

# Stanford

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## Calvin Kuo

Maureen Lyles D'Ambrogio Professor  
Medicine - Hematology

### Bio

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#### ACADEMIC APPOINTMENTS

- Professor, Medicine - Hematology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

#### ADMINISTRATIVE APPOINTMENTS

- Co-lead, Cancer Biology Program, Stanford Cancer Center, (2012- present)
- Vice Chair, Department of Medicine, (2015- present)

#### HONORS AND AWARDS

- 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

- Scientific Advisory Board, AP Giannini Foundation (2008 - present)

- Advisory Board, American Heart Association Silicon Valley Chapter (2013 - 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

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### 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 versus the 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

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### COURSES

#### 2019-20

- Cellular and Clinical Aspects of Cancer: CBIO 242 (Spr)

#### 2018-19

- Cellular and Clinical Aspects of Cancer: CBIO 242 (Spr)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Helen Yue Zhang

#### Postdoctoral Faculty Sponsor

Yuan-Hung Lo, Qinghui Mu, Michitaka Nakano, Roel Polak, Cara Rada, Kanako Yuki

#### Doctoral Dissertation Advisor (AC)

Shannon Choi, HUDSON HORN

#### Postdoctoral Research Mentor

Asmita Bhattacharya, Yuan-Hung Lo, Qinghui Mu, Michitaka Nakano, Roel Polak, Cara Rada, Branden Tarlow

### 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

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### PUBLICATIONS

- **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., Marcic, 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., Pieciewicz, 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., Pieciewicz, 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
  - **Models for Immuno-oncology Research** *CANCER CELL*  
Kuo, C. J., Voest, E., Parrini, M., Zou, W., Teng, M. L., Greten, T. F., Palucka, K., Gill, S., Joshi, N. S.  
2020; 38 (2): 145-47
  - **Development of a miniaturized 3D organoid culture platform for ultra-high throughput screening.** *Journal of molecular cell biology*  
Du, Y., Li, X., Niu, Q., Mo, X., Qui, M., Ma, T., Kuo, C. J., Fu, H.  
2020
  - **Organoid Models of Tumor Immunology.** *Trends in immunology*  
Yuki, K., Cheng, N., Nakano, M., Kuo, C. J.  
2020
  - **Insertion of the CFTR cDNA in the Endogenous Locus in Airway Stem Cells Using CRISPR/Cas9 Restores CFTR Function to Wild-Type Levels in Differentiated Epithelia**  
Vaidyanathan, S., Sellers, Z. M., Bravo, D. T., Le, W., Randell, S. H., Desai, T. J., Kuo, C. J., Nayak, J. V., Porteus, M. H.  
CELL PRESS.2020: 569-70
  - **CRISPR screens in cancer spheroids identify 3D growth-specific vulnerabilities.** *Nature*  
Han, K., Pierce, S. E., Li, A., Spees, K., Anderson, G. R., Seoane, J. A., Lo, Y. H., Dubreuil, M., Olivas, M., Kamber, R. A., Wainberg, M., Kostyrko, K., Kelly, et al  
2020; 580 (7801): 136-141
  - **Organoids as Oracles for Precision Medicine in Rectal Cancer.** *Cell stem cell*  
Kolahi, K. S., Nakano, M., Kuo, C. J.  
2020; 26 (1): 4-6
  - **Immune receptor inhibition through enforced phosphatase recruitment.** *Nature*  
Fernandes, R. A., Su, L. n., Nishiga, Y. n., Ren, J. n., Bhuiyan, A. M., Cheng, N. n., Kuo, C. J., Picton, L. K., Ohtsuki, S. n., Majzner, R. G., Rietberg, S. P., Mackall, C. L., Yin, et al  
2020

