

# Historical Record of Discussion on Transition to Subscriptions

## TAIR will continue with subscription support (8/31/2013)

Dear TAIR community,

TAIR's NSF funding is ending soon, but we think that the data we provide is still important to you, and we see concrete evidence of this in the increasing use of TAIR. There are plans to build a new informatics resource with a modular structure distributed among many groups and countries (1); although this is a positive development, a mechanism for sustained and stable funding of the intensive data curation and stewardship that TAIR provides is still lacking (2).

We strongly resisted the idea of subscriptions four years ago when the ramp down of TAIR funding was first announced; however, times have changed, and we now believe this option is worth exploring. More of you now pay for access to online information of one type or another, including newspapers and scientific journals. Some of you have expressed willingness to pay a small fee to keep TAIR current, and at this point we see no other sustainable way to continue providing high-quality curated data. For that reason, and with strong encouragement from NSF, we have decided to move to subscription-based support.

We will have a subscription requirement for researchers at companies beginning in October of this year, followed by an academic subscription requirement in the spring or summer of 2014. We will ensure that the subscription price is easily affordable for academic scientists, teachers, and students, and we will allow a limited degree of data access for those who are unable to pay. Details of the subscription plan including the cost will be announced in the coming months. We will keep TAIR available to as many people as possible.

To ensure that TAIR continues to serve the public interest, a new nonprofit entity will manage TAIR with a mission to make scientific data publicly available in a way that is sustainable over the long term -- something that cannot be done with government grant funding. We will use all funds from subscriptions to maintain and enhance TAIR to ensure continued public availability of the data. Our new funding plan will provide you with the continuously updated, high quality data you rely on, will let us develop new TAIR pages and tools, and will enable us to provide new kinds of data to help with your research.

Please join us in our effort to preserve and improve this community resource. If you have questions, comments, or suggestions, please contact the TAIR team at [curator@arabidopsis.org](mailto:curator@arabidopsis.org).

Best regards,

The TAIR staff (Eva Huala, Tanya Berardini, Donghui Li and Bob Muller)

(1) International Arabidopsis Informatics Consortium. Taking the next step: building an Arabidopsis information portal. *Plant Cell*. 2012 Jun;24(6):2248-56. <http://www.plantcell.org/content/24/6/2248.full>

(2) Berman F, Cerf V. Science priorities. Who will pay for public access to research data? *Science*. 2013 Aug 9;341(6146):616-7. doi: 10.1126/science.1241625. PMID: 23929969 <http://www.sciencemag.org/content/341/6146/616.full>

## TAIR plans for transition to IAIC (8/31/2011)

Dear TAIR community,

As many of you are aware, funding for TAIR will end on August 31 2013. An International Arabidopsis Informatics Consortium (IAIC, <http://www.arabidopsis.org/portals/masc/IAIC.jsp>) has been organized to develop a new informatics infrastructure. The TAIR team will be working within this consortium to help develop the next generation of informatics tools and resources for the community. The IAIC has tentatively planned a "design workshop" for December 11th to 14th to develop implementation and funding plans for this new infrastructure. This workshop will include individuals with a broad range of expertise; interested individuals can contact the consortium at [arabidopsisinformatics@gmail.com](mailto:arabidopsisinformatics@gmail.com).

Future updates on the TAIR to IAIC transition will be posted in our breaking news section. Although we will do our best to keep TAIR updated and accessible over the final two years we ask for your patience and understanding as our declining funding will limit our efforts to the most essential tasks. Please contact us at [curator@arabidopsis.org](mailto:curator@arabidopsis.org) with any questions.

Eva Huala (TAIR) and Blake Meyers (IAIC)

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## TAIR launches new corporate sponsorship program (7/23/2010)

Dear TAIR user community,

To help us through the current funding crisis we recently established a new TAIR corporate sponsorship program. We feel that this approach is preferable to implementing a subscription requirement for the private sector because it will allow us to keep TAIR open and free of login requirements, facilitating the free exploration of data by all scientists. Two companies (Dow AgroSciences and Syngenta) and one research organization (Gregor Mendel Institute) have already become TAIR sponsors. More information can be found on our [sponsorship page](#).

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## TAIR Funding Crisis (10/16/2009)

Dear TAIR user community,

As some of you may already have heard, our previous five year NSF grant supporting TAIR ended on August 31 2009. Many of you wrote individual letters in support of continued TAIR funding or signed a joint letter with others; those that were received by June 2 were forwarded by the TAIR Advisory Board to the relevant NSF program directors (ABI and 2010 programs). I want to express my sincere thanks to all of you for the strong display of community support. However, an NSF policy against considering such evidence in funding decisions prevented the program officers from reading the letters until after the TAIR renewal decision was final. The TAIR project did obtain a renewal from NSF that provides level funding for the current year (September 2009 - August 2010) followed by **steeply decreasing budgets (75%, 50% and 25% of the current year)** for the remaining three years. There is currently no funding mechanism in place at NSF for ongoing operational costs of long term data resources like TAIR.

NSF has strongly encouraged TAIR to seek funding from other sources, including subscription fees for companies and/or academic labs and funding from other US agencies or other countries. TAIR currently serves a fourfold role as data producer, portal for data access, permanent data archive, and leader in biological data curation methods. A change in our funding model could have wide-ranging effects on how we operate (including our ability to export gene structure and function data to other resources such as NCBI, SIGnAL, UniProt, etc.); therefore it is essential that the impact is carefully considered before a new funding strategy is implemented.

NSF and the Multinational Arabidopsis Steering Committee (MASC) will be organizing workshops to gather community input on the database and informatics needs of the Arabidopsis community within the next several months. NSF has left open the possibility that its current lack of a stable funding mechanism for long-term research infrastructure projects like TAIR may be reconsidered in the future. Workshops will be held in early spring 2010 in the U. K. and in early summer 2010 in the USA. Recommendations from the workshops will be presented to participants of the next Arabidopsis conference in Japan. If you are invited to a workshop, I encourage you to participate in this important discussion of priorities and needs, and to make your views known to any colleagues who attend.

The steep reduction in funding for TAIR requires that we either scale back our work to a corresponding degree or obtain funding from other sources. **The funding reduction will begin strongly impacting TAIR's activities in September 2010.** A public discussion is urgently needed on community bioinformatics needs, TAIR's role in fulfilling these needs and viable funding strategies for this type of resource. It is essential that this discussion include the viewpoints of plant biology researchers, educators and students from around the world.

**To make your voice heard, please add a comment at the bottom of this page** expressing your views on (1) the bioinformatics needs of the Arabidopsis and wider plant biology communities and (2) how resources like TAIR should be funded. It is important that we hear from a variety of people in the USA and from other countries including wet lab researchers, computational biologists, researchers working on crop plants or basic biological questions, students and teachers, and those working within a company as well as those in academic institutions.

In addition, if you use TAIR for your research, please do one or more of the following in your publications:

- Cite the most recent [TAIR publication](#)
- Acknowledge TAIR ( <http://arabidopsis.org>) as a source of data in your methods section
- Include TAIR ( <http://arabidopsis.org>) in your acknowledgement section.

Best regards,

Eva Huala,  
TAIR Director

#### Comments

User	Date	Comment
	2009-10-16 21:12:58.0	Dr. Abdullah Makhzoum, This is very useful database for Arabidopsis genome information and it will be damaged to reduce its activities. Basically, it must be improved with new features like genome regulators or differential gene expression.
Hongxi a Zhang	2009-10-16 21:43:17.0	We think taht TAIR is the most important public database for our Arabidopsis researchers all over the world. We benefited a lot from the information TAIR provides and are greatly indebted to the contributions that TAIR make to the whole plant molecular biology, in general and Arabidopsis studies, in particular. In my opinion, the funds from NSF program to TAIR should be augmented but not reduced, because it is so important for all researchers and TAIR has been developing very rapidly during past years. If more supports are given to TAIR, it will play increasingly essential role in plant and crop sciences and potentially return the favor to the whole society.
	2009-10-17 18:39:28.0	TAIR is providing plenty of information here and it is not wise to reduce its funds. NSF should continue to fund TAIR to preserve and improve its activities.
	2009-10-17 19:29:13.0	I don't think it's a wise manner to cut the support of TAIR.
	2009-10-18 00:00:53.0	TAIR is very important database for plant research!!! the funds from NSF should NOT be cutted!! I think TAIR deserves more supports not only from NSF but also from other funding agency!! I am fully convinced that TAIR will and should play more important role in biology science!!!

	2009-10-19 01:12:43.0	TAIR is useful for the community and there are no other resources that can replace it.
	2009-10-19 01:20:15.0	TAIR is very important and essential data source not only for Arabidopsis researchers but also for other plant scientists especially for crop scientists all over the world. I think compared with other database related to plant TAIR is the best organized database. If NSF reduce the funding for TAIR, the basic research associated with plant growth and development will be drastically impaired. In the genome and proteomic era, TAIR should be granted more by NSF rather than less.
Eva Huala	2009-10-19 09:12:24.0	Thanks for the great comments so far! I would love to hear something about what kind of research problem you're working on and how you're using TAIR data for your work. Are you applying TAIR data to research on another plant? If you're an educator or student, please comment on what role TAIR data plays in your teaching or learning.
	2009-10-19 12:26:28.0	Despite emergence of new model plants, Arabidopsis still effectively serves as a tool for plant biology study. TAIR has fulfilled this purpose and long been an extremely useful database for the Arabidopsis community world-wide. This decrease of funding for the organization, I believe, will affect not only Arabidopsis research but also the study of plant biology as a whole.
Ernest Retzel	2009-10-19 12:35:00.0	I was stunned to hear that NSF is considering pressing TAIR into an alternative funding model. While grant periods are familiar to all of us, the criticality of TAIR to the plant community has and will continue to warrant the support at a national level at the highest level possible. Whatever the dataset (sequence, map, expression, metabolite, etc), TAIR has set the highest standards in annotation, biocuration and availability. In my own current work, we are exploring Arabidopsis meiosis, and rely heavily on the detailed annotations within TAIR to indicate whether we have discovered new genes and/or new exons being expressed as part of the meiotic process. The accuracy of the known genes and predicted models are critical to us. Only a researcher who has "skin in the game" will provide us with the gold standard annotations that are available to us in TAIR. For all the desire of agencies to find sustainable models other than direct grants to database groups, it is clear that no privately funded database has, to my knowledge, been successful in maintaining itself. It is hard to imagine that such a private funding model would allow for the continued growth of the database. TAIR is an integral part of the community. Actually, it is beyond integral - it is the fulcrum on which so much of the plant community depends to leverage the relatively small amounts of money available, particularly in crop science. I foresee no positive consequences from a decision to force TAIR to become the collector of little fees from users and to enforce policies imposed on it. It will build a divide between well-funded laboratories and the more moderately funded (or those unfunded at all - beginning investigators, or those who work on orphan species). If some sliding scale is made for all contingencies, TAIR will have to have an accounting and "awards" staff to track who pays for what, and when, rather than what new tools can be built for researchers. For all the outreach activities that have been constructed around TAIR and its connected resources (e.g., ABRC), there is likely to be a crashing gate that closes between the hopeful teachers and students and the researchers who have worked hard to provide these resources. And, while the mandate of the agencies to keep us focused on utilizing and contributing to significant resources such as TAIR, there will now be every excuse to build small, non-standard, un-connected databases external to TAIR. As we move toward a research publishing model in our academic work that is focused on open access and free availability of research publications in the face of stiff opposition from the for-profit journals, it seems that we are taking a retrograde step to be asking our most successful public model organism database to begin a path of closed access and user fees. I will repeat: I am unaware of any long-term successful fee-for-service database. We cannot afford to allow TAIR to even falter for a moment. It is too critical to the plant community. TAIR has become the model of a cost-effective, well-run, forward thinking community database. In this case, the community extends far beyond Arabidopsis to every model and crop plant being explored. There is no crop species database that does not have significant numbers of instances saying "Similar to Arabidopsis"? If there needs to be some solution other than the normal competitive granting competition, I would say that it is to tithe every Plant Biology Program, and turn that money over to TAIR to maintain its free availability. There is not a genomics project that doesn't, at some point, rely on the data, biocuration and professionalism of TAIR.
	2009-10-19 14:17:58.0	I think TAIR is a tremendous resource! Perhaps though some of its funding should come from advertisements and donations. Losing NSF funding shouldn't be the end. --Marcelo Grad Student OSU
	2009-10-19 14:20:44.0	TAIR has been a great resource to all Arabidopsis researchers in past several years. Without TAIR Arabidopsis research would not have progressed so quickly. TAIR is not only beneficial to the Arabidopsis community but also to researchers working on other model plants. Researcher working on other model plants routinely use TAIR as a resource for comparative analysis. An updated and evolving TAIR database is absolutely essential for plant science to move forward.
	2009-10-19 15:48:45.0	TAIR is very helpful source for plant researchers all over the world. It is also the base of plant science research.
	2009-10-19 19:55:45.0	Without TAIR plant scientist don't have the ability to have the overview on a comprehensible, smartly designed website where you can look up gene information at any time. I really hope TAIR can continue with its leading position as a plant genetics database in the future.
	2009-10-19 20:10:35.0	TAIR is so important to the scientific world and I hope the US government can help its maintenance and development.
	2009-10-20 02:35:47.0	Yes, We need TAIR!

