FOREWARD TO THE REPORT

In 1990, an *ad hoc* committee composed of nine scientists from the United States, Europe, Japan and Australia prepared a report called "Long-range Plan for the Multinational Coordinated *Arabidopsis thaliana* Genome Research Project." The report outlined a plan for international cooperation in studies of the model plant, *Arabidopsis thaliana*. The mission statement read "The mission of the project is to identify all of the genes by using a functional biological approach leading to determination of the complete sequence of the *Arabidopsis* genome by the end of this century." The stated ultimate goal of the project was "to understand the physiology, biochemistry, and growth and developmental processes of a flowering plant at the molecular level, using *Arabidopsis* as an experimental model system."

At the end of the 20th Century, the complete genome sequence of *Arabidopsis* was published, thus accomplishing the mission of the Multinational Coordinated *Arabidopsis thaliana* Genome Research Project. Analysis of the complete genome sequence indicates that there are approximately 25,500 genes in *Arabidopsis*. Now the *Arabidopsis* research community is proposing a new mission: to determine the function of every gene in *Arabidopsis* by 2010. The ultimate goal remains the same: a complete understanding of the biology of a flowering plant, using *Arabidopsis* as an experimental model system.

The purpose of this document is to outline what is required in the next ten years for the *Arabidopsis* research community to accomplish the new mission. The availability of the complete genome sequence gives us for the first time a glimpse of the information needed for a complete understanding of plant biology. However, like the charcoal sketches a painter draws on a canvas, this sequence is just a framework: an outline that provides data, but little understanding. Exploitation of this information will establish *Arabidopsis* as the premier species for the complete study of the physiology, biochemistry, and development of plants, and will serve as a basis for comparative studies as well as application of the knowledge gained to more economically important species.

Secondly, this document will serve as an update to the *Arabidopsis* research community at large of the efforts being made in *Arabidopsis* Functional Genomics world-wide. To maintain optimal research efficiency, it is important to keep the community current not only on the status of research but on the funding, biological resources and services being made available around the world that will drive this research forward.

It has became clear during the past ten years that international cooperation and communication are essential elements to success in an undertaking as large as the Multinational Coordinated *Arabidopsis thaliana* Functional Genomics Project. **We have put forth a goal of no less than complete understanding of the biology of an organism; the only way to achieve success is to work together with the realization that we are all wedded to the same goal.**

The Multinational *Arabidopsis* Steering Committee
June 2002