Stanford

Calvin Kuo

Maureen Lyles D'Ambrogio Professor

Medicine - Hematology

Bio

ACADEMIC APPOINTMENTS

- Professor, Medicine - Hematology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Institute for Stem Cell Biology and Regenerative Medicine
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Medicine Children's Health Center for IBD and Celiac Disease
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Co-lead, Cancer Biology Program, Stanford Cancer Center, (2012-2021)
- Co-President, American Heart Association Bay Area Chapter, (2018-2020)
- Vice Chair, Department of Medicine, (2015-2020)

HONORS AND AWARDS

- Ignite Award, Arc Institute (2023, 2025)
- Maureen Lyles D'Ambrogio Professor of Medicine, Stanford University School of Medicine (2015)
- Fellow, AAAS (2015)
- Member, American Academy of Physicians (2016)
- Consulting Editor, JCI (2012)
- American Heart Association Innovative Science Award, AHA (2012)
- Research Chair, NIH Intestinal Stem Cell Consortium, NIH (2009)
- Transformative R01 Award, NIH (2009)
- Member, American Society for Clinical Investigation, American Society for Clinical Investigation (2007)
- Samantha Janower Research Chair, Brain Tumor Society (2005)
- Merck Faculty Development Award, Merck (2003)
- Kimmel Foundation Scholar in Translational Science, Kimmel Foundation (2002)
- Burroughs Wellcome Foundation New Investigator in Pharmacological Sciences, Burroughs Wellcome Foundation (2001)

- HHMI Physician-Scientist Fellowship, HHMI (1998)
- Summa cum laude, Harvard College (1987)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Advisory Board, American Heart Association Silicon Valley Chapter (2013 - 2020)
- Scientific Advisory Board, AP Giannini Foundation (2008 - present)

PROFESSIONAL EDUCATION

- Fellowship: Brigham and Women's Hospital Harvard Medical School (2000) MA
- Residency: Brigham and Women's Hospital Harvard Medical School (1997) MA
- Medical Education: Stanford University School of Medicine (1994) CA
- A.B., Harvard College , Biochemical Sciences (1987)
- M.D./Ph.D., Stanford University , Cancer Biology (1994)
- Internship/ Residency, Brigham and Women's Hospital , Internal Medicine (1997)
- Fellowship, Dana-Farber/Partners , Adult Oncology (2000)

COMMUNITY AND INTERNATIONAL WORK

- American Heart Association Silicon Valley Chapter

LINKS

- Kuo Lab website: http://kuolab.stanford.edu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Organoid modeling of cancer cells and the tumor immune microenvironment.

We have successfully established primary 3D organoid cultures of diverse tissues and used them to achieve the first in vitro conversion of primary intestine, stomach and pancreas tissue to adenocarcinoma (Ootani et al, Nat Med 2009; Li et al, Nat Med 2014) amongst others. These organoid systems comprise an robust in vitro system which we are exploiting for the functional validation of putative oncogenic loci which are identified in whole-genome cancer surveys such as TCGA. In a new direction, we have developed organoid methods to preserve tumor cells along with a diversity of endogenous infiltrating immune cells (T, B, NK, macrophages) and demonstrated that such organoids are responsive to checkpoint inhibitor therapy (Neal et al, Cell 2018). Further, we have established large biobanks of organoids from clinical cancer biopsies with relevance to tumor modeling and predication of patient responses to therapeutics.

Organoids for regenerative medicine.

We are also interested in using organoids as a method to grow mini-organs that can be transplanted into recipients for regenerative medicine purposes. We are establishing proof-of-principle for human or mouse organoid transplantation, ultimately to effect phenotypic correction of diseases.

Intestinal stem/progenitor biology.

