

Controlling a sea of information

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Curators at one of the world's most widely used biological databases, The Arabidopsis Information Resource, or TAIR, have joined forces with the journal *Plant Physiology*, to solve the "flood of information" dilemma. It is a first-of-its-kind partnership, which cuts out the middle person for entering important genetics and other biological data about plants into the database. The new system will unclog the information highway and significantly increase the data contained in TAIR.

TAIR, located at the Carnegie Institution's Department of Plant Biology, is used by researchers from over 120 countries who study the model plant Arabidopsis. The plant is a quick-growing relative of mustard that is used to understand the fundamental processes of plants and thereby provide insights that could enhance the world's food supply, develop disease and drought resistant crops, and much more. The database has grown from 100,000 page hits per month in 2000 to over 1 million in 2007.

Wolf Frommer, the acting director of Plant Biology and VP of the Feedstocks Division of the Joint BioEnergy Institute (JBEI) in Emeryville, CA, emphasizes the immense importance of this partnership for the development of the emerging biofuels industry. "Arabidopsis is the most advanced reference plant and TAIR's efforts will certainly have a major impact for the identification of novel feedstock crops that will enable us to use plant cell walls (cellulose) as an energy source," he said.

"We simply do not have the people-power to cope with entering all the research data coming from the plant biology community," remarked

TAIR director Eva Huala. “We’ve had to triage which information goes in.”

Given the information overload, TAIR principal investigator Sue Rhee and director Eva Huala approached the journal in May of 2007 about the partnership. Now authors publishing in *Plant Physiology*, a journal of the American Society of Plant Biologists, will enter their own information directly through a specially designed web-interface when their papers are accepted. The new interface went live on February 27th.

“It’s huge for us and plant biologists everywhere,” stated Rhee. “It will increase our data input from this journal from about 25% to 100%.”

The group hopes the partnership will become a model for other disciplines. “We are pleased that TAIR selected us for what we think will be a successful partnership that other biological databases and journals can emulate to increase the flow of information and data dissemination within the research community,” wrote Donald Ort, editor-in-chief, with Aleel Grennan in a journal editorial.

Looking to the future Huala said that “if a few more journals jump on this bandwagon, TAIR could provide complete coverage of all published Arabidopsis data within a few years. Currently only about 27% of articles with data on Arabidopsis genes have had their data extracted.”

For more information on the project see www.plantphysiol.org/cgi/content/full/146/3/1022?etoc

Source: Carnegie Institution

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