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The quest for the structure of the biological machine that reads our genes

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Everyone has heard of DNA. But by itself, DNA is just an inert blueprint for life. It is the ribosome—an ancient and enormous molecular machine made up of half a million atoms—that makes DNA come to life by turning our genetic code into proteins and therefore into us. My book Gene Machine is a frank insider account of the race for the structure of the ribosome, a fundamental discovery in molecular biology, but one that could also lead to the development of better antibiotics against bacterial infections. But the book is also about the human messiness of science: the twists and turns of my career, initially being an outsider who gave up on physics to become a biologist, and then being the dark horse in a fierce competition with well-established groups. Gene Machine is also a frank and gossipy account of how science is done, with its mixture of insights and persistence as well as blunders and dead ends. It is also honest about how scientists behave, especially when the stakes are high, with their personalities, egos, insecurities and jealousies but also their kindness and generosity.

Presenter: Prof. RAMAKRISHNAN, PRS, Sir Venki

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