The complete regeneration of the epithelial lining of the intestine every 5-7 days renders the intestine a model system for studying stem cell behaviors. We are investigating the regulation of the intestinal stem cell (ISC) compartment by extracellular signals such as Wnts, using adenoviral and conditional knockout approaches. We have defined R-spondins as dominant regulators of the ISC niche with Wnts playing a more permissive role using lineage tracing, bioengineered Wnts and single cell RNA-seq approaches (Yan et al., Nature, 2017a; Janda et al, Nature 2017b). We have found that Bmi1+ ISC

are strongly injury-inducible versusthe homeostatic function of Lgr5+ ISC (c.f. Yan et al, PNAS 2012, Barry et al, Nature 2013) and have enteroendocrine characteristics (Yan et al., Stem Cell, 2017). Further, we have derived robust organoid methods for prolonged culture of and ex vivo expansion of primary intestine and other GI organs, with preservation of ISCs and recapitulation of the Wnt- and Notch-dependent ISC niche, even allowing peristalsis (Ootani et al, Nat Med 2009; Li et al Nat Med 2014).

Angiogenesis and the blood-brain barrier.

We are interested in determining functions of novel molecules regulating angiogenesis including receptors such as GPCRs, microRNAs and secreted molecules. We found that GPR124 is essential for developmental brain angiogenesis (Kuhnert et al, Science 2010) that GPR124 is critical for maintaining blood-brain barrier integrity during stroke and brain tumor growth (Chang et al, Nat Med 2017) and that the GPR124-associated protein RECK is a Wnt7 receptor (Vallon et al, Cell Reports, 2018). We have several active projects in stroke and blood-brain barrier (BBB) basic biology and therapeutic development. We have previously exploring the functions of the endothelial miRNA miR-126 in adults using conditional ko mice (Kuhnert et al, Development 2008) and have extensive interests in pharmacologic inhibition of novel targets for anti-angiogenic therapy of cancer and ocular disorders.

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Madelyn Mauro

Doctoral Dissertation Reader (AC)

Azam Mohsin

Postdoctoral Faculty Sponsor

Davide Cinat, HUDSON HORN, Juhyung Park, Cara Rada, Jared Wallace, Kanako Yuki, Annerose Ziegler

Postdoctoral Research Mentor

Cara Rada

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cancer Biology (Phd Program)
- Cardiovascular Medicine (Fellowship Program)
- Chemical and Systems Biology (Phd Program)
- Immunology (Phd Program)
- Medicine (Masters Program)

Publications

PUBLICATIONS

- **Large-scale CRISPR screening in primary human 3D gastric organoids enables comprehensive dissection of gene-drug interactions.** *Nature communications*
  Lo, Y. H., Horn, H. T., Huang, M. F., Yu, W. C., Young, C. M., Liu, Q., Tomaske, M., Towers, M., Dominguez, A., Bassik, M. C., Lee, D. F., Qi, L. S., Weissman, et al
  2025; 16 (1): 7566
- **FZD5 controls intestinal crypt homeostasis and colonic Wnt surrogate agonist response.** *Developmental cell*
  Mu, Q., Ha, A., Santos, A. J., Lo, Y. H., van Unen, V., Miao, Y., Tomaske, M., Guzman, V. K., Alwahabi, S., Yuan, J. J., Deng, L., Li, L., Garcia, et al

2024

- **A human autoimmune organoid model reveals IL-7 function in coeliac disease.** *Nature*
  Santos, A. J., van Unen, V., Lin, Z., Chirieleison, S. M., Ha, N., Batish, A., Chan, J. E., Cedano, J., Zhang, E. T., Mu, Q., Guh-Siesel, A., Tomaske, M., Colburg, et al
  2024

- **Cancer organoids 2.0: modelling the complexity of the tumour immune microenvironment.** *Nature reviews. Cancer*
  Polak, R., Zhang, E. T., Kuo, C. J.
  2024

- **Functional screening of amplification outlier oncogenes in organoid models of early tumorigenesis.** *Cell reports*
  Salahudeen, A. A., Seoane, J. A., Yuki, K., Mah, A. T., Smith, A. R., Kolahi, K., De la O, S. M., Hart, D. J., Ding, J., Ma, Z., Barkal, S. A., Shukla, N. D., Zhang, et al
  2023; 42 (11): 113355