- **Next-Generation Surrogate Wnts Support Organoid Growth and Deconvolute Frizzled Pleiotropy In Vivo.** *Cell stem cell*  
Miao, Y. n., Ha, A. n., de Lau, W. n., Yuki, K. n., Santos, A. J., You, C. n., Geurts, M. H., Puschhof, J. n., Pleguezuelos-Manzano, C. n., Peng, W. C., Senlice, R. n., Piani, C. n., Buikema, et al  
2020
- **Integrated genomic characterization of ERBB2/HER2 alterations in invasive breast carcinoma: a focus on unusual FISH groups.** *Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc*  
Yang, S. R., Bouhlal, Y. n., De La Vega, F. M., Ballard, M. n., Kuo, C. J., Vilborg, A. n., Jensen, G. n., Allison, K. n.  
2020
- **Retinoic Acid and Lymphotoxin Signaling Promote Differentiation of Human Intestinal M Cells.** *Gastroenterology*  
Ding, S. n., Song, Y. n., Brulois, K. F., Pan, J. n., Co, J. Y., Ren, L. n., Feng, N. n., Yasukawa, L. L., Sánchez-Tacuba, L. n., Wosen, J. E., Mellins, E. D., Monack, D. M., Amieva, et al  
2020
- **Applications of organoids for cancer biology and precision medicine.** *Nature Cancer*  
Lo, Y., Karlsson, K., Kuo, C. J.  
2020; 1: 761–773
- **Surrogate R-spondins for tissue-specific potentiation of Wnt Signaling.** *PloS one*  
Luca, V. C., Miao, Y. n., Li, X. n., Hollander, M. J., Kuo, C. J., Garcia, K. C.  
2020; 15 (1): e0226928
- **Engineered materials for organoid systems** *NATURE REVIEWS MATERIALS*  
Kratovichil, M. J., Seymour, A. J., Li, T. L., Pasca, S. P., Kuo, C. J., Heilshorn, S. C.  
2019; 4 (9): 606–22
- **Human Intestinal Enteroids Model MHC-II in the Gut Epithelium.** *Frontiers in immunology*  
Wosen, J. E., Ilstad-Minnihan, A., Co, J. Y., Jiang, W., Mukhopadhyay, D., Fernandez-Becker, N. Q., Kuo, C. J., Amieva, M. R., Mellins, E. D.  
2019; 10: 1970
- **Inhibition of VEGF (Vascular Endothelial Growth Factor)-A or its Receptor Activity Suppresses Experimental Aneurysm Progression in the Aortic Elastase Infusion Model.** *Arteriosclerosis, thrombosis, and vascular biology*  
Xu, B., Iida, Y., Glover, K. J., Ge, Y., Wang, Y., Xuan, H., Hu, X., Tanaka, H., Wang, W., Fujimura, N., Miyata, M., Shoji, T., Guo, et al  
2019: ATVB AHA119312497
- **HAT1 Coordinates Histone Production and Acetylation via H4 Promoter Binding.** *Molecular cell*  
Gruber, J. J., Geller, B., Lipchik, A. M., Chen, J., Salahudeen, A. A., Ram, A. N., Ford, J. M., Kuo, C. J., Snyder, M. P.  
2019
- **Receptor subtype discrimination using extensive shape complementary designed interfaces** *NATURE STRUCTURAL & MOLECULAR BIOLOGY*  
Dang, L. T., Miao, Y., Ha, A., Yuki, K., Park, K., Janda, C. Y., Jude, K. M., Mohan, K., Ha, N., Vallon, M., Yuan, J., Vilches-Moure, J. G., Kuo, et al  
2019; 26 (6): 407-+
- **Receptor subtype discrimination using extensive shape complementary designed interfaces.** *Nature structural & molecular biology*  
Dang, L. T., Miao, Y., Ha, A., Yuki, K., Park, K., Janda, C. Y., Jude, K. M., Mohan, K., Ha, N., Vallon, M., Yuan, J., Vilches-Moure, J. G., Kuo, et al  
2019
- **Controlling Epithelial Polarity: A Human Enteroid Model for Host-Pathogen Interactions.** *Cell reports*  
Co, J. Y., Margalef-Catala, M., Li, X., Mah, A. T., Kuo, C. J., Monack, D. M., Amieva, M. R.  
2019; 26 (9): 2509
- **Controlling Epithelial Polarity: A Human Enteroid Model for Host-Pathogen Interactions** *CELL REPORTS*  
Co, J. Y., Margalef-Catala, M., Li, X., Mah, A. T., Kuo, C. J., Monack, D. M., Amieva, M. R.  
2019; 26 (9): 2509-+
- **Introduction to themed series on intestinal stem cells and the NIDDK Intestinal Stem Cell Consortium** *AMERICAN JOURNAL OF PHYSIOLOGY-GASTROINTESTINAL AND LIVER PHYSIOLOGY*  
Wang, T. C., Martin, M. G., Kuo, C. J., Klein, O. D., Niland, J.  
2019; 316 (2): G247–G250