	2009-10-20 03:53:22.0	TAIR is very important for plant biology research!!
Arjun Krishnan	2009-10-20 05:47:00.0	TAIR is *the* resource for plant scientists like me involved in both experimental and computational work. Searching/viewing existing data has been so easy, and data presentation and integration/linking-out with external databases is remarkable. For my computational needs, data is up-to-date, very well organized and documented, and formatted for easy use. It is extremely easy to find the file you want within TAIR. The other *the most* important positive about TAIR is its curator-team. They are very involved in this work, are very quick to respond to a question, do not mind going back-and-forth on an issue, and are most willing to cater to very personalized requests ( <a href="ftp://ftp.arabidopsis.org/home/tair/User_Requests/">ftp://ftp.arabidopsis.org/home/tair/User_Requests/</a> ). Rarely does a day go by when I don't use TAIR. It is a clear model for web resource for other plants. I strongly support continued funding for TAIR to keep up its great work.
	2009-10-20 07:22:12.0	No plant biology without TAIR!
	2009-10-20 07:44:52.0	I don't see how a subscription service will be a successful long term model for TAIR and the plant community. TAIR will be limited to those arabidopsis researchers who use it on a regular basis, while crop scientists and teachers + students may not be able to justify a fee (even though TAIR is important to there work). A move away from grant funding seems to me to be a negative for transferring the knowledge gained in arabidopsis to other species. It will be interesting to hear other views from the community but I see only negative in a subscription approach.
	2009-10-20 15:41:00.0	There are so many databases are available for various plants, crops but nothing is even close to TAIR. We all plant scientists are not only dependent on TAIR's computational resources but also dependent on experimental material. In my opinion, TAIR should be funded in a permanent manner so that all the data, and experimental material can be maintained by its permanent staff members. If my request can help, I request all the concerned authorities for financial support to TAIR as it is important, essential, carry accurate and reliable information, and very unique as there is no other TAIR in the world so please support.
	2009-10-20 18:00:12.0	TAIR is critical to plant biology research. Please support this resource.
	2009-10-21 05:21:04.0	Dont tear TAIR down!!!!!!
	2009-10-21 05:27:54.0	Still much needs to be done using model plants. TAIR is very useful and imp. tool for model plant arabidopsis. So, pl. cont to fund TAIR..!! Thanks
	2009-10-21 08:53:43.0	TAIR is an essential resource for the entire plant research community. For every year that TAIR has been in existence, it has consistently set the bar for plant genome annotation and data curation while ensuring that these data are readily and freely available to the global plant research community. My work in genome evolution and dynamics spans all available plant genomes, and no other plant genome comes close to the depth and quality of information available as those for arabidopsis. I frequently refer to arabidopsis gene models and annotations to better inform orthologies in other plant genomes, and often come across annotation mistakes in these other plant genomes. I believe that TAIR's mission of continuing to provide the entire research community with the highest quality plant genome information is essential, and this resource needs to be funded directly as a publicly available resource. I strongly believe that alternative funding models such as pay-for-access will ultimately be the demise of TAIR. Since most users of TAIR are academic researchers, such a funding model change does not reduce the public's cost of supporting TAIR. Instead, this shifts the costs from a direct grant to TAIR to dispersed costs in many other grants. This presents two significant ways our limited time and funding resources are wasted. First, this increases the number of bureaucratic steps taken by many individual researchers to ensure their grants have additional funding for access to TAIR, and the additional time needed by TAIR to process and charge for access to its data. Second, this presents a signifiant impediment to researchers without a grant who need to use TAIR's data for the first stages of their grant writing process. In addition, TAIR's ability to provide continual improvement to its data depends upon an inherent collaboration with the research community at large. Individual researchers provide TAIR with their data in order to improve and refine TAIR's data, which in turn feedback to the community. If these researchers do not have free access to TAIR, the flow of data from the community into this shared resource will significantly ebb. Over time, this too will cause the death of TAIR. Of the many science-driven online resources available, TAIR is one of the best. NSF's tag-line, "Where Discoveries Begin", could not be a more appropriate description of TAIR. NSF must continue its support for TAIR. Eric Lyons, Postdoc Department of Plant and Microbial Biology, UC Berkeley <a href="http://syntney.cnr.berkeley.edu/CoGe">http://syntney.cnr.berkeley.edu/CoGe</a>
	2009-10-21 09:02:48.0	TAIR is one of the best databases in plant science research. Without TAIR it is very difficult to contribute something to society in the form of food/medicine/fuel etc?It is time for us to think of improving the exciting database with robots computer applications to help all the researchers throughout the world including developing countries. It is unfortunate TAIR funding is shrinking! I strongly support funding TAIR to continue its tremendous work. Thanks TAIR keepup! Sanjay, MSU
	2009-10-21 09:28:05.0	I work both computationally and in the lab and make heavy use of TAIR for both. With the escalating power and reducing costs of high throughput methods, resources like TAIR will become even more important in the future, not less so; to reduce its funding would be bonkers. There is it seems a growing interest in data storage and sharing methods, and perhaps TAIR may attract more funding by participating as a benchmark to the wider audience? There is talk of having journals enforce data sharing as a requisite to publication, perhaps TAIR might play a role in that and gain its finding that way?

	2009-10-21 12:00:39.0	I am a project manager at UC Berkeley overseeing NSF-funded research in comparative genomics within the genus Arabidopsis. TAIR has been an essential part of my work, as I rely heavily on this site to keep me up to date on the most recent annotations in thaliana. I consider TAIR one of the best databases for plant research, and it must be continued to be funded. Margaret Woodhouse, UCB
Erin Osborne	2009-10-21 13:03:53.0	I am shocked to hear of this unfortunate situation. Though I work in the field of yeast biology, I use TAIR on a regular basis and find its easy to navigate pages and succinct information very useful. For me, it is an efficient way to keep up to date on the histone modification enzymes in the Arabidopsis model system. In short, Arabidopsis is a gorgeous model system, and as such it impacts many fields outside of the plant world.
	2009-10-21 13:11:21.0	TAIR is the most crucial resource for plant research. I am a graduate student at UC Berkeley. I am using TAIR routinely and for many aspects of my thesis project.
Shai Lawit	2009-10-21 13:33:50.0	I am a PI at Pioneer Hi-Bred a DuPont Business. I perform discovery research using Arabidopsis as a model system. TAIR is a critical resource to my research program and, I am sure, to many others in my company and other plant biotech companies. TAIR has been critical tool in every project and stage of my scientific development; from grad student to post-doc to PI. The TAIR resource is invaluable not only to those of us using Arabidopsis, but as a annotation and comparative tool to anyone in plant biology. I highly support sponsorship for TAIR from any and all source.
	2009-10-21 13:57:32.0	TAIR is an invaluable resource for any Arabidopsis and plant researcher or student!
Stacey Harmer	2009-10-21 14:17:37.0	TAIR is essential to the research being carried out in my lab. Given the large investment NSF has made in genome-enabled research (both in Arabidopsis and in other species) I am puzzled as to why the need for a long-term, stable archive of such genome data is not immediately obvious. Although a subscription-based model for funding may initially seem appealing to NSF, this would curtail the ability of smaller plant labs and non-plant labs to use the wonderful tools and data available at TAIR. It would also discourage data sharing between TAIR and other databases. As one of the explicit goals of the NSF-funded cyberinitiative iPlant is to improve data access, it would be ironic if NSF were to reduce funding to TAIR and in the process raise barriers between datasets. I strongly believe that NSF should provide stable, long-term funding for TAIR. TAIR is so central to NSF's other investments in plant biology that it would be illogical to do otherwise.
	2009-10-21 14:24:35.0	TAIR is very important for plant research. We have constantly order seeds from TAIR and the service was fast. It did helped our research a lot.
	2009-10-21 14:25:38.0	TAIR is a critical tool for my research work. From gene finding to gene models and T-DNA mutant searches, TAIR has become a big part of the day to day work in any plant molecular biology lab. It is user friendly, regularly updated and well maintained. A great tool to work with! Decreasing funding for TAIR are very sad news to all plant field research. It would be good to know whether there is some way plant scientists could organize and send their views to NSF.
Brad Day	2009-10-21 14:39:43.0	TAIR has enabled me, as a new investigator, to pursue avenues of research and experimentation that would otherwise be cost prohibitive or too timely in which to invest. The availability of, and access to, a broad range of resources has streamlined the basis for hypothesis-driven research, and more importantly, positioned TAIR as a foundation for so many in the community. As a central forum, TAIR's mission has always been the dissemination of information and resources to the community. Without resources like TAIR, I fear the pace of plant science research would take a step back, slowing the advance of new ideas and technology.
Daphne Autran	2009-10-21 14:47:53.0	Every day we are using the resources, tools, informations available at TAIR. This is a tool exceedingly interesting to speed up research in Arabidopsis and for comparative projects with crop species. To maintain and expand the TAIR project is critical for the future of both basic and applied research in plants.
	2009-10-21 14:52:14.0	TAIR is an amazing resource and is crucial for plant biology research. I have used TAIR for many years and would be very frustrated without it. It not only successfully provides user-friendly information, tools and resources but it also serves as a model for how genome-based data should be available for any organism. One of the best features of TAIR is that anyone can access it from anywhere; if TAIR were to become subscription based it would negatively impact how TAIR is utilized. Ideally TAIR would have funding to not only keep operating as is but to also continue to grow and develop new tools, etc. (as it has done in the past).
Abraham Koo	2009-10-21 15:53:31.0	My research starts with TAIR. It served as invaluable tool for my research in the past and will no doubt be in the future. While there are other similar databases, TAIR is the launch pad that I use to navigate other resources because it has everything. TAIR has served a vital role to the majority of Arabidopsis community. It is one of the most successful and high impact resulting investment by NSF that had direct influence on my research. Funding for TAIR should be continued if not increased.
	2009-10-21 17:26:09.0	I am a graduate student at Duke University and I use TAIR everyday. The investment in TAIR pays off in increased productivity.
	2009-10-21 17:50:07.0	Without Tair, the research on the model plant Arabidopsis will not be so quick. The whole research on plant science has benefited from it. If the platform was reduced, the database and material resources will be not as good as now and the plant science research will be retarded.

