumors in Mice and Is Up-Regulated in a Subset of Human Colon Cancers** *GASTROENTEROLOGY*
Chen, E. C., Karl, T. A., Kalisky, T., Gupta, S. K., O'Brien, C. A., Longacre, T. A., De Rijn, M. V., Quake, S. R., Clarke, M. F., Rothenberg, M. E.
2015; 149 (3): 705-?
- **Read count-based method for high-throughput allelic genotyping of transposable elements and structural variants** *BMC GENOMICS*
Kuhn, A., Ong, Y. M., Quake, S. R., Burkholder, W. F.
2015; 16
- **A survey of human brain transcriptome diversity at the single cell level** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Darmanis, S., Sloan, S. A., Zhang, Y., Enge, M., Caneda, C., Shuer, L. M., Gephart, M. G., Barres, B. A., Quake, S. R.
2015; 112 (23): 7285-7290
- **Clonal Deletion Prunes but Does Not Eliminate Self-Specific alpha beta CD8(+) T Lymphocytes** *IMMUNITY*
Yu, W., Jiang, N., Ebert, P. J., Kidd, B. A., Mueller, S., Lund, P. J., Juang, J., Adachi, K., Tse, T., Birnbaum, M. E., Newell, E. W., Wilson, D. M., Grotenbreg, et al
2015; 42 (5): 929-941
- **Multiplexed locus-specific analysis of DNA methylation in single cells** *NATURE PROTOCOLS*
Cheow, L. F., Quake, S. R., Burkholder, W. F., Messerschmidt, D. M.
2015; 10 (4): 619-631
- **A Biotic Game Design Project for Integrated Life Science and Engineering Education** *PLOS BIOLOGY*
Cira, N. J., Chung, A. M., Denisin, A. K., Rensi, S., Sanchez, G. N., Quake, S. R., Riedel-Kruse, I. H.
2015; 13 (3)
- **Brain Tumor Mutations Detected in Cerebral Spinal Fluid** *CLINICAL CHEMISTRY*
Pan, W., Gu, W., Nagpal, S., Gephart, M. H., Quake, S. R.
2015; 61 (3): 514-522
- **Novel Exons and Splice Variants in the Human Antibody Heavy Chain Identified by Single Cell and Single Molecule Sequencing** *PLOS ONE*
Vollmers, C., Penland, L., Kanbar, J. N., Quake, S. R.
2015; 10 (1)
- **The phylogenetic and geographic structure of Y-chromosome haplogroup R1a** *EUROPEAN JOURNAL OF HUMAN GENETICS*
Underhill, P. A., Poznik, G. D., Rootsi, S., Jaerve, M., Lin, A. A., Wang, J., Passarelli, B., Kanbar, J., Myres, N. M., King, R. J., Di Cristofaro, J., Sahakyan, H., Behar, et al
2015; 23 (1): 124-131
- **Dissecting noncoding and pathogen RNA-protein interactomes** *RNA-A PUBLICATION OF THE RNA SOCIETY*
Flynn, R. A., Martin, L., Spitale, R. C., Do, B. T., Sagan, S. M., Zarnegar, B., Qu, K., Khavari, P. A., Quake, S. R., Sarnow, P., Chang, H. Y.
2015; 21 (1): 135-143
- **Dissecting the clonal origins of childhood acute lymphoblastic leukemia by single-cell genomics.** *Proceedings of the National Academy of Sciences of the United States of America*
Gawad, C., Koh, W., Quake, S. R.
2014; 111 (50): 17947-17952

- **A cell-intrinsic role for TLR2-MYD88 in intestinal and breast epithelia and oncogenesis.** *Nature cell biology*
Scheeren, F. A., Kuo, A. H., van Weele, L. J., Cai, S., Glykofridis, I., Sikandar, S. S., Zabala, M., Qian, D., Lam, J. S., Johnston, D., Volkmer, J. P., Sahoo, D., van de Rijn, et al
2014; 16 (12): 1238-1248
- **A cell-intrinsic role for TLR2 MYD88 in intestinal and breast epithelia and oncogenesis** *NATURE CELL BIOLOGY*
Scheeren, F. A., Kuo, A. H., van Weele, L. J., Cai, S., Glykofridis, I., Sikandar, S. S., Zabala, M., Qian, D., Lam, J. S., Johnston, D., Volkmer, J. P., Sahoo, D., van de Rijn, et al
2014; 16 (12): 1238-U245
- **Multiplexed Analysis of Protein-Ligand Interactions by Fluorescence Anisotropy in a Microfluidic Platform** *ANALYTICAL CHEMISTRY*
Cheow, L. F., Viswanathan, R., Chin, C., Jennifer, N., Jones, R. C., Guccione, E., Quake, S. R., Burkholder, W. F.
2014; 86 (19): 9901-9908
- **RNA-guided endonuclease provides a therapeutic strategy to cure latent herpesviridae infection** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Wang, J., Quake, S. R.
2014; 111 (36): 13157-13162
- **An implantable microfluidic device for self-monitoring of intraocular pressure** *NATURE MEDICINE*
Araci, I. E., Su, B., Quake, S. R., Mandel, Y.
2014; 20 (9): 1074-1078
- **Noninvasive prenatal diagnosis in a fetus at risk for methylmalonic acidemia** *GENETICS IN MEDICINE*
Gu, W., Koh, W., Blumenfeld, Y. J., El-Sayed, Y. Y., Hudgins, L., Hintz, S. R., Quake, S. R.
2014; 16 (7): 564-567
- **Circulating Cell-Free DNA Enables Noninvasive Diagnosis of Heart Transplant Rejection** *SCIENCE TRANSLATIONAL MEDICINE*
De Vlaminck, I., Valantine, H. A., Snyder, T. M., Strehl, C., Cohen, G., Luikart, H., Neff, N. F., Okamoto, J., Bernstein, D., Weisshaar, D., Quake, S. R., Khush, K. K.
2014; 6 (241)
- **Linkage disequilibrium and signatures of positive selection around LINE-1 retrotransposons in the human genome** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Kuhn, A., Ong, Y. M., Cheng, C., Wong, T. Y., Quake, S. R., Burkholder, W. F.
2014; 111 (22): 8131-8136
- **Noninvasive in vivo monitoring of tissue-specific global gene expression in humans.** *Proceedings of the National Academy of Sciences of the United States of America*
Koh, W., Pan, W., Gawad, C., Fan, H. C., Kerchner, G. A., Wyss-Coray, T., Blumenfeld, Y. J., El-Sayed, Y. Y., Quake, S. R.
2014; 111 (20): 7361-7366
- **Reconstructing lineage hierarchies of the distal lung epithelium using single-cell RNA-seq.** *Nature*
Treutlein, B., Brownfield, D. G., Wu, A. R., Neff, N. F., Mantalas, G. L., Espinoza, F. H., Desai, T. J., Krasnow, M. A., Quake, S. R.
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