- **High-Efficiency, Selection-free Gene Repair in Airway Stem Cells from Cystic Fibrosis Patients Rescues CFTR Function in Differentiated Epithelia.** *Cell stem cell*  
Vaidyanathan, S. n., Salahudeen, A. A., Sellers, Z. M., Bravo, D. T., Choi, S. S., Batish, A. n., Le, W. n., Baik, R. n., de la O, S. n., Kaushik, M. P., Galper, N. n., Lee, C. M., Teran, et al  
2019
- **RECK in Neural Precursor Cells Plays a Critical Role in Mouse Forebrain Angiogenesis.** *iScience*  
Li, H. n., Miki, T. n., Almeida, G. M., Hanashima, C. n., Matsuzaki, T. n., Kuo, C. J., Watanabe, N. n., Noda, M. n.  
2019; 19: 559–71
- **Introduction to Themed Series on Intestinal Stem Cells and the NIDDK Intestinal Stem Cell Consortium.** *American journal of physiology. Gastrointestinal and liver physiology*  
Wang, T. C., Martin, M. G., Kuo, C. J., Klein, O. D., Niland, J. C.  
2018
- **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–+
- **The Intestinal Stem Cell Niche: Homeostasis and Adaptations** *TRENDS IN CELL BIOLOGY*  
Santos, A. M., Lo, Y., Mah, A. T., Kuo, C. J.  
2018; 28 (12): 1062–78
- **Reserve Stem Cells in Intestinal Homeostasis and Injury** *GASTROENTEROLOGY*  
Bankaitis, E. D., Ha, A., Kuo, C. J., Magness, S. T.  
2018; 155 (5): 1348–61
- **A RECK-WNT7 Receptor-Ligand Interaction Enables Isoform-Specific Regulation of Wnt Bioavailability.** *Cell reports*  
Vallon, M., Yuki, K., Nguyen, T. D., Chang, J., Yuan, J., Siepe, D., Miao, Y., Essler, M., Noda, M., Garcia, K. C., Kuo, C. J.  
2018; 25 (2): 339
- **A RECK-WNT7 Receptor-Ligand Interaction Enables Isoform-Specific Regulation of Wnt Bioavailability** *CELL REPORTS*  
Vallon, M., Yuki, K., Nguyen, T. D., Chang, J., Yuan, J., Siepe, D., Miao, Y., Essler, M., Noda, M., Garcia, K., Kuo, C. J.  
2018; 25 (2): 339–+
- **The Intestinal Stem Cell Niche: Homeostasis and Adaptations.** *Trends in cell biology*  
Santos, A. J., Lo, Y., Mah, A. T., Kuo, C. J.  
2018
- **STAG2 deficiency induces interferon responses via cGAS-STING pathway and restricts virus infection.** *Nature communications*  
Ding, S., Diep, J., Feng, N., Ren, L., Li, B., Ooi, Y. S., Wang, X., Brulois, K. F., Yasukawa, L. L., Li, X., Kuo, C. J., Solomon, D. A., Carette, et al  
2018; 9 (1): 1485
- **STAG2 deficiency induces interferon responses via cGAS-STING pathway and restricts virus infection** *NATURE COMMUNICATIONS*  
Ding, S., Diep, J., Feng, N., Ren, L., Li, B., Ooi, Y., Wang, X., Brulois, K. F., Yasukawa, L. L., Li, X., Kuo, C. J., Solomon, D. A., Carette, et al  
2018; 9
- **Bone marrow niche trafficking of miR-126 controls the self-renewal of leukemia stem cells in chronic myelogenous leukemia** *NATURE MEDICINE*  
Zhang, B., Le Xuan Truong Nguyen, Li, L., Zhao, D., Kumar, B., Wu, H., Lin, A., Pellicano, F., Hopcroft, L., Su, Y., Copland, M., Holyoake, T. L., Kuo, C. J., et al  
2018; 24 (4): 450–+
- **Organoids lead the cancer attack** *NATURE MEDICINE*  
Smith, A. R., Kuo, C. J.  
2017; 23 (12): 1399–1400
- **Expanding tumor chemical-genetic interaction map using next-generation cancer models**  
Tseng, Y., Hong, A., Gill, S., Keskula, P., Raghavan, S., Cheah, J., Tsherniak, A., Vazquez, F., Alkhairy, S., Peng, A., Sayeed, A., Deasy, R., Ronning, et al  
AMER ASSOC CANCER RESEARCH.2017

- **Intestinal Enteroendocrine Lineage Cells Possess Homeostatic and Injury-Inducible Stem Cell Activity.** *Cell stem cell*  
Yan, K. S., Gevaert, O., Zheng, G. X., Anchang, B., Probert, C. S., Larkin, K. A., Davies, P. S., Cheng, Z. F., Kaddis, J. S., Han, A., Roelf, K., Calderon, R. I., Cynn, et al  
2017; 21 (1): 78-90.e6
- **Rapid characterization of candidate loss of function genes in primary organoid culture.**  
Hart, D., Salahudeen, A., de la O, S., Han, K., Morgens, D., Bassik, M., Kuo, C.  
AMER SOC CLINICAL ONCOLOGY.2017
- **Linked read sequencing resolves complex genomic rearrangements in gastric cancer metastases.** *Genome medicine*  
Greer, S. U., Nadauld, L. D., Lau, B. T., Chen, J. n., Wood-Bouwens, C. n., Ford, J. M., Kuo, C. J., Ji, H. P.  
2017; 9 (1): 57
- **Intestinal Enteroendocrine Lineage Cells Possess Homeostatic and Injury-Inducible Stem Cell Activity** *Cell Stem Cell*  
Yan, K., Gevaert, O., Zheng, G., Anchang, B., Probert, C., et al  
2017; 21 (1): 78 - 90.e6
- **Wnt pathway regulation of intestinal stem cells.** *journal of physiology*  
Mah, A. T., Yan, K. S., Kuo, C. J.  
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