	2009-10-21 17:53:47.0	TAIR is an invaluable resource for the entire Arabidopsis community, and it is a model for cooperative effort and dissemination of knowledge and strains. I use seed from enhancer trap lines from TAIR to introduce plant development to large numbers of undergraduate students in our introductory lab course. I know from experience that asking individual investigators for materials can be spotty at best (most never reply to an inquiry). TAIR is a model of models and I hope that sources of support can be identified to allow this critical resource to continue.
	2009-10-21 18:55:13.0	I thought we had progressed beyond the Reagan era where public services had to be privatized because the market is more efficient. But beyond the ad hominem, although I only use the seed stock resources, they change everything about what kind of educational experiences I can offer undergraduates. The ease of use and reasonable charges mean I can have students working with the materials they read about in text books and get them to do some real science. Most won't become scientists but they will become something far more important: educated citizens.
	2009-10-21 19:05:42.0	I am an undergraduate from China. I and my lab colleagues are using TAIR almost everyday in our research. It is an invaluable resource indeed. The funding for it should be guaranteed and it will sure pay off.
	2009-10-21 19:29:55.0	TAIR is invaluable to the Arabidopsis community. I use the TAIR website for my research on a daily basis and TAIR is a vital asset for Arabidopsis research. Funding to TAIR needs to be increased, not cut!
	2009-10-21 20:37:50.0	TAIR is very important for plant biology communities, the funding to TAIR should not be decreased.
Pierre Hilson	2009-10-21 21:26:07.0	In the past years, NSF has been a staunch advocate of public and free access to scientific results. The fact that in certain programs NSF funding requires the release of materials and data to resource centers such as TAIR has been a remarkable asset and an invaluable boost to research progress in the Arabidopsis community and beyond. In fact, NSF's visionary position has been an example for other funding bodies, including at the European level, that now have similar policies. Of course, this excellent policy can only be enacted if top notch resource centers such as TAIR are sufficiently supported. Life sciences increasingly requires the integration of data from transcript, metabolite and protein profiles with information about phenotypic variation and allelic diversity. These efforts would be significantly hampered without the immediate and seamless access to the information provided by TAIR. TAIR is a partner of choice in disseminating the results of our efforts. While there are indeed multiple on line sources for data and information about Arabidopsis, TAIR has grown over the years to be the unrivaled and necessary reference to all of them. It is the cement that keeps the international information structure together. While NSF is investing significantly in forging the next generation of tools for integrative plant biology via iPlant, it would be nonsensical to abruptly end TAIR's funding. Why build a roof and sap the foundation at the same time?
	2009-10-21 21:52:36.0	NSF should just see these comments and come to their senses. We, at small research institutions, are maintaining small research labs, only because of this rich resources available to us with a minimum cost.
	2009-10-21 21:56:56.0	While my principal research efforts are on crop plants, I occasionally have students who pursue projects in Arabidopsis. I often find myself jealous at the ease with which they can obtain mutants or genome information from TAIR. This is clearly a resource that is critical to the future of plant biology research and rather than seeing such a resource shrink from lack of funding, I would like to see it enlarged to encompass other model species, like Brachypodium.
Josh Mylne	2009-10-21 22:11:21.0	As the central repository for data on Arabidopsis I consider the TAIR site essential for my research in Arabidopsis. The Arabidopsis data and biological resources are of great use to work I also do in sunflower. We recently annotated an EST pilot project in a non-model plant using the annotations of Arabidopsis genes we downloaded from TAIR. TAIR is essential to a wide range of biological research ranging from development of new crops to increasing our understanding of fundamental biological and evolutionary processes in plants and other organisms.
	2009-10-21 23:24:04.0	catherine Bergounioux Oct 29, 2009 . I used TAIR every days. TAIR is the tool required by all the scientific community to search and to spread information.
Richard Cooke	2009-10-21 23:48:23.0	We have been using TAIR (and its predecessors) since the beginning of Arabidopsis genomics. We teach TAIR, we cite TAIR as a unique example of what can be done when all available information on a model organism is collected and presented in an integrated form, and we use TAIR almost every day, both for bioinformatic analyses or in the framework of our wet-lab biology. Invaluable.
	2009-10-22 00:14:57.0	The Arabidopsis research community is able to share information and resources through the efforts of TAIR in a way that that is the envy of other research communities. The TAIR encourages a sharing culture that allows the advancement of scientific knowledge by all users, no matter where they are in the world. The access to data and resources is crucial to understanding biological processes not only in Arabidopsis, but also non-model plants. The work of the TAIR is vital to the Plant Science Community and deserves financial support to keep it functioning as well as it does.
	2009-10-22 00:17:25.0	TAIR is the resource most widely used by the Arabidopsis Research community. Killing TAIR just means killing plant research.

	2009-10-22 00:21:42.0	TAIR is simply indispensable for the plant community. Most users should be willing to pay a subscription fee.
	2009-10-22 00:34:12.0	TAIR is the perfect website for researchers that work on Arabidopsis as it gathers all the available data on this model organism. As a PHD student, I use it on a daily basis and it is a very useful and time saving device. I'll make sure to acknowledge it in my future works.
	2009-10-22 00:44:50.0	TAIR is a fundamental tool to explore the wealth of gene/protein/metabolite information available and makes efficient research work possible. That way ideas develop, knowledge is gained, benefit arises and costs are saved. If there is a need for plant research in the future to ensure sufficient and sustainable crop production bioinformatic means like TAIR are indispensable for the scientific community. Steffen Rietz, Germany
	2009-10-22 00:51:07.0	user TSAGRIS EFTHIMIA MINA UNIVERSITY OF CRETE TAIR IS A VERY USEFUL DATABASE FOR ALL PLANT SCIENTISTS IN RESEARCH AND EDUCATION. IT SHOULD BE FUNDED BY INTERNATIONAL ORGANIZATIONS THROUGH GRANTS, BY (NOT TOO HIGH) FEE FROM ACADEMIC INSTITUTIONS, BY GRANT APPLICATIONS (COOPERATION BETWEEN NATIONAL AUTHORITIES) AND BY GRANTS FROM THE INDUSTRY
Marc Knight	2009-10-22 00:53:30.0	In my opinion, it is unimaginable that TAIR finds itself in a position to reduce its activities, in the face of its immense success and contribution to moving forwards plant science research. This comes, ironically, at a time when food security is a major global issue, which is not going to go away, and will get worse. I would urge those controlling funding of TAIR to consider its contribution to date, and extrapolate the vital role it will play in the future. In a field of research so important to a basic human need: food, it seems incredible that the tools and resources available to practitioners in this area should become reduced and more meagre as the challenge is increasing exponentially!
Miguel Botella	2009-10-22 01:06:56.0	I cannot believe the mail I have received indicating that TAIR funding is a problem. This database is not only essential for the Arabidopsis community but for all people working on plant science. EVERYONE goes to TAIR to ask for fundamental questions, even if you are working in crop species. I use TAIR everyday, and have requested so many resources that it is unimaginable that TAIR is getting into funding troubles. If there is anything else I could do, in addition to write this letter I am willing to do it. I also agree that if needed a subscription fee for keeping the database not only running but improving you can count on me. However I think that this must be funded generously by public grants. I also think that TAIR must be acknowledged in the Ms that uses TAIR resources and then those people responsible for the grants would be aware how important it is for the plant community.
	2009-10-22 01:07:34.0	I can not do plant science without TAIR database. It's vital to have TAIR running at full capacity and more, to help TAIR improving. Elena
Jose Feijo	2009-10-22 01:48:05.0	TAIR became a fundamental tool for virtually every plant biologist doing any sort of genetic analysis, and a useful resource for the whole community. The level of service has been great, and the amount of publications out relying heavily on the reliability and updated annotation of TAIR is enormous. NSF has a (very good) tradition of keeping up with centers that provide such kind of services for the community for decades, as long as they continue to prove useful, and it's hard to understand how a resource like this which is a pillar for a whole community, does not qualify as such. I ignore the numbers involved, or if NSF plans for an alternative, but I strongly plea that whatever is the case a service like the one TAIR has been providing may continue to be available for the plant biology community, there is just too many things which depend on their services.
	2009-10-22 01:49:56.0	Without TAIR, the work that I do would not be possible. Systems biology - which is currently a field receiving priority funding from NSF, BBSCR and numerous other funding bodies - requires the bioinformatics tools that TAIR provides.
	2009-10-22 02:07:43.0	TAIR is the most central node among plant databases, and many take their information from it. Such a database, and further development of it, is instrumental for progress in plant biology. This is needed for crop and energy plant development to cover the demands for increased food and renewable energy production in a climate becoming more hostile to production in many agricultural areas.
	2009-10-22 02:12:42.0	TAIR has been the best resource I have used for researching data on candidates derived from proteomics. It is the best starting point for obtaining information regarding a wide range of general characteristics for a gene. The loss of funding over time will have a severe impact on the ability of the database to update itself which is imperative for a resource of this magnitude to continue being the best for the plant biologist community. So many aspects of research depend solely on this service that its loss could deal a decisive blow in plant research across the world.
Michel Schneider	2009-10-22 02:19:04.0	The annotation of Arabidopsis thaliana proteins in the UniProt Knowledge Base (UniProtKB) draws heavily on information derived from TAIR. TAIR is the only resource which maintains and curates a complete set of all predicted Arabidopsis genes. The high quality annotation of protein coding sequences performed by TAIR is an absolute prerequisite for accurate functional annotation at UniProtKB. We maintain active and fruitful collaborations with TAIR and the responsiveness of TAIR curators is of major benefit to our own annotation efforts. Free access to TAIR is essential to our annotation process and the proposed closure of TAIR will have extremely negative consequences for our own plant protein annotation program. Michel Schneider, UniProtKB/Swiss-Prot program leader, Switzerland
Miriam Gifford	2009-10-22 02:28:49.0	TAIR is critical for plant biology across the world-wide community. One of our strengths as a community is our openness and willingness to share data and resources. TAIR is a critical facilitator of this. And as new bioinformatic resources are developed and vast amounts of novel and important data is generated (e.g. from proteome-interaction mapping and next-gen sequencing of thousands of Arabidopsis ecotypes) we need this a central node to be a funded service to curate, collate and distribute this information and to develop new tools with which to apply the data in our research. As food security becomes an even bigger priority to address, the need for TAIR is paramount.

