

Moss genome to be sequenced

Plant Biotechnology at University of Freiburg, headed by Prof. Ralf Reski, hosted 130 scientists from 14 countries during the 7th International Conference on Moss Molecular Biology, Moss 2004, from September 12th–15th in Freiburg, Germany. This meeting was supported by 15 sponsors, mostly German companies.

Highlight of this conference was the establishment of an international Genome Sequencing Consortium aiming at deciphering the 511 Mbp of the haploid moss genome. Kick-off was provided by the US Department of Energy (DOE) which approved a proposal submitted by groups from the US, UK, Japan and Freiburg, Germany. The Joint Genome Institute (DOE-JGI) at Walnut Creek, California will provide a 6x coverage shotgun-sequencing of the moss genome by mid 2005. Sequencing the gaps, assembly of the genome and gene annotation will depend on additional grants provided from different sources. At Moss 2004 it was announced that Japanese agencies responded positively to such a proposal. Unfortunately, neither German nor European agencies are prepared to fund plant genome projects other than from crop plants.

The moss *Physcomitrella* became well-recognized for plant functional



The Moss Genome Sequencing Consortium with individuals from the US, UK, Japan and Freiburg, Germany at the 7th International Conference on Moss Molecular Biology, Moss 2004, held at Freiburg earlier this year.

Courtesy: Eva Opitz

genomics when German groups in 1998 published two reports on the functional identification of novel genes by highly efficient targeted gene knock-out. Based on their EST database the Freiburg team now predicts about

30,000 different moss genes, several thousands of them unknown from crops and still awaiting their functional annotation.