UC DAVIS HEALTH | SCHOOL OF MEDICINE

Medical Microbiology & Immunology
MMI 291 Seminar Series
Emerging Challenges in Microbiology and Immunology

MMI 291 Seminar Series

Current Theme: Interdisciplinary Research
Winter Quarter 2019 – CRN 43601

Sponsored by
Animal Models of Infectious Diseases Training Program(AMID)

Friday Seminar – 12:10-1 PM

"A new genetic model organism for primate biology, behavior, and health"

Krasnow's lab pioneered the genetic and genomic dissection of organ development and the stem cells that maintain organs throughout life. They established the first genetic system to elucidate an organogenesis program by mapping the events of Drosophila respiratory system development at single cell resolution, then carrying out systematic mutant screens that identified over a hundred genes that defined the molecular pathways controlling each of the fundamental steps in organogenesis. They used the same approach to elucidate the complete branching program of mammalian lung development and map at single cell resolution the progenitors and stem cells and their niches for many lung cell types, and how the stem cells are coopted in lung cancer and other deadly diseases and how they can be harnessed for cures.

Publication references

Nabhan, N., Brownfield, D.G., Harbury, P.B., **Krasnow, M.A.***, and Desai, T.J.* (2018) Single cell Wnt signaling niches maintain stemness of alveolar type 2 cells. **Science**, 359, 1118-1123 (*, corresponding authors).

Ezran, C., Karanewsky, C.J., Pendleton, J.L., Sholtz, A., Krasnow, M.R., Willick, J., Razafindrakoto, A.,Zohdy, S., Albertelli, M., and **Krasnow, M.A.**(2017) Mouse lemur, a genetic model organism for primate biology, behavior, and health. **Genetics** 206, 651-664.

Yackle, K., Schwarz, L.A., Kam, K., Sorokin, J.M., Huguenard, J.R., Feldman, J.L., Luo, L., and **Krasnow, M.A.**(2017) Breathing control center neurons that promote arousal in mice. **Science** 355, 1411-1415.

50 YEARS UCDAVIS SCHOOL OF MEDICINE

March 1

Mark Krasnow, M.D., Ph.D.
Paul and Mildred Berg Professor
Department of Biochemistry
Stanford University,
School of Medicine

March 1, 2019
12:10 – 1 PM
Genome and Biomedical Sciences Facility, Auditorium

Medical Microbiology & Immunology
School of Medicine

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