	2009-10-22 02:37:15.0	I just cannot think of any scientific research at the advance molecular level without the TAIR's critical presence. It is most definitely indispensable world-wide.
	2009-10-22 02:41:09.0	TAIR is the first place to look for so many tools essential for the modern plant biologist. I access the various bioinformatics tools available here most weeks. My research colleagues working with Arabidopsis and other model plant species are similarly regular users. Should this resource be cut, how would the plant research community continue its work? A decision to end its funding could only be made by those who have no appreciation of the value of biological sciences research to our global environment and society. Dr Mags Pullen, University of Durham, UK
	2009-10-22 02:48:16.0	It is astonishing that anyone would even consider cutting funding to TAIR. It is the best database of its kind in plant science and as such is essential to plant science research. If anything it needs more funding to improve the site and information available (gene/protein interactions information would be good) as it currently lags behind similar databases from other fields including the S. cerevisiae <a href="http://yeastgenome.org">yeastgenome.org</a> . With food security increasingly becoming a problem, reducing funding for a resource so essential for plant science would be a shockingly irresponsible decision.
	2009-10-22 03:29:26.0	My research - no matter what plant species - has always centered around the TAIR databases. TAIR is so essential for my work I find it hard to imagine how large the detrimental impact of cutting funding would be. I am convinced the plant community as a whole requires and depends on TAIR. Henrik Buschmann UK / Germany
	2009-10-22 03:44:13.0	I'm a post-doc and I have NEVER worked on a project that DID NOT use TAIR. If the information in TAIR had not been freely available, most of my time and effort of the course of years would have been spent obtaining the information that otherwise was accessed in a question of minutes via TAIR, for even things as simple as primer or marker design (which requires access to well annotated genome sequence and polymorphism information), just to pick a small example. TAIR's role in facilitating research and making funding use most efficient (by avoiding the same things having to be generated over and over again by each lab in the relevant but never to be shared subsets) CAN NOT be underestimated. It is unimaginable what a ridiculous waste of everyone's time and money it would be to have to generate this kind of data on an individual lab basis for each project, and in fact would be impossible for many, and render many projects unviable. Furthermore, subscriptions would penalise small labs and occasional users, and even more so non-plant labs (and hence valuable collaborations and cross-disciplinary work), unless they were really very cheap - like the cost of personal membership to a society like SEB or the Genetics society, rather than a level comparable to the exorbitant cost of, let's say a journal subscription. To finish: this is an essential plant science resource. It is imperative that it has every support to remain accessible to the research community.
	2009-10-22 03:57:20.0	The information provided and shared via TAIR is essential for fast and efficient progress in plant biology, which is absolutely necessary to cope with the demands for food and feed of a growing world population. Everyone, including members of governments, who is responsible for funding of research can be aware of this fact. It is a shame that such an important knowledge database will be limited in future by funding, but I have no doubt that funding will be reduced.
	2009-10-22 04:02:49.0	I use TAIR on a daily basis and is invaluable to my research, not just as a data repository but also as an integrated set of tools tailored to fundamental plant biology. The curating and data integration available through TAIR far surpasses any other database for any species and has removed many of the obstructions to science by its secrecy of just knowing where to find a certain type of data. TAIR is a fantastic example of what open science can achieve with data contributions from all over the world on all aspects of plant science. If anything TAIR needs more funding to allow it to add much of the data becoming available from modelling, -omics experiments, epigenetics and maybe even related species to aid in evo/devo work. Integration with data from crop species would also aid in crossover work. Ending or reducing TAIR funding would put many researchers in the dark and significantly reduce the efficiency of plant science. Given the issues surrounding food security and climate change it seems very short sighted to cut funding for a keystone of fundamental plant science. A small fee for access would probably be within budget for most users but I feel the scope of TAIR goes beyond what could be achieved through subscription. I also feel uncomfortable with the idea of TAIR becoming subject to market forces and all of the issues that it would entail.
	2009-10-22 04:03:39.0	TAIR is an indispensable resource which needs to be maintained to its current high standards
Franziska Turck	2009-10-22 04:33:26.0	The TAIR site is the "homepage" of many scientists working with Arabidopsis and one of the reasons why this model organism had such a success story. Now an enormous amount of data coming from next generation sequencing approaches will have to be integrated and presented to the community - impossible to cut funding now when the team behind TAIR should actually be empowered to meet the new challenges. If NSF is too poor, ask for more participation from European or Asian funding bodies. We all profit enormously from TAIR.
Michael Nodine	2009-10-22 05:11:05.0	TAIR is a central depository that provides high quality annotations for the premier plant model system Arabidopsis thaliana. I use this resource on a daily basis to design wet-lab experiments and to download genomic data. If TAIR funding is significantly decreased, then this will have a negative impact on basic plant research and ultimately impede our ability to make research advances in agriculture and medicine.
	2009-10-22 05:41:07.0	TAIR is instrumental and absolutely crucial for Plant Biology. The quality of plant research in general will decrease significantly without a resource like TAIR
	2009-10-22 05:59:41.0	Amanda

	2009-10-22 06:00:19.0	Amanda Benson Oct 22,2009
	2009-10-22 06:07:44.0	TAIR is an essential teaching tool for for undergraduate education in Plant Biology. I have used the ecotype lines to design several undergraduate labs. And I would urge NSF to increase their commitment to TAIR.
Greg Lampard	2009-10-22 06:09:22.0	As a professor at a primarily undergraduate university, the continued funding of TAIR is extremely important both for my research and for my undergraduate education programs. TAIR has an extremely well organized collection of biological data and I feel that limited funding would significantly diminish the impact that it has on all plant biologists.
Claire Grierson	2009-10-22 07:09:10.0	I am deeply concerned to hear about the forthcoming decreases in TAIR funding. TAIR is a fantastic resource that supports a huge proportion of, if not all, international plant science. Whilst it is clear that increasing amounts of future research will involve plant species other than Arabidopsis, it would be a serious mistake to think that this will reduce the importance of TAIR. If anything the coming acceleration in the genome analysis of other species will increase the importance of TAIR as an integrated and accessible source of existing data on Arabidopsis - data that can be used to greatly inform studies in other species. Plant science has never been more important (see yesterday's report from the Royal Society, UK, and the mid-October report from the Food and Agriculture Organisation of the United Nations). TAIR and the Arabidopsis stock centres have underpinned the phenomenal success of plant science over the last twenty years. A sensible move to the future would retain these as a strong core whilst building new resources on other species around them. To allow TAIR to fall out of date would be a criminal waste of an invaluable and hard-earned resource.
Helen Tai	2009-10-22 07:15:45.0	I am a potato genomics researcher, who has used TAIR regularly. TAIR has made important contributions to my research program and to many other crop genomics efforts. The need for TAIR will grow as more plant genomes become sequenced. Governments and funding agencies need to recognize that TAIR is not just a tool for scientists but that it plays an integral part in developing agriculture and forestry innovations that contribute to the economy, environment and human health. Maintaining funding for resources like TAIR can often be faced with challenges, even with the track record of success that TAIR has had. Public funding is not always the most steady stream of resources as changes in government policy that sometimes occur almost overnight can impact long-term projects like TAIR. TAIR has a large user base that reaches researchers around the world and may be an attractive site for advertising. Unless a successful campaign can be mounted to convince public funding agencies to maintain funding for TAIR, alternatives such as generating advertising revenue may have to be considered. The most important aspects of TAIR to maintain are its free access and its freedom to operate. The power of TAIR is in its wide variety of resources, ease of use and the large number of users. User fees will compromise access for smaller labs that are not directly working on Arabidopsis thaliana and will not be able to justify paying TAIR fees. TAIR has enabled small labs to make large impacts on plant science to the benefit of the whole community.
	2009-10-22 07:50:24.0	TAIR is instrumental for my reseach in Plant Biology. I hope the EU system can help (join Nasc and Tair)
	2009-10-22 08:29:53.0	TAIR is a critical resource for plant researchers in Canada and the US and abroad and it would be a disaster if this resource lost its funding. Funding MUST be maintained at all costs. Every single person in my lab uses this resource every single day (multiple times), to check out gene info, for cloning and primer design, for bioinformatics, to learn about mutant phenotypes, to order seeds, to find contact information, etc. The only other resources that we use to the same extent are PubMed and Google. I firmly believe that this resource should remain open-access but if I need to contribute to its upkeep I certainly will because my research and the research of everyone else in the Plant Biology teaching and research communities would suffer greatly without it. All sources of funding should be considered: public, government, advertising revenue, donations, subscriptions, merging with NASC, anything to keep it open-access.
Magdalen Lindeberg	2009-10-22 08:33:31.0	Many millions of dollars have been spent on Arabidopsis research and for a relatively small sum, TAIR leverages the massive amounts of data into a widely and easily accessible form. For example, I maintain a genome resources database for Pseudomonas syringae, a model bacterial pathogen of Arabidopsis, and as part of modeling host pathogen interactions I rely extensively on hyperlinks to TAIR. Were these hyperlinks to be available only to registered users, the usability of my interacting database would be substantially diminished. I have also put substantial effort into the design of lessons on plant-pathogen interactions for middle school and high school students, in accordance with NSF priorities. Databases such as TAIR are invaluable as teaching tools but clearly public schools (as well as many undergraduate institutions) will not have the financial resources to pay for access.
	2009-10-22 08:37:23.0	TAIR is the first place I look for new/definitive information on Arabidopsis. It has been invaluable to my research. It provides a fantastic resource for thousands of labs worldwide. This includes those working on other plants and, I daresay, non-plant organisms. The cost benefit ratio is tiny; that is to say the help it gives to the whole community far outweighs what is required to maintain it. NSF should fund it, as should other national and international fundng agencies. Sam Zeeman 22 October 2009
	2009-10-22 09:01:37.0	As a PhD student I would be lost without TAIR. It is an essential resource for my day to day work in the lab and an instant, easy to use reference for all things Arabidopsis. I wouldn't know what to do without it and my research would certainly be a lot slower and more difficult.
	2009-10-22 10:10:52.0	I've been using TAIR since its inception while I was a graduate student, now it is an integral part of every project in my own lab. It is used daily by my lab personnel and myself, and is the first place to look for information on pretty much anything related to doing molecular genetics in Arabidopsis. It is an incredible resource to the community and I use it in my courses (Molecular & Cell Biology Laboratory, Genetics) as an example of a one-stop resource database. I don't know what I would do without it - probably spend a lot time "re-inventing the wheel". TAIR should be publicly funded, as many researchers with smaller, less well-funded labs would do be able to afford a subscription, or perhaps even have access to well-stocked libraries or access to other databases to look up the information without TAIR. T Western, McGill University, Canada