- **Therapeutic blood-brain barrier modulation and stroke treatment by a bioengineered FZD4-selective WNT surrogate in mice.** *Nature communications*
  Ding, J., Lee, S., Vlahos, L., Yuki, K., Rada, C. C., van Unen, V., Vuppalapaty, M., Chen, H., Sura, A., McCormick, A. K., Tomaske, M., Alwahabi, S., Nguyen, et al
  2023; 14 (1): 2947

- **Deterministic evolution and stringent selection during preneoplasia.** *Nature*
  Karlsson, K., Przybilla, M. J., Kotler, E., Khan, A., Xu, H., Karagyozova, K., Sockell, A., Wong, W. H., Liu, K., Mah, A., Lo, Y. H., Lu, B., Houlahan, et al
  2023

- **A CRISPR/Cas9-engineered ARID1A-deficient human gastric cancer organoid model reveals essential and non-essential modes of oncogenic transformation.** *Cancer discovery*
  Lo, Y. H., Kolahi, K. S., Du, Y. n., Chang, C. Y., Krokhotin, A. n., Nair, A. n., Sobba, W. D., Karlsson, K. n., Jones, S. J., Longacre, T. A., Mah, A. T., Tercan, B. n., Sockell, et al
  2021

- **Modeling human adaptive immune responses with tonsil organoids.** *Nature medicine*
  Wagar, L. E., Salahudeen, A. n., Constantz, C. M., Wendel, B. S., Lyons, M. M., Mallajosyula, V. n., Jatt, L. P., Adamska, J. Z., Blum, L. K., Gupta, N. n., Jackson, K. J., Yang, F. n., Röltgen, et al
  2021

- **Progenitor identification and SARS-CoV-2 infection in human distal lung organoids.** *Nature*
  Salahudeen, A. A., Choi, S. S., Rustagi, A., Zhu, J., van Unen, V., de la O, S. M., Flynn, R. A., Margalef-Catala, M., Santos, A. J., Ju, J., Batish, A., Usui, T., Zheng, et al
  2020

- **Organoid Modeling of the Tumor Immune Microenvironment.** *Cell*
  Neal, J. T., Li, X., Zhu, J., Giangarra, V., Grzeskowiak, C. L., Ju, J., Liu, I. H., Chiou, S., Salahudeen, A. A., Smith, A. R., Deutsch, B. C., Liao, L., Zemek, et al
  2018; 175 (7): 1972

- **Organoids reveal cancer dynamics** *NATURE*
  Kuo, C. J., Curtis, C.
  2018; 556 (7702): 441–42

- **Non-equivalence of Wnt and R-spondin ligands during Lgr5(+) intestinal stem-cell self-renewal** *NATURE*
  Yan, K. S., Janda, C. Y., Chang, J., Zheng, G. X., Larkin, K. A., Luca, V. C., Chia, L. A., Mah, A. T., Han, A., Terry, J. M., Ootani, A., Roelf, K., Lee, et al
  2017; 545 (7653): 238-?

- **Surrogate Wnt agonists that phenocopy canonical Wnt and beta-catenin signalling** *NATURE*
  Janda, C. Y., Dang, L. T., You, C., Chang, J., de Lau, W., Zhong, Z. A., Yan, K. S., Marecic, O., Siepe, D., Li, X., Moody, J. D., Williams, B. O., Clevers, et al
  2017; 545 (7653): 234-?

- **Gpr124 is essential for blood-brain barrier integrity in central nervous system disease** *NATURE MEDICINE*
  Chang, J., Mancuso, M. R., Maier, C., Liang, X., Yuki, K., Yang, L., Kwong, J. W., Wang, J., Rao, V., Vallon, M., Kosinski, C., Zhang, J. J., Mah, et al
  2017; 23 (4): 450-?

