



Vrije
Universiteit
Brussel



Solvay Colloquium

“Calcium Signalling in Health and Disease”

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Abstract



Calcium (Ca^{2+}) is a highly versatile intracellular signal capable of regulating many different processes. To achieve this versatility, cells have access to a very extensive Ca^{2+} signalling toolkit from which each cell type expresses a unique set of components to create Ca^{2+} signalling systems with widely different spatial and temporal properties. Spatial properties are particularly relevant for fast responses where components of the ON reactions and their downstream effectors are closely associated. This spatial contiguity is less apparent for the slower responses such as gene transcription, fertilization and cell proliferation where Ca^{2+} signals tend to operate more globally and where temporal properties of signalling become increasingly important with signalling represented as repetitive Ca^{2+} transients and waves. Such Ca^{2+} signalling systems are not fixed in stone, but are constantly being remodelled to adapt to changing circumstances. Ca^{2+} itself plays a critical role in an internal assessment mechanism that remodels its own signalling pathway. Abnormal remodelling of Ca^{2+} signalling systems is responsible for a number of important disease states such as congestive heart failure and Alzheimer's disease.

Tuesday 27 April 2010 at 16h00

COFFEE AND TEA WILL BE SERVED AT 15H45 IN FRONT OF THE SOLVAY ROOM

« SALLE SOLVAY » - SOLVAY ROOM

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