David Meinke	2009-10-22 11:54:10.0	I am one of the individuals who submitted a letter to the TAIR advisory board in strong support of TAIR before a final decision on renewed NSF funding was made. I attach that letter here: I am writing to express my concern about the future of TAIR. I have learned that TAIR funding will expire August 31 and that a renewal proposal is currently under consideration at NSF. I have also heard that questions are being raised about the need for NSF to provide long-term support for TAIR, with talk of moving instead to a model of self-support through paid subscriptions. I find this both alarming and disheartening. I have devoted my entire scientific career to promoting the use of Arabidopsis as a model system. I have also served NSF in multiple capacities over the years. I was a member of the original review team that urged NSF to support the TAIR project, I served as an early member of the TAIR executive committee, and I worked for a year as the program director for the NSF Plant Genome Program. I use TAIR on a regular basis for both teaching and research, and I have the greatest respect and admiration for the curators and database experts who provide TAIR as a service free of charge to members of the Arabidopsis community and beyond. What a cruel irony that questions about NSF support for TAIR should be raised at this point in time, when NSF has just received a significant infusion of new funds to support a wide range of programs and when the value of Arabidopsis for research and education in modern biology is finally being realized. Years ago, NSF made a commitment to increase support for basic research in plant biology. The benefits can be found in just about every major discipline of biology. In addition to funding individual research projects, that commitment brought certain responsibilities with respect to maintaining both a central database and a biological resource center to ensure that investments in basic research were not wasted. I am very concerned that a move by NSF to abandon its commitment to support either of these critical facilities for the long term would have a chilling effect on current and future research efforts in plant biology and on the training of new scientists at all levels. I realize that NSF is constantly faced with making difficult decisions about funding priorities. But I am convinced that abandoning support for TAIR, despite an outstanding track record and incredible community-wide utilization and appreciation, would send a clear message to the scientific community that NSF has moved away from its commitment to play a unique role in supporting basic research in plant biology. And that, in my opinion, would be a big mistake. I cannot image a system that would require a subscription fee to access the TAIR database. Here are just a few problems that come to mind: 1. How can I encourage public school teachers to make use of TAIR when they have difficulty paying for just about anything these days? 2. How can we encourage people to continue working on Arabidopsis, the premier model system for research in plant biology, when the premier funding agency for scientific research (NSF) is unwilling to support the database that makes the results of that work accessible and understandable to the broad scientific and education communities? 3. Why should I provide data to TAIR that will be available to just a limited subset of people in the scientific community? 4. How do I encourage people not familiar with Arabidopsis to make use of large amounts of information on Arabidopsis when they need to pay up front in order to learn how valuable that information might be to their own research? 5. NSF would still end up paying for at least part of TAIR because some of those fees would be put on NSF research grants. The difference is that NSF support for TAIR under the subscription plan would be more difficult to predict. And the negative press that a subscription plan would generate for NSF should not be underestimated. 6. How can TAIR continue to support its excellent staff through a transition period to an uncertain source of funding in the future? We cannot afford to lose the combined expertise of TAIR staff members all at once. 7. How do you prevent people from sharing their subscription access numbers to other people who do not pay the subscription fee? The logistics of this could be difficult to say the least. 8. How can you predict future revenue generated by subscription fees to a level of accuracy that allows for rational planning of future projects and enhancements? 9. How do we keep TAIR as the primary focal point for information on Arabidopsis, which simplifies information management, with a subscription fee that encourages people to look for bits and pieces of Arabidopsis information (often not curated) elsewhere for free? I urge NSF to maintain its longstanding commitment to support and facilitate research with Arabidopsis by approving the next round of funding for TAIR without moving to a m
David Meinke	2009-10-22 12:08:02.0	Here is the final sentence of my letter above, which was cut short. "I urge NSF to maintain its longstanding commitment to support and facilitate research with Arabidopsis by approving the next round of funding for TAIR without moving to a model of self-support through subscription fees." David Meinke; Oklahoma State University.
Gabrie I Leon	2009-10-22 13:26:39.0	I've been working in plant biology since I was an undergrad student. Since the begining, TAIR was the most important resource for my research. Now, as PI of my own lab, I am deeply concerned about the strong cut in TAIR's funding. I can not even imagine our day-to-day research activities without TAIR! Certainly it will negatively impact plant research worldwide.
David Ehrhardt	2009-10-22 14:47:18.0	I think that David Meinke just about said it all. Arabidopsis is my primary research organism and my program would suffer greatly if TAIR was not maintained. I consider databases like TAIR to be essential infrastructure for basic research and science education. If the US government values basic research and science education then it needs to fund the infrastructure that supports these activities. Because such basic infrastructure benefits not just a few research projects, but the life sciences in general, it is an appropriate and indeed ideal subject for government support.
	2009-10-22 14:54:33.0	TAIR is absolutely essential for our work on Arabidopsis and other plant species. Reducing or aborting its services will strongly impact all areas of plant science.
	2009-10-22 23:48:58.0	Must be kept. Critical resources for all plant scientists. I was hoping TAIR concept would be expanded to other plants.
	2009-10-23 00:38:11.0	It is crucial that secure funding for TAIR is guaranteed for the future of not only Arabidopsis research community but also broad field of plant biology. what can we do without TAIR support??
Stefan Weinel	2009-10-23 00:41:17.0	The TAIR website is an essential resource of information for all scientists working in the plant science field. Restricting the online offer of TAIR would mean a major drawback for many plant scientists and will have impact especially to young scientists starting to work in the plant science field.

	2009-10-23 01:08:26.0	TAIR is very important for Arabidopsis research. I would be lost without TAIR. It would be very bad if it wouldnt be maintained at this high standard.
	2009-10-23 01:25:59.0	Losing TAIR, even in part, would mean losing the best handhold on genomics resources for plants in the world. Other sites host plant genomics information but none are maintained by a team that understands Arabidopsis so well, which is vital. Those of us working on genomics in non-model species with high importance for food security would be really lost without this essential resource. DM.
	2009-10-23 01:46:08.0	TAIR is one of the most important data resources for plant researchers. It would be very hard for a researcher without TAIR.
	2009-10-23 05:24:39.0	TAIR is the hub for worldwide Arabiopsis research and has wider implications in plant biology as a whole. Indeed, it is also essential for researchers in other systems trying to gain an insight into genetic conservation across kingdoms! It would be a travesty to jeopardise this resource and would be a slap in the face to the fantastic work made by TAIR curators and researchers who have exploited it to publish some of the excellent science going on in the plant community - MICHAEL BORG
	2009-10-23 07:01:01.0	TAIR is one of the best databases in the community of plant sciences. We can not have it!
Julin Maloof	2009-10-23 07:10:33.0	The ideas of subscription fees and/or reduced functionality at TAIR are very disheartening. Having databases such as TAIR be free and openly accessible is strongly synergistic and enabling for a broad community of users. This synergism will be lost in a subscription-based model and the entire community will suffer.
	2009-10-23 07:24:31.0	There are two points I'd like to make here. First, it is shortsighted to cut funding for any well-established database such as TAIR. Databases make research faster and less expensive, and every dollar spent on literature curation is paid back severalfold in time saved to the bench scientist. One time, when I was in grad school, I spent three weeks in the library doing a literature search that would have taken seconds had there been a database covering the material. How much do you think it cost to fund me, even on my stipend, for that period of time? Second, while it is well-established that TAIR is a vital resource for the plant research community, it is also a highly valuable resource for the broader scientific community. As just one example, Arabidopsis is the only plant included on the list of Reference Genome organisms and, as such, provides a valuable outgroup when trying to infer gene function from phylogenetic information. -Mike Livstone
	2009-10-23 08:35:33.0	TAIR is the single most important data resource for researchers of Arabidopsis and other plants, and it cannot be that an established public resource, on which so many depend, will be reduced so dramatically. In addition, TAIR is very important for the wider research and database community. TAIR is at the forefront of Gene Ontology development and represents the plant aspect there. TAIR also is a leader in scientific journal / database cooperation, to streamline the annotation process and make published results available to all in a more efficient way - Petra Fey
	2009-10-23 16:51:55.0	I am also disheartened and appalled by these news. TAIR has been the #1 tool I've used since I began my research career as an undergraduate in 2002. The website greatly facilitates day to day tasks by providing plant scientist with a hub of information that otherwise would take great effort to acquire. I use TAIR tools such as seqviewer and tair blast on the the daily basis. Additionally, materials such as cDNA plasmids and T-DNA seeds are readily available through the website making ordering simple. The bioinformatics tools provided by TAIR have helped me find gene homologues that were previously unidentified. The people at TAIR are also great resources. They not only keep the site running but they also are there to help us scientist with any questions and technical difficulties we may have. TAIR should continue being funded by the NSF, by other government agencies in the US and or perhaps Worldwide. I believe adding user fees is not going to help the situation. Instead, it will create a disadvantage for smaller plant labs that do not have resources that labs at "big" research institutions or in the industry posses. This will in turn increase the gap in research quality done at "smaller" schools. Thus, TAIR should remain a free source for everyone in the plant community. Brunie Burgos Doctoral Candidate Department of Genetics The University of Georgia
Boon Leong Lim	2009-10-24 06:37:18.0	TAIR is the most useful website in plant researches. Without TAIR, the progress of plant biology will be greatly delayed, in terms of decades!!
	2009-10-24 14:02:26.0	TAIR is my favorite database for everyday work,the way it delivered the data reduce greatly time I spend looking for necessary information - Marta Sawczak, Adam Mickiewicz University, Poland