- **Expression of specific inflammasome gene modules stratifies older individuals into two extreme clinical and immunological states** *NATURE MEDICINE*
  Furman, D., Chang, J., Lartigue, L., Bolen, C. R., Haddad, F., Gaudilliere, B., Ganio, E. A., Fragiadakis, G. K., Spitzer, M. H., Douchet, I., Daburon, S., Moreau, J., Nolan, et al
  2017; 23 (2): 174-184

- **Toward recreating colon cancer in human organoids.** *Nature medicine*
  Salahudeen, A. A., Kuo, C. J.
  2015; 21 (3): 215-216

- **Ascl2 reinforces intestinal stem cell identity.** *Cell stem cell*
  Yan, K. S., Kuo, C. J.
  2015; 16 (2): 105-106

- **Identification and specification of the mouse skeletal stem cell.** *Cell*
  Chan, C. K., Seo, E. Y., Chen, J. Y., Lo, D., McArdle, A., Sinha, R., Tevlin, R., Seita, J., Vincent-Tompkins, J., Wearda, T., Lu, W., Senarath-Yapa, K., Chung, et al
  2015; 160 (1-2): 285-298

- **Through-skull fluorescence imaging of the brain in a new near-infrared window** *NATURE PHOTONICS*
  Hong, G., Diao, S., Chang, J., Antaris, A. L., Chen, C., Zhang, B., Zhao, S., Atochin, D. N., Huang, P. L., Andreasson, K. I., Kuo, C. J., Dai, H.
  2014; 8 (9): 723-730

- **Oncogenic transformation of diverse gastrointestinal tissues in primary organoid culture** *NATURE MEDICINE*
  Li, X., Nadauld, L., Ootani, A., Corney, D. C., Pai, R. K., Gevaert, O., Cantrell, M. A., Rack, P. G., Neal, J. T., Chan, C. W., Yeung, T., Gong, X., Yuan, et al
  2014; 20 (7): 769-777

- **Metastatic tumor evolution and organoid modeling implicate TGFBR2 as a cancer driver in diffuse gastric cancer.** *Genome biology*
  Nadauld, L. D., Garcia, S., Natsoulis, G., Bell, J. M., Miotke, L., Hopmans, E. S., Xu, H., Pai, R. K., Palm, C., Regan, J. F., Chen, H., Flaherty, P., Ootani, et al
  2014; 15 (8): 428-?

- **Interfollicular Epidermal Stem Cells Self-Renew via Autocrine Wnt Signaling** *SCIENCE*
  Lim, X., Tan, S. H., Koh, W. L., Chau, R. M., Yan, K. S., Kuo, C. J., van Amerongen, R., Klein, A. M., Nusse, R.
  2013; 342 (6163): 1226-1230

- **A liver Hif-2a-Irs2 pathway sensitizes hepatic insulin signaling and is modulated by Vegf inhibition.** *Nature medicine*
  Wei, K., Piecewicz, S. M., McGinnis, L. M., Taniguchi, C. M., Wiegand, S. J., Anderson, K., Chan, C. W., Mulligan, K. X., Kuo, D., Yuan, J., Vallon, M., Morton, L. C., Lefai, et al
  2013; 19 (10): 1331-1337

- **A liver Hif-2 alpha-Irs2 pathway sensitizes hepatic insulin signaling and is modulated by Vegf inhibition** *NATURE MEDICINE*
  Wei, K., Piecewicz, S. M., McGinnis, L. M., Taniguchi, C. M., Wiegand, S. J., Anderson, K., Chan, C. W., Mulligan, K. X., Kuo, D., Yuan, J., Vallon, M., Morton, L. C., Lefai, et al
  2013; 19 (10): 1331-?

- **Cross-talk between hypoxia and insulin signaling through Phd3 regulates hepatic glucose and lipid metabolism and ameliorates diabetes.** *Nature medicine*
  Taniguchi, C. M., Finger, E. C., Krieg, A. J., Wu, C., Diep, A. N., Lagory, E. L., Wei, K., McGinnis, L. M., Yuan, J., Kuo, C. J., Giaccia, A. J.
  2013; 19 (10): 1325-1330

- **Restriction of intestinal stem cell expansion and the regenerative response by YAP** *NATURE*
  Barry, E. R., Morikawa, T., Butler, B. L., Shrestha, K., de la Rosa, R., Yan, K. S., Fuchs, C. S., Magness, S. T., Smits, R., Ogino, S., Kuo, C. J., Camargo, F. D.
  2013; 493 (7430): 106-?

