



## ~ Biography ~

**MARK STITT**  
MAX-PLANCK INSTITUTE  
FOR MOLECULAR PLANT  
PHYSIOLOGY

Mark Stitt was born in Stafford England in 1953, completed his undergraduate work at Cambridge in 1975. He went on to earn the Ph.D. in 1978 under the supervision of Dr. T. ap Rees at Cambridge with a thesis entitled "Carbohydrate oxidation by photosynthetic cells." Dr. Stitt's postdoctoral training was at the Institute for Physiological Chemistry and Physical Biochemistry, Munich, with Prof. Dr. H. W. Heldt from 1978 to 1980, followed by research experiences at UC Berkeley with Bob Buchanan, and his habilitation in Plant Biochemistry at the University of Göttingen. Dr. Stitt was appointed Professor for Plant Biochemistry in the Department of Plant Physiology, Bayreuth in 1986 and became Professor and Head of the Institute for Botany, University of Heidelberg in 1991. From 1997 to 2000 he served as the Dean of the Faculty of Biology at the University of Heidelberg, and in 2000 was appointed as the Director of the department 'Metabolic Networks' at the Max-Planck Institute for Molecular Plant Physiology in Golm.

Professor Stitt has been a Handling Editor for Plant Cell and Environment since 1992, and for The Plant Journal since 1996. He is Section Head for Plant Biochemistry and Physiology for Faculty of 1000 (2000), and is on the Advisory Board for an additional four scientific journals including Current Opinion in Plant Biology. He also serves on the Advisory Boards and Steering Committees of an additional nine European and international scientific institutes and collaborative research projects.

In 1986 Dr. Stitt was awarded the Presidents Medal of the Society for Experimental Botany, England, and in 2002 was identified by ISI as a Highly Cited Researcher, based upon his publications from 1991 to 2001. Overall, Dr. Stitt has over 200 peer-reviewed publications to his credit.

## ~ Lectures ~

**Tuesday, February 22**  
**4:00 - 5:00**  
**Pfendler Auditorium**

### **“Running out of control: approaches to study the control of metabolism”**

In this I will briefly survey approaches that are taken in 'classical' biochemical approaches to identify and characterize the steps that are responsible for the regulation of metabolite flux. I will then illustrate how forward and reverse genetics allows the development of system orientated approaches to assess the importance of different steps and regulatory mechanisms in vivo and, in combination with broad metabolite analysis, to analyze the interactions between different sectors of metabolism and cellular function. At the end I will discuss how the genetic resources provided by unbiased reverse genetics programs and use of natural diversity provide new routes to probe and understand complex metabolic networks. The talk will be illustrated with examples from central carbon and nitrogen metabolism.

**Wednesday, February 23**  
**3:00 - 4:00**  
**Pfendler Auditorium**

### **“(Dys)Functional genomics: a comprehensive insight into system function”**

In this talk I will discuss how a multilevel phenotype platform including whole genome expression profiling, highly multiplexed real time RT-PCR for transcription factors, quantitative proteomics, robotized enzyme assays and metabolite profiling allow dissection of complex biological responses like the response to low carbon and nutrients. This approach provides information about system responses and also highlights novel candidate regulatory genes, which can be subjected to detailed functional analysis. The talk will include a discussion of new technologies that are required for this approach and bioinformatics tools that help to analyze and visualize the results, will include data that provides new insights into systems responses to carbon and nutrients, and ongoing research into newly-identified genes that regulated carbon and nutrient use in plants.