	2009-10-24 14:02:55.0	Shift does NOT equal End!   I find all of the above to be quite alarmist in nature, and agree more whole-heartedly with the comment from TSAGRIS EFTHIMIA reproduced below. I have little doubt that TAIR will continue given that it is an absolutely invaluable resource. I can, however, understand the concept that granting agencies, and perhaps especially NSF, are about taking the reasoned risks in supporting new and innovative initiatives. TAIR is an excellent example of just such an initiative that few others might have bought into when it was just a concept. Once new initiatives are established and have successfully demonstrated their exceptional value, long-term support should gradually shift to the greater international scientific community. In other words, benefits from TAIR are by no means restricted to US scientists (the only ones actually eligible for NSF research support), nor are they restricted to those in academia, so it only makes sense for financial support for TAIR to come from many sources.    Again, I reproduce Tsagris' comments here: user TSAGRIS EFTHIMIA MINA UNIVERSITY OF CRETE -- TAIR IS A VERY USEFUL DATABASE FOR ALL PLANT SCIENTISTS IN RESEARCH AND EDUCATION. IT SHOULD BE FUNDED BY INTERNATIONAL ORGANIZATIONS THROUGH GRANTS, BY (NOT TOO HIGH) FEE FROM ACADEMIC INSTITUTIONS, BY GRANT APPLICATIONS (COOPERATION BETWEEN NATIONAL AUTHORITIES) AND BY GRANTS FROM THE INDUSTRY)   My only amendments would be to say that academic institution fees, if incorporated into the funding structure at all (which I don't 100% support), be scaled relative to institution size, and even waived for institutions with fewer than 4 or 5 plant researchers -- otherwise many institutions with only one or two plant researchers would not likely pay the fee, leaving those individuals significantly hampered relative to colleagues at other institutions.    With respect to agricultural/horticultural industry, who also clearly benefit substantially from public resources such as TAIR, I would encourage a model of formulating an ad hoc committee of representatives from all companies likely to benefit, and negotiating with the collective regarding financial support of this resource. You could go to each one by one, and then you are reliant upon the philanthropy of each, as well as the degree to which they are willing to be honest about how much they rely upon the resource. In other words, hoping that each company will be a ?good citizen? in contributing at all, and will give generously. First off, companies would not only undermine their own credibility among their peers/competitors by trying to argue that they do not make use of the resource, and therefore should be exempted from paying, but they would undoubtedly be strongly challenged regarding that claim. Thus, it would seem likely that the percentage of contributing companies would be quite high. Moreover, if industry representatives work together to agree upon acceptable/expected levels of support, it is most likely that the overall level of support would be higher than if approached on a case-by-case basis.
Charles White	2009-10-24 14:12:32.0	TAIR is a key part of research in my lab. and in the world-wide Arabidopsis research community. I am convinced that it has played a central role in the tremendous acceleration of Arabidopsis and plant research in general. We are witnessing an explosion of information in biological research. The facile, structured access to available information and resources for tractable model organisms will, to my mind, provide the key basis for integrating and analysing this information. This is not moment to threaten to shut down or reduce the effectiveness of TAIR.
	2009-10-25 04:49:22.0	In my opinion, TAIR is the most important public database for Arabidopsis researchers all over the world. Our research greatly benefited from the information TAIR provides. I consider the reduction of TAIR funds a severe mistake as it most likely yields in a deceleration of progress impacting fundamental research on a large scale. Instead fundings for this invaluable resource should be greatly augmented.
	2009-10-25 07:44:33.0	Nurit Firon Oct 25, 2009 TAIR is an ESSENTIAL public database and resource important for plant research all over the world.
	2009-10-26 00:29:38.0	TAIR is THE gateway for plant biology. It is an important source of information and always tries to stay updated with the latest developments in plant science and omics. As such it is an example for all other databases of modelorganisms. From a simple database it has matured into a valuable knowledgebase!
Chunlin Liu	2009-10-26 06:28:02.0	TAIR has the irreplaceable status in plant research area and she is one of the most important data and function bank. Although we meet economic crisis, to reducing the TAIR funds will damage the innovation in plant and crop science in the world. In the long term, reduction of TAIR funds must fluctuate the foundation status of USA in the world. So I strongly suggest that the NSF provide level funding as September 2009 - August 2010 to TAIR for another five years in order to let TAIR establish the self-development capabilities. I also suggest that TAIR increase the price to \$8 or 10 for one mutant.
Viktor Zarsky	2009-10-26 08:02:50.0	From central European perspective TAIR is one of major pillars of our progress in plant sciences after the years of communistic isolation from the rest of the world. It is well known, that genetics was terribly affected by communist ideology and free access to plant genetic resources decisively contributes to our way out into the contemporary plant science. Free access to this crucial information and DNA/plant resource not only enabled us to initiate interesting exploration of essential Angiosperm biology, but also is used for teaching purposes at the universities and sometimes high schools. TAIR is a flagship for trustful, candid and altruistic service to collaborative science which in itself is an important aspect of its activities.
	2009-10-26 08:35:18.0	TAIR is an essential resource for the entire plant community. Reduction in the funding for TAIR and hence services TAIR provides will have a huge impact - well beyond the Arabidopsis community - affecting all areas of plant science. I think that solid core funding is essential for this flagship amongst database resources. Alexandra ME Jones.
	2009-10-26 12:37:53.0	TAIR saved me three months of map-based cloning work due to its morphological phenotype database. It is also a great source for producing markers for map-based cloning. This is only one of many wonderful uses of this database. Generating new databases is essential for the Arabidopsis community, especially since so many hypotheses are based upon its bioinformatics databases. It would be highly detrimental to plant research if TAIR was forced to operate on shoestring budget. I hope the NSF will reconsider their position. Christopher DeFraia
	2009-10-26 14:31:46.0	TAIR was a great resource for my Ph.D. work and I hope to use it to reach out to our next "crop" of "budding" research scientists. Please fund TAIR.

	2009-10-26 18:15:30.0	TAIR provides a wonderful model for other species research, her rapid and effective service are impressive and helpful for our workand wider plant biology communities.Please continue funding TAIR and to promote her invaluable spirit and management. Chorong Tang lab
	2009-10-26 18:54:37.0	TAIR is the first database we access for information for our gene of interest. The funding for this gigantic global plant resourse is just a small drop of what animal centric and now biofuel fueled research demands. Its short sightedness of the few non-plant people at NSF to cut funding for this international resource.
	2009-10-27 00:50:51.0	TAIR has supplied high quality genome information that is useful for all Arabidopsis researchers. Moreover, I believe that TAIR database is becoming an encyclopedia of plant kingdom that is useful for whole plant research community. I hope that funding agencies including NSF will reconsider the importance of TAIR activity and provide continuous support to TAIR.
	2009-10-27 02:44:30.0	TAIR has been, is and will be the first supportive database for plant science in general and for Arabidopsis research. I hope that future fundings of this irreplaceable database will be seriously considered by the NSF and other funding organizations. Ali Ferjani
	2009-10-27 04:24:30.0	TAIR has been and is a critical facility for both my research and teaching. I use it as the exemplar to my postgrad students of how a community facility should be run. It is ironic that just at the time when food security, sustainable agriculture and biotechnology is becoing increasingly accepted that this short term view has been taken. As a Brit, not something I expect from the NSF. If necessary, some level of international support should be put into place, the community has the mechanisms to do this, they should mobilise.
Tony Schaeffner	2009-10-27 05:27:14.0	TAIR in conjunction with the stock centers ABRC & NASC provides the worldwide Arabidopsis research with indispensable information and material. I think that none of us in the "wetlab" community (I am guiding an Arabidopsis wetlab) would be able to continue working without that resource. On the other hand, I realize that it has to be financed in a adequate and fair way. Suggestions: a) One possibility is to ask for higher fees for use of stocks, which may not be a problem for the individual labs, but it could sum up to a considerable amount. b) Ask other contries scientific organizations for support, since this is a worldwide community. I am from Germany and I am willing to propose to our national (DFG) and/or EU agencies to support TAIR by an adequate share. What is adequate could be estimated by the number of users per country (less developed countries could/should be free). Tony Schaeffner, Helmholtz Zentrum, Muenchen, Germany
	2009-10-27 07:30:08.0	We may regard TAIR as one of our legs we move forward on in modern plant science. It has been growing over the years and we learned more and more how beneficial its use is for our purposes. Don't let our teaching and research trip on cutting down the TAIR budgets steeply!
	2009-10-27 07:45:37.0	It seems obvious that TAIR is essential. If no other option is found I could see at least some kind of subscription fee being applied for annual access (per lab or individual). I would rather this to cover costs than exorbitant prices for particular items such as seed stocks. It would be useful to know what such a fee would need to be to be adequate. Marcus Heisler.
Leslie Sieburth	2009-10-27 08:41:46.0	Tair is an essential resource! My students and I use TAIR almost daily. In addition, I have used TAIR in my teaching. Even undergraduates were able to access TAIR and augment their learning. NSF, please continue funding!
	2009-10-27 13:48:53.0	I don't think I can do my research without TAIR.
	2009-10-27 14:39:10.0	I think TAIR is totally indispensable for those of us studying plants, whether Arabidopsis researchers or not. We use Arabidopsis as a model for what may be going on in other plants also. I use TAIR on a daily basis, it's the first place I look for info on genes, sequences of genes/proteins, domains, expression, localization. EVERYTHING! I would feel like I lost a huge resource and I would have no solid hub of data to turn to. SUPPORT TAIR! - Grad student, UK
	2009-10-27 17:24:17.0	TAIR is so important for us plant biology researchers. plant biology is essential for our daily life, plant biolgy is our essential foods.
	2009-10-28 02:43:05.0	I love Tair. Oh yeah
	2009-10-28 03:59:02.0	TAIR is the Best. No TAIR, NO LIFE
	2009-10-28 03:59:29.0	Tair is clearly very useful and there should be structured continued funding, as the NSF can provide. Big new projects, like the 1001 arabidopsis genomes, should significantly contribute. Perhaps one should also get sponors on the website, given the enormous amount of visitors every day.