- **beta-Catenin-Driven Cancers Require a YAP1 Transcriptional Complex for Survival and Tumorigenesis** *CELL*
  Rosenbluh, J., Nijhawan, D., Cox, A. G., Li, X., Neal, J. T., Schafer, E. J., Zack, T. I., Wang, X., Tsherniak, A., Schinzel, A. C., Shao, D. D., Schumacher, S. E., Weir, et al
  2012; 151 (7): 1457-1473

- **The intestinal stem cell markers Bmi1 and Lgr5 identify two functionally distinct populations** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Yan, K. S., Chia, L. A., Li, X., Ootani, A., Su, J., Lee, J. Y., Su, N., Luo, Y., Heilshorn, S. C., Amieva, M. R., Sangiorgi, E., Capecchi, M. R., Kuo, et al
  2012; 109 (2): 466-471

- **Essential Regulation of CNS Angiogenesis by the Orphan G Protein-Coupled Receptor GPR124** *SCIENCE*
  Kuhnert, F., Mancuso, M. R., Shamloo, A., Wang, H., Choksi, V., Florek, M., Su, H., Fruttiger, M., Young, W. L., Heilshorn, S. C., Kuo, C. J.
  2010; 330 (6006): 985-989

- **Sustained in vitro intestinal epithelial culture within a Wnt-dependent stem cell niche.** *Nature medicine*
  Ootani, A., Li, X., Sangiorgi, E., Ho, Q. T., Ueno, H., Toda, S., Sugihara, H., Fujimoto, K., Weissman, I. L., Capecchi, M. R., Kuo, C. J.
  2009; 15 (6): 701-706

- **WNT7A/B assemble a GPR124-RECK-LRP5/6 co-receptor complex to activate β-catenin signaling in brain endothelial cells.** *The Journal of biological chemistry*
  Heiden, R., Hannig, L., Kuo, C. J., Ergün, S., Braunger, B. M., Vallon, M.
  2025: 110682

- **Defining the antitumor mechanism of action of a clinical-stage compound as a selective degrader of the nuclear pore complex.** *Cancer discovery*
  Yuan, L., Ji, W., Dwyer, B. G., Lu, J., Bian, J., Colombo, G. M., Martinez, M. J., Fernandez, D., Phillips, N. A., Tang, M. T., Zhou, C. W., Quispe Calla, N. E., Guzman Huancas, et al
  2025

- **A quantitative spatial cell-cell colocalizations framework enabling comparisons between in vitro assembloids and pathological specimens.** *Nature communications*
  Bouchard, G., Zhang, W., Ilerten, I., Li, I., Bhattacharya, A., Li, Y., Trope, W., Shrager, J. B., Kuo, C., Ozawa, M. G., Giaccia, A. J., Tian, L., Plevritis, et al
  2025; 16 (1): 1392

- **Author Correction: Targeting colorectal cancer with small-molecule inhibitors of ALDH1B1.** *Nature chemical biology*
  Feng, Z., Hom, M. E., Bearrood, T. E., Rosenthal, Z. C., Fernández, D., Ondrus, A. E., Gu, Y., McCormick, A. K., Tomaske, M. G., Marshall, C. R., Kline, T., Chen, C. H., Mochly-Rosen, et al
  2024

- **Frizzled5 controls murine intestinal epithelial cell plasticity through organization of chromatin accessibility.** *Developmental cell*
  Deng, L., He, X. C., Chen, S., Zhang, N., Deng, F., Scott, A., He, Y., Tsuchiya, D., Smith, S. E., Epp, M., Malloy, S., Liu, F., Hembree, et al
  2024

- **Microdissection tools to generate organoids for modeling the tumor immune microenvironment.** *Microsystems & nanoengineering*
  Cordts, S. C., Yuki, K., Henao Echeverri, M. F., Narasimhan, B., Kuo, C. J., Tang, S. K.
  2024; 10 (1): 126

- **Disparate pathways for extrachromosomal DNA biogenesis and genomic DNA repair.** *Cancer discovery*
  Rose, J. C., Belk, J. A., Wong, I. T., Luebeck, J., Horn, H. T., Daniel, B., Jones, M. G., Yost, K. E., Hung, K. L., Kolahi, K. S., Curtis, E. J., Kuo, C. J., Bafna, et al
  2024

