Stanford

Katrin Chua

Associate Professor of Medicine (Endocrinology, Gerontology and Metabolism)

Medicine - Endocrinology, Gerontology, & Metabolism

Bio

ACADEMIC APPOINTMENTS

- Associate Professor, Medicine - Endocrinology, Gerontology, & Metabolism
- Member, Bio-X
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Director, MSTP MD-PhD program, (2018- present)
- Director of Admissions, MSTP MD-PhD program, (2016-2017)
- Associate Director, MSTP MD-PhD program, (2014-2018)

HONORS AND AWARDS

- Sackler Scholar in Psychobiology, Harvard University (1995-1996)
- Fellow of the Jane Coffin Childs Memorial Fund For Medical Research, Jane Coffin Childs Memorial Fund For Medical Research (2001-2002)
- Pfizer Postdoctoral Fellow in Rheumatology/Immunology, Pfizer (2002-2005)
- Paul Beeson Scholar in Aging Research, National Institute on Aging/American Federation for Aging Research (2006-)
- Ellison Medical Foundation New Scholar in Aging, Ellison Medical Foundation/AFAR (2008-2012)

PROFESSIONAL EDUCATION

- Ph.D., Harvard Medical School , Neuroscience/Cell Biology (2001)
- M.D., Harvard Medical School , Medicine (2001)
- B.A., Harvard University , Biochemistry/Molecular Biology (1991)

LINKS

- Chua Lab Website: http://www.stanford.edu/group/katrinchualab/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our lab is interested in understanding molecular processes that underlie aging and age-associated pathologies in mammals. We focus on a family of genes, the SIRTs, which regulate stress resistance and lifespan in lower organisms such as yeast, worms, and flies. In mammals, we recently uncovered a number of ways in which SIRT factors may contribute to cellular and organismal aging by regulating resistance to various forms of stress. We have now begun to characterize the molecular

mechanisms by which these SIRT factors function. In particular, we are interested in how SIRT factors regulate chromatin, the molecular structure in which the DNA of mammalian genomes is packaged, and how such functions may link genome maintenance to stress resistance and aging.

Teaching

COURSES

2018-19

- Physician Scientist Hour: INDE 217 (Aut, Win, Spr)

2017-18

- Physician Scientist Hour: INDE 217 (Aut, Win, Spr)

2016-17

- Cancer Biology Journal Club: CBIO 280 (Win)
- Physician Scientist Hour: INDE 217 (Aut, Win, Spr)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Maria Angulo Ibáñez, Joonseok Cho, Tiemei Li, Wei Zheng

Postdoctoral Research Mentor

Maria Angulo Ibáñez, Joonseok Cho, Tiemei Li

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cancer Biology (Phd Program)

Publications

PUBLICATIONS

- **A Click Chemistry Approach Reveals the Chromatin-Dependent Histone H3K36 Deacylase Nature of SIRT7.** *Journal of the American Chemical Society*
  Wang, W. W., Angulo-Ibanez, M., Lyu, J., Kurra, Y., Tong, Z., Wu, B., Zhang, L., Sharma, V., Zhou, J., Lin, H., Gao, Y. Q., Li, W., Chua, et al
  2019
- **The epigenetic regulator SIRT7 guards against mammalian cellular senescence induced by ribosomal DNA instability.** *The Journal of biological chemistry*
  Paredes, S., Angulo-Ibanez, M., Tasselli, L., Carlson, S. M., Zheng, W., Li, T., Chua, K. F.
  2018
- **SIRT6 deacetylates H3K18ac at pericentric chromatin to prevent mitotic errors and cellular senescence** *NATURE STRUCTURAL & MOLECULAR BIOLOGY*
  Tasselli, L., Xi, Y., Zheng, W., Tennen, R. I., Odrowaz, Z., Simeoni, F., Li, W., Chua, K. F.
  2016; 23 (5): 434-440
- **CANCER Metabolism in the driver's seat** *NATURE*
  Tasselli, L., Chua, K. F.
  2012; 492 (7429): 362-363
- **SIRT7 links H3K18 deacetylation to maintenance of oncogenic transformation** *NATURE*
  Barber, M. F., Michishita-Kioi, E., Xi, Y., Tasselli, L., Kioi, M., Moqtaderi, Z., Tennen, R. I., Paredes, S., Young, N. L., Chen, K., Struhl, K., Garcia, B. A., Gozani, et al
  2012; 487 (7405): 114-?