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# LECTURE SERIES & WORKSHOPS 2019 CANCER RESEARCH

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**MEET, GREET & EAT \* CHL Luxembourg** Amphitheatre Fover

light lunch provided **CHL Luxembourg** 

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## 11.00 - 12.00 pm 12.00 - 1.00 pm

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3 4 \* Registration is mandatory by sending an email to florence.henry@lih.lu



**OCT 2019** Tuesday

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### SPEAKER Prof Ana C. ANDERSON

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Associate Professor of Neurology, Harvard Medical School Scientist, Brigham and Women's Hospital, USA

HOST: LIH

#### **RESPONSIBLE LIH SCIENTISTS:** Jérôme Paggetti (jerome.paggetti@lih.lu) **Etienne Moussay** (etienne.moussay@lih.lu)

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#### **CELLULAR AND MOLECULAR CIRCUITS THAT DETERMINE CD8+ T CELL PHENOTYPES IN CANCER**

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#### ABSTRACT

The CD8+T cell response is a critical component of anti-tumor immunity. Within tumor tissue, the CD8+ T cell response is heterogeneous with effector CD8+ T cells and dysfunctional or "exhausted" CD8+ T cells at opposite ends of the functional spectrum. We have applied an integrated and iterative approach involving experimental immunology, supervised and unsupervised genomics, and computational analyses to study CD8+ tumor-infiltrating lymphocytes (TILs). Through these efforts, we have uncovered a role for intracellular zinc in

driving T cell dysfunction, leading to the discovery of distinct gene modules associated with the activated vs dysfunctional T cell state in CD8+ TILs. We have also identified a transcriptional circuit downstream of the immunoregulatory cytokine IL-27 that controls the expression of an immunoregulatory module of co-inhibitory and co-stimulatory receptors in CD8+ TILs. Lastly, we have discovered a role for endogenous steroid hormone production and signaling within the tumor microenvironment in driving T cell dysfunction.