- **Engineered matrices reveal stiffness-mediated chemoresistance in patient-derived pancreatic cancer organoids.** *Nature materials*
  LeSavage, B. L., Zhang, D., Huerta-López, C., Gilchrist, A. E., Krajina, B. A., Karlsson, K., Smith, A. R., Karagyozova, K., Klett, K. C., Huang, M. S., Long, C., Kaber, G., Madl, et al
  2024

- **DRA involvement in linaclotide stimulated bicarbonate secretion during loss of CFTR function.** *JCI insight*
  Sarthi, J. B., Trumbull, A. M., Abazari, S. M., van Unen, V., Chan, J. E., Jiang, Y., Gammons, J., Anderson, M. O., Cil, O., Kuo, C. J., Sellers, Z. M.
  2024

- **Engineered CD47 protects T cells for enhanced antitumour immunity.** *Nature*
  Yamada-Hunter, S. A., Theruvath, J., McIntosh, B. J., Freitas, K. A., Lin, F., Radosevich, M. T., Leruste, A., Dhingra, S., Martinez-Velez, N., Xu, P., Huang, J., Delaidelli, A., Desai, et al
  2024

- **Focal adhesion kinase-YAP signaling axis drives drug-tolerant persister cells and residual disease in lung cancer.** *Nature communications*
  Haderk, F., Chou, Y. T., Cech, L., Fernández-Méndez, C., Yu, J., Olivas, V., Meraz, I. M., Barbosa Rabago, D., Kerr, D. L., Gomez, C., Allegakoen, D. V., Guan, J., Shah, et al
  2024; 15 (1): 3741

- **Design and Evaluation of a Robust CRISPR Kinetic Assay for Hot-Spot Genotyping.** *Analytical chemistry*
  Blanluet, C., Kuo, C. J., Bhattacharya, A., Santiago, J. G.
  2024

- **GPR124 regulates murine brain embryonic angiogenesis and BBB formation by an intracellular domain-independent mechanism.** *Development (Cambridge, England)*
  Yuki, K., Vallon, M., Ding, J., Rada, C. C., Tang, A. T., Vilches-Moure, J. G., McCormick, A. K., Echeverri, M. F., Alwahabi, S., Braunger, B. M., Ergün, S., Kahn, M. L., Kuo, et al
  2024

- **Integrative multi-omic profiling of adult mouse brain endothelial cells and potential implications in Alzheimer's disease.** *Cell reports*
  Yu, M., Nie, Y., Yang, J., Yang, S., Li, R., Rao, V., Hu, X., Fang, C., Li, S., Song, D., Guo, F., Snyder, M. P., Chang, et al
  2023; 42 (11): 113392

- **A microwell platform for high-throughput longitudinal phenotyping and selective retrieval of organoids.** *Cell systems*
  Sockell, A., Wong, W., Longwell, S., Vu, T., Karlsson, K., Mokhtari, D., Schaepe, J., Lo, Y., Cornelius, V., Kuo, C., Van Valen, D., Curtis, C., Fordyce, et al
  2023; 14 (9): 764

- **The colocatome as a spatial -omic reveals shared microenvironment features between tumour-stroma assembloids and human lung cancer.** *bioRxiv : the preprint server for biology*
  Bouchard, G., Zhang, W., Li, I., Ilerten, I., Bhattacharya, A., Li, Y., Trope, W., Shrager, J. B., Kuo, C., Tian, L., Giaccia, A. J., Plevritis, S. K.
  2023

- **Report of the Assay Guidance Workshop on 3-Dimensional Tissue Models for Antiviral Drug Development.** *The Journal of infectious diseases*
  Jordan, R., Ford-Scheimer, S. L., Alarcon, R. M., Atala, A., Borenstein, J. T., Brimacombe, K. R., Cherry, S., Clevers, H., Davis, M. I., Funnell, S. G., Gehrke, L., Griffith, L. G., Grossman, et al
  2023