	2009-10-28 04:21:23.0	I think TAIR belongs to the most important public databases for Arabidopsis research. Not only it is important for researchers in projects related to Arabidopsis, but also for reserach related to cruciferous plants. TAIR provides genes, maps, publications and much more which builds the basis for future straight-forward research. TAIR is an inevitably necessary resource which must not vanish into thin air! The NSF funding program to TAIR must not be not reduced, because it is substantially important for high-quality research. Futhermore the importance of TAIR as resource rose throughout the past years and will become even more important in the future, from my point of view.
Fatima Cvrckova	2009-10-28 05:16:14.0	Over the last several years, TAIR has evolved into THE world's No 1 public database for a very substantial portion of the plant biology community, not just arabidopsis researchers. I do not hesitate to compare its importance as a part of the core research infrastructure with sites such as NCBI Entrez or Expasy/SwissProt. So I sincerely hope that the current funding crisis of TAIR will be resolved at least as well as the 1996 funding crisis of SwissProt. (For those too young to remember - a good article on the SwissProt crisis, though with obsolete links, is at <a href="http://www.techfak.uni-bielefeld.de/bcd/Curric/For All/Econom/sprot.html">http://www.techfak.uni-bielefeld.de/bcd/Curric/For All/Econom/sprot.html</a> ).
	2009-10-28 08:34:37.0	TAIR is one of very important database in the world, and should get enough money for supporting the research.
	2009-10-28 09:34:17.0	Senders : UniProt Consortium Pls Dear Eva, The announcement of the steep decrease in TAIR funding sounds as a death threat on one of the most valuable resources for plant research. We outline below the major features of the collaboration between TAIR and UniProt in the hope it can be of help. The Plant Protein Annotation Program was instated at Swiss-Prot in 2001 and since then, TAIR, as a central repository for all the data produced by various research groups, has been a key source of information for the manual curation of Arabidopsis proteins. As early as 2004, the first mapping between the TAIR proteins and the UniProt Arabidopsis proteins described in UniProtKB/Swiss-Prot was produced. At the same time, UniProt also started to request new AGI codes assignments for genes previously unidentified. For example, the complete annotation in UniProt of two families of small cysteine-rich proteins resulted in the identification of 115 new CDS not present at TAIR at this time. Exchanges between TAIR and UniProt increased in 2005 and explicit links to TAIR appeared in all Arabidopsis entries in the UniProtKB release 6.0. In addition, a pipeline was set up for importing into UniProtKB/TrEMBL around 2300 TAIR proteins not having a reciprocal best match with a UniProt entry. Since then, UniProtKB and TAIR are kept synchronized. Moreover the TAIR team has always been highly collaborative and responsive. For examples, it took them only a few days to produce specifically for us a file detailing all the splice variants included in their new release, and all our numerous requests concerning modifications in the way TAIR is cross-referenced to UniProtKB have been implemented almost immediately. UniProtKB/Swiss-Prot also manually annotated several enzymes that were to be integrated in new pathways created by the AraCyc curators at TAIR. Based on our family annotations, alterations to the current gene model predictions are sometimes necessary and over 150 gene model improvements have been transmitted to TAIR for integration in their database. The exchanges described above allow a proper access to both the genomic structure and protein data via the 2 complementary databases. Both databases have benefited from this collaboration to the best advantage of the scientific community who is using them. TAIR has been successfully proactive in linking with publishers through a unique partnership formed between Plant Physiology and TAIR to create an efficient mechanism to ensure that genetic and molecular data on Arabidopsis published in the journal are reliably captured in TAIR's public database. Thanks to TAIR, UniProt has been included in this monthly exchange and we have now a direct access to the data. This information allows us to identify proteins with sound functional characterization for a priority manual annotation Generalist databases such as UniProtKB, if they want to fulfill their users' requirements depend on the availability of resources such as TAIR. Moreover it is only by keeping complementarities and collaborations between global databases and specialized databases that it is possible to guarantee a full access to data by the scientific community. The disappearance of TAIR would widely impact the plant research field and more generally will jeopardize the free access of every scientist to data. The UniProt Consortium Pls : Rolf Apweiler, Cathy Wu and Ioannis Xenarios
	2009-10-28 19:03:20.0	Tair is our main reference database for plant research. The information provided by it is very important and comprehensive. So we hope to use it for a long time!
Kemal Kazan	2009-10-29 00:45:46.0	I completely agree with those who have already extensively commented on the importance of maintaining the functionality of TAIR. As many other plant scientists, we use the TAIR database almost daily in our research activities, from seeking information on a particular gene to ordering T-DNA insertion lines and mutants. It is needless to say that TAIR has contributed immensely to every aspect of plant science so far and will continue to do so in the foreseeable future. Therefore, we strongly support the view that TAIR should be spared from funding cuts. I use the TAIR website as my home page. I think that says it all. Kemal Kazan
	2009-10-29 07:43:16.0	TAIR is essential for research in plant sciences and useful for teaching. Its removal would be an unbelievably retrograde step and lead to a huge amount of wasted effort.
Jim Tokuhisa	2009-10-29 07:53:25.0	TAIR is an essential component for Arabidopsis research and a model for other genome-based organismal research. From its inception, TAIR has supported and reinforced the unparalleled collegiality, access and openness of the arabidopsis community. What strikes me is that TAIR remains at the frontier of innovation and discovery while maintaining its established resources. Other genomes have been sequenced and resources should be devoted to these more commercially important species but I would argue that those databases have profited from the TAIR model and should be supported commercially and through user fees. The arabidopsis community continues to advance the leading edge of systems biology and TAIR is an essential tool for that vitality.
	2009-10-29 10:05:12.0	Our lab is to study functions of uncharacterized RING proteins in Arabidopsis taking reverse biology approach. TAIR has helped us in so many ways such as checking for availability of T-DNA insertion lines, cDNAs, EST information, and homologues search.
	2009-10-29 11:34:19.0	We also use the TAIR database very frequently. Together with the information on T-DNA insertion lines and mutants, TAIR is positively contributing to research in Plant Biology. I agree with Julin Mallot: it has to be free. Otherwise the entire Arabidopsis (and even plant) community will suffer. JF Martinez-Garcia, Barcelona, Spain.

	2009-10-29 19:11:10.0	TAIR is a fantastic resource for us - at the University of Auckland in New Zealand- we use it for teaching bioinformatics and finding insertion mutants in key genes. It is used as a model by other genome sequencing projects - many aspire to be as good as TAIR. As a model and a pioneer it needs to be kept going and publically funded.
	2009-10-30 06:36:14.0	TAIR is a key pillar to our research. In our search for novel regulatory proteins in the chloroplast we rely heavily on annotations, gene expression data and general literature. The TAIR website gives us that information in a clear straightforward overlook. Simon Stael, Vienna, Austria
	2009-10-30 07:04:47.0	I am a TAIR-aholic! No (science) life without TAIR!!!
	2009-10-30 07:38:41.0	TAIR is great! I almost use it everyday!
Thomas Greb	2009-10-30 07:57:14.0	Without TAIR Arabidopsis research on the level where it is now would not be possible. The service is key to connect thousands of research groups around the globe and to integrate all the single efforts into one platform. Thinking some years ahead, the amount of data collected about Arabidopsis will have increased exponentially and the combination of them will be even more important. Without a platform like TAIR such a 'next-level' research would not be possible and all the funding of individual projects would loose momentum. Therefore, it should be in the interest of everybody to keep TAIR alive on the level where it is now or even extend its resources.
	2009-10-31 12:17:32.0	there are lots of information and tools that help us for doing research
	2009-11-01 16:14:47.0	NSF POLICIES NEEDS TO BE OVERHAULED, IT IS OLD, OUTDATED AND DOES NOT SERVE THE SCIENTIFIC COMMUNITY WITH ITS NEEDS TO PROGRESS AND PUSH THE LIMITS OF SCIENTIFIC DISCOVERY.
	2009-11-01 16:21:54.0	Obama should set up a committee to review the policies and staff at NSF. The old boys network needs to be removed and replaced with a fair and unbiased review process.
	2009-11-02 02:31:07.0	If NSF wants to save money, it should keep TAIR funded. Shutting down TAIR or limiting it's resources will slow down research all over the world, regarding the fact that TAIR is used on a daily basis by most plant labs. In addition NSF money will be burned because individual labs will have use their "own" (NSF?) money to collect/provide/organize all the data so far provided by TAIR.
	2009-11-02 04:59:38.0	We profited enormously from TAIR as well as many many our colleagues and all the info and tools are absolutely needed on the daily basis for world wide scientific community to do the best science.
	2009-11-02 11:48:39.0	TAIR provides an essential front door to all Arabidopsis genetic resources, including SiGNAL and ABRC. I don't believe anyone (including NSF) questions the absolute need for its existence. It is a resource in which the worldwide community and NSF can be very proud. this is not the issue. TAIR is great and everyone knows it. The question is: who funds it? As a user and as a partner through our journal, I see no reasonable mechanism for long term self-funding. A user-fee schedule is simply unsustainable and will discourage use by academics. There is no simple mechanism for support by foreign government entities. And industry will not come up with enough money to keep things going. There really is no viable alternative to public US funding.
	2009-11-02 12:37:01.0	I read the entire letter David Meinke wrote, and totally agree with the reasons to keep TAIR well funded. A further reason is that TAIR set a high bar for other sequenced model plants. The sophisticated tools in TAIR have helped researchers a lot to pursue functional studies, which is a paradigm for other model plants.
	2009-11-02 17:11:03.0	We would like to send an email to those in charge at NSF to express our concerns regarding TAIRs decreasing funding. Does anyone have the email address of the director at NSF?
	2009-11-03 02:03:52.0	I don't understand the reason to leave TAIR now that this is the principal repository for THE plant model. Unfortunately I don't know another database with this high quality of annotation, such exhaustive data and interporability between data. Let live the TAIR !
	2009-11-03 02:39:57.0	TAIR is absolutely necessary for my daily research. I would have enourmous disadvantage without having TAIR as a information resource.

	2009-11-03 06:13:51.0	TAIR is very useful for Arabidopsis researchers. It deserves more funding rather than reducing its functions.
	2009-11-03 08:23:39.0	TAIR is essential for all of us. No doubt!
Nicholas Smirnov	2009-11-03 11:00:49.0	TAIR (and PMN) are essential resources for my research group. The comments posted already underline its importance to the international community of plant scientists as an accurate and user-friendly repository of information. This adds value to everybody's research and is essential for the goal of understanding how Arabidopsis works, moving on to systems level research and transferring knowledge to crop plants. As I am not a USA citizen, I can't comment in detail on NSF funding policy, but a solution for future funding is needed, either from the USA or perhaps an international consortium. Access by subscription would result in unequal access and an unpredictable level of funding.
	2009-11-03 22:21:50.0	TAIR is useful for our research, it's not wise to reduce its funds.
	2009-11-04 02:31:24.0	TAIR has been a great resource for years. It gives not only equal access for information but also equal opportunity in doing good science and research in plant biology worldwide. It would be sad if TAIR won't get well funded from NSF as before. ---- A voice from researcher in Thailand. DW.
	2009-11-04 14:22:11.0	TAIR is an excellent database that is free to use for everyone working on Arabidopsis. It in fact, keeps getting better. All pertinent sequence data for every gene, its present localization data and all papers linked to gene can be obtained at one stop TAIR. I have been using it at least twice a week, and it's hard to believe that TAIR could become unavailable to us. All other good bioinformatics suites, like BIOGRID are not free of charge. I used a trial version and found out that everything on there was already on TAIR.
	2009-11-04 16:39:00.0	For those who wanted the email address for the director of NSF: <a href="http://www.nsf.gov/od/index.jsp">http://www.nsf.gov/od/index.jsp</a> Email: <a href="mailto:abement@nsf.gov">abement@nsf.gov</a> Title: Director Email: <a href="mailto:cmarrett@nsf.gov">cmarrett@nsf.gov</a> Title: Deputy Director (Acting) I have emailed and addressed my concerns regarding the lack of funding for TAIR and the importance of TAIR for science around the world.
	2009-11-04 18:56:29.0	????
	2009-11-04 19:15:43.0	what are you thinking about Is??? this is real serious!! We need more funding for this excellent database!!!
	2009-11-04 19:21:59.0	Hey! Soy bean is also included in TAIR... You can see plant is everywhere...
	2009-11-04 20:04:58.0	Is it possible to seek funding from other places such as EU, Canada or China?
	2009-11-04 20:51:34.0	I teach a senior/MS level nucleic acids lab course at a primarily undergraduate institution. TAIR is critical to the execution of this course. The course is based on soybean cDNA libraries, and once each student has analyzed the sequence of his/her randomly selected clone, he/she uses the TAIR resources to aid in their design of an experiment to test function. The TAIR information itself is obviously critical to the course, but so, too, is the student experience of working with such an incredible resource. I can't imagine doing without it. I am currently on sabbatical in an Arabidopsis lab & again, can't imagine doing without TAIR.
	2009-11-05 03:50:32.0	TAIR is essential for the researchers of plants.
	2009-11-05 06:24:56.0	I'm sorry to hear that.
	2009-11-05 06:33:56.0	Without TAIR, how could we play arabidopsis?

