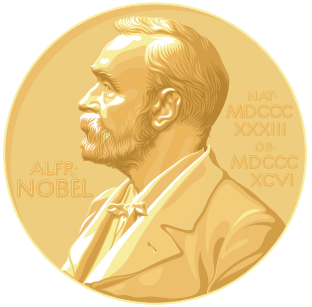

Nobel Prize Inspiration Initiative

IN PARTNERSHIP WITH:

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HOSTED BY:

Institute of Medical Science
University of Tokyo

NOBEL PRIZE INSPIRATION INITIATIVE PRESENTS:

Richard J. Roberts

1993 Nobel Laureate in Physiology or Medicine

"Bacterial Methylomes"

Monday 2th March 2015, 11:00–12:30
The Institute of Medical Science, The University of Tokyo

Nobel Prize Inspiration Initiative

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"Bacterial Methylomes"

Abstract:
Bacterial DNA methyltransferases (MTases) are best known as orphan enzymes such as the Dam methylase of *E. coli* or as components of restriction-modification (RM) systems. Until recently, rigorously determining the specificity of MTases has been a tedious process. When they were components of Type II restriction systems it has been assumed that the MTases would have the same specificity as the cognate restriction enzyme. For Type I and Type III RM systems specificity determination was rarely attempted. With the advent of SMRT sequencing from Pacific Biosciences this situation has changed dramatically. Now it has become very simple to determine MTase recognition sequences both for individual MTases cloned in plasmids and also for whole bacterial genomes. This offers new insights into the functioning of bacteria and has led to the discovery of many novel MTases with unexpected properties. A new door on bacterial life has been opened and raises many questions, among which one of the most tantalizing is whether bacteria are engaged in novel epigenetic regulation.

NOBEL PRIZE INSPIRATION INITIATIVE

Programme

Monday 2nd March 2015, 11:00–12:30

Lecture by Dr Richard J. Roberts with audience Q&A

Title: "Bacterial Methylomes"

Venue: The Institute of Medical Science, The University of Tokyo

11.00–11.25	Opening Remarks Mattias Fyrenius, CEO, Nobel Media AB Hiroshi Kiyono, Dean and Professor of The Institute of Medical Science Introduction Ichizo Kobayashi, Professor
11:25–12:15	Lecture by Dr Richard J. Roberts
12:15–12:30	Audience Q&A