- **Critical role of down-regulated in adenoma bicarbonate transporter in linaclotide stimulated intestinal bicarbonate secretion.** *bioRxiv : the preprint server for biology*
  Sarthi, J. B., Trumbull, A. M., Abazari, S. M., van Unen, V., Chan, J. E., Joo, N. S., Jiang, Y., Kuo, C. J., Sellers, Z. M.
  2023

- **Organoid modeling of lung-resident immune responses to SARS-CoV-2 infection.** *Research square*
  Choi, S. S., van Unen, V., Zhang, H., Rustagi, A., Alwahabi, S. A., Santos, A. J., Chan, J. E., Lam, B., Solis, D., Mah, J., Röltgen, K., Trope, W., Guh-Siesel, et al
  2023

- **Complete Remission of Widely Metastatic Human Epidermal Growth Factor Receptor 2-Amplified Pancreatic Adenocarcinoma After Precision Immune and Targeted Therapy With Description of Sequencing and Organoid Correlates.** *JCO precision oncology*
  King, D. A., Smith, A. R., Pineda, G., Nakano, M., Michelini, F., Goedegebuure, S. P., Thyparambil, S., Liao, W. L., McCormick, A., Ju, J., Cioffi, M., Zhang, X., Hundal, et al
  2023; 7: e2100489

- **Regulation of the Blood-Brain Barrier in Health and Disease.** *Cold Spring Harbor perspectives in medicine*
  Rada, C. C., Yuki, K., Ding, J., Kuo, C. J.
  2023

- **RHAMM marks proliferative subpopulation of human colorectal cancer stem cells.** *Cancer science*

Nakano, M., Taguchi, R., Kikushige, Y., Isobe, T., Miyawaki, K., Mizuno, S., Tsuruta, N., Hanamura, F., Yamaguchi, K., Yamauchi, T., Ariyama, H., Kusaba, H., Nakamura, et al

2023

- **Pharmacological targeting of TFIIH suppresses KRAS mutant pancreatic ductal adenocarcinoma and synergizes with TRAIL.** *Cancer research*

  Moser, R., Annis, J., Nikolova, O., Whatcott, C. J., Gurley, K. E., Mendez, E., Moran-Jones, K., Dorrell, C., Sears, R. C., Kuo, C. J., Han, H., Biankin, A. V., Grandori, et al

  2022

- **Immune organoids: from tumor modeling to precision oncology.** *Trends in cancer*

  Dao, V., Yuki, K., Lo, Y., Nakano, M., Kuo, C. J.

  2022

- **R-SPONDIN2+ mesenchymal cells form the bud tip progenitor niche during human lung development.** *Developmental cell*

  Hein, R. F., Wu, J. H., Holloway, E. M., Frum, T., Conchola, A. S., Tsai, Y., Wu, A., Fine, A. S., Miller, A. J., Szenker-Ravi, E., Yan, K. S., Kuo, C. J., Glass, et al

  2022

- **IRBIT as a Regulator of Bicarbonate Transport in the Small Intestine.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*

  Sarthi, J. B., van Unen, V., Chan, J. E., Abazari, S., Trumbull, A., Guh-Siesel, A., Kuo, C. J., Sellers, Z. M.

  2022; 36 Suppl 1

- **Lumbar Motion Is Maintained with Paraspinous Tension Band for Degenerative Spondylolisthesis: Results from 24-month FDA Study**

  Kim, K. D., Sasso, R., Hu, S., Villavicencio, A., Yoon, S., Lavelle, W., Sandhu, H., Bae, H., Deutsch, H., Sethi, K., Fischgrund, J., Stauff, M., Perez-Cruet, et al

  AMER ASSOC NEUROLOGICAL SURGEONS.2022

- **Targeting colorectal cancer with small-molecule inhibitors of ALDH1B1** *Nature Chemical Biology*

  Feng, Z., Hom, M. E., Bearrood, T. E., Rosenthal, Z. C., Fernández, D., Ondrus, A. E., Gu, Y., McCormick, A. K., Tomaske, M. G., Marshall, C. R., Chen, C., Mochly-Rosen, D., Kuo, et al

  2022

- **Cancer stem cells: advances in biology and clinical translation-a Keystone Symposia report.** *Annals of the New York Academy of Sciences*

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