THE GIS
SPEAKER SERIES

Genome Institute of Singapore
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Building cellular memories as a mechanism of therapy resistance in melanoma

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Professor of Genetics
University of Pennsylvania

Host: Shyam PRABHAKAR

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9.30am – 10.30am

Zoom

About The Speaker

Arjun grew up in Ithaca, New York, then went to UC Berkeley for his undergraduate education, where he majored in math and physics. He then earned his PhD in mathematics from the Courant Institute at NYU, followed by postdoctoral training at MIT before joining the faculty at Penn in 2010. He is currently a Professor of Bioengineering and Professor of Genetics. His research focuses on the development and application of experimental techniques for making quantitative measurements in single cells and models for linking those measurements to cellular function. His ultimate goal is to achieve a quantitative understanding of the molecular underpinnings of cellular behavior.

About The Seminar

Do cells remember their past experiences? DNA is one way to encode these past experiences, but cannot generally be altered within a lifetime. How, then, can cells learn? We present data showing that cancer cells, in the context of therapy resistance, remember their past, and this past can influence their future. We find the molecular mechanism by which such regulatory flexibility is achieved. We think this mechanism may be responsible for many forms of cellular adaptation.