	2009-11-05 07:52:32.0	I am absolutely terrified at the thought of lost or restricted access to TAIR. This website is an essential resource for every single project in my laboratory. NSF, please reconsider your funding strategy to reflect the ongoing needs of Arabidopsis and other plant research.
	2009-11-05 10:18:24.0	We need TAIR!
Ortrun Mittelst en Scheid	2009-11-05 11:36:04.0	Without repeating too much of the impressive list of supportive statements above: TAIR has become an essential tool for plant research and is used repeatedly every day in my lab. Thanks to the TAIR team and to NSF so far! Facing ever-growing amounts of information, the need for a centralized data base is increasing rather than declining. Reducing or stopping TAIR funding in future would be a significant and global drawback. The potentially saved expenses are minor in relation to the worldwide benefit for thousands of scientists. I understand that maintaining a functional TAIR costs money, and in principal, I would not object against a fair contribution from users. But please consider that the administrative efforts to collect funds worldwide would devour a lot of the potentially raised money. Therefore, I urge the NSF to reconsider the decision and rather help to continue a success story.
	2009-11-05 12:22:42.0	TAIR is an essential tool for all plant biology and plant related research. It is also important to state that this basic research, which begins in special public databases like TAIR, is the base of all knowledge that matters the humankind so much (just to say some mainstream topics which I believe are getting much easier funding) as biofuel, carbon fixation and crop improvement. It is also important to say that we really need people working in this basic research (which TAIR supports so much by maintaining the database online and up-to-date) because if everyone just went after the money and start doing very specialized applied research, in a few years we will run out of scientific ground to step on (or knowledge, just to say it clearer). Funding agencies should really review their position regarding TAIR. It's not an opinion, TAIR funding is far more than essential!!!
	2009-11-05 16:06:22.0	Dear Francis Collins-- you have the vision of Mr. McGoo.
	2009-11-05 17:27:30.0	We should acknowledge TAIR more often in our publications.
	2009-11-05 17:32:50.0	Without TAIR, we cannot go on our research, seriously!
	2009-11-05 17:40:15.0	TAIR provided essential tools even for me, a researcher of rice gene, since the comparative analysis between rice and information rich model plant Arabidopsis is essential for today's experiment. Thus the TAIR contribute not only model plant but also crop science. I hope NFS support TAIR program.
	2009-11-05 19:04:12.0	TAIR is one of the best database for plant research. The information provided by it is very important and comprehensive. So the funding to TAIR should not be decreased.
	2009-11-05 19:44:50.0	no advancement of science without TAIR
	2009-11-05 19:52:02.0	TAIR is counted as primary stock center for plant science in the World. TAIR had, have and will support all plant scientists including food production and environmental science. TAIR should be retain to keep the world sustain.
	2009-11-05 20:19:16.0	No doubt this is bad news and the knock-on effects of losing something like TAIR will set back plant research. It is a global resource that many people benefit from. By providing support for the sector fo the plant sciecne community working on the fundamentals of plant biology TAIR raises the quality of research and efficacy of research dollars spent. Without TAIR, I fear that the community will become fragmented in the sense that researchers will not be able to easily obtain relevant information from others working on other genes/processes in Arabidopsis. Finally, the idea of a pay site is ridiculous. Can someone produce a single example of a vital omics resource like TAIR that is directly user supported? Even the Human GDB that was funded internationally was eventually pulled offline. Sorry people, but shouldering the cost of something like TAIR is required if we want high quality research.
	2009-11-06 04:18:05.0	We need TAIR, it is unimaginable without TAIR in future arabidopsis research !
	2009-11-06 04:24:22.0	We need TAIR!!!!!!

	2009-11-06 08:10:14.0	TAIR is a essential system for not only Arabidopsis researchers but also everyone working with model organisms. Without TAIR, we couldn't acomplish many studies and we will never be able to continue our studies. TAIR is far superior to other systems with other organisms. Therefore, it is necessary to support TAIR.
	2009-11-06 11:07:39.0	The real question is WHO should fund TAIR. The majority of TAIR users are not from the US. Non-US funding agencies need to work together with NSF and TAIR to find a solution. This will not happen if NSF continues supporting TAIR with no strings attached. Thus, NSF has sent shock waves though our community signaling that they will no longer support TAIR alone (or maybe even at all). If the international effort for Arabidopsis (plant) research is going to continue funding will have to appear from additional nations. It's time for non-US funding agencies to contribute to TAIR!
	2009-11-06 18:19:19.0	NSF needs a complete staff overhaul from top to bottom, it obviously NO IDEA what the research community wants and needs. They are happy to drain millions of tax payers dollars on projects like iPLANT which to date, is nothing short of a DISASTER. NSF needs to wake up and listen to the needs of the scientific community...
	2009-11-06 21:47:32.0	Regarding the above comment: ?The real question is WHO should fund TAIR. The majority of TAIR users are not from the US. Non-US funding agencies need to work together with NSF and TAIR to find a solution.? I wish to make two points: 1) fair enough that non-US funding agencies should contribute to TAIR. The issue here is how to make this happen? and what role NSF needs to play in this process to secure international funding? NSF could potentially play a more constructive role by working together with its counterparts from other countries and TAIR. Is this happening? NSF would be making a mistake by simply reducing TAIR?s funding without offering any meaningful assistance in identifying alternative funding strategies. It is not difficult to imagine that in order to find the funds to keep TAIR up running, TAIR staff will have to divert their time and resources away from doing what they should be doing, which is to provide the highest quality data to serve the community needs; 2) true that TAIR is used by many people outside the US. But would it be a sufficient reason for NSF or any other US funding agencies not to fund TAIR simply because other countries are not sharing the cost? It is pretty clear based on these comments that Arabidopsis and plant biology researchers in the US consider TAIR an essential resource for their work. Then what?s the reason for NSF (or other US agency) not to continue funding this project?
	2009-11-06 22:58:51.0	TAIR DOES VERY WELL, TAIR STAFF WORK VERY HARD, I'M very shock to heard this news. INFORMATIONs IN TAIR give me a lot of help. I need you, TAIR. IF YOU CANNOT GET YOUR FUNDING FROM NSF (or other US agency) , PLEASE TRY OTHER COUNTRY AGENCY? thanks very much for your help.
	2009-11-09 01:24:45.0	TAIR does very well,we support you,NSF is not very wise.
	2009-11-09 06:10:02.0	This is shocking. TAIR is THE platform for plant genomics knowledge. It is the start point to get information from genes. It is also extremely helpful for being up-dated with the most recent citations of genes of interest and its collection of tools is incredibly useful. Take the funds out from TAIR will really impact world's plant research.
Minoru Murata	2009-11-09 19:49:25.0	Without TAIR, no preogress is expected in plant science.
	2009-11-11 07:29:53.0	TAIR is essential for continued progress in plant science. The database is the SOURCE for information on Arabidopsis, the primary reference for plant biologists. I and members of my lab use TAIR every day. TAIR increases the efficiency of science. It brings together many different types and sources of information. It has developed several excellent platforms for genomics research. It is essential that US government should continue to fund TAIR.
	2009-11-11 13:03:47.0	Members may be forced to make an annual contribution!
	2009-11-12 06:34:16.0	I cannot imagine plant scientist daily activities without TAIR, can you? Have you guys (TAIR) looked for funding in the EU? I agree that TAIR should stay non-fee accessible.
	2009-11-15 12:27:06.0	TAIR is an essential tool to my work as a geneticist, I visit the website and use its resources many time every single day. If TAIR ceases to exist, or if its quality is compromised by lack of funding or poor coordination among new funding agencies it will have a huge negative impact in plant science research. Unfortunately this seems to be one of these moves that NSF bureaucrats think will save money (and I have a feeling we are not talking about that much money saved anyway) and that will in fact COST a lot of money by hindering plant science progress in the US to levels that we just can't afford. I hope NSF will think this through and realize the mistake in their decision before it is too late.
	2009-11-17 05:15:42.0	TAIR is critical to all basic plant research, and cuts to its funding will negatively impact all research. Lynn Hartweck
	2009-11-17 10:37:39.0	TAIR is one of the most useful tools in the plant community. Not only arabidopsis research will be significantly damaged by loss of this quality resource, but work in major crop species will also be impaired. TAIR permeates every aspect of being a plant biologist, from ordering mutant seed stocks, to primer design, to locus information, to microarray analysis. I believe it would be a failing of the NSF mission to keep plant science at the leading edge of discovery.

	2009-11-18 00:13:15.0	TAIR is a crucial plant scientific project. Continue to support its research will certainly not only promote the understanding of plant sciences, but also greatly help to increase the benefits we get from all plants.
	2009-11-19 11:48:35.0	What are we going to do without TAIR? TAIR should be grant funding. Everybody should be able to access without fees. TAIR, we all are with you!
	2009-11-22 15:36:00.0	TAIR is essential here at Royal Holloway Laboratories in London. Our research will be hard hit without TAIR!
	2009-11-22 17:41:13.0	Knocking out TAIR would be a lethal phenotype! Please silence the "funding cut"! I have used TAIR extensively throughout my Ph.D program. TAIR is an excellent resource tool for the community. It's hard to imagine the academic life of an Arabidopsis researcher without TAIR. Manjeet Kumari
	2009-11-23 06:41:47.0	TAIR is an essential tool for my research in Japan.
	2009-11-23 08:19:17.0	TAIR is one of the best tools for our research, alos for those on crop plants.
	2009-11-24 02:40:59.0	TAIR is essential to my work - please keep it going!
	2009-11-24 05:41:28.0	TAIR is an important tool for my research. Please keep supporting it.
	2009-11-24 23:40:01.0	TAIR has developed a global infrastructure for a wide range of researches in plant sciences. I am particularly indebted to freely accessible, high-quality databases of TAIR.
Jan Lohmann	2009-11-25 05:04:02.0	TAIR is an indispensable tool for the plant science community both for research and teaching purposes. We need the continued support from NSF and additional funds from other non- US sources.
	2009-11-25 08:10:02.0	We are heavily dependent on TAIR for all our bioinformatics analyses and otherwise also it is an indispensable resource for Plant Biologists. it is extremely unfair to cut the funding of TAIR, it is a great disservice to Plant Science community.
	2009-11-25 13:23:05.0	we need tair !!!
	2009-11-26 06:01:57.0	An amazing tool for my research. I need TAIR!
	2009-11-27 00:39:59.0	TAIR has been providing the Arabidopsis community an ever increasing service and has become an indispensable tool of research. TAIR has probably helped to realize a large number of outstanding publications , very often without any citation, which might also be a problem of public recognition by the funding agencies and science politicians!!! The research on Arabidopsis is essential to plant science and essential progress in plant breeding of crops has been translated from knowledge generated from Arabidopsis. TAIR is a cornerstone of open access research on this plant model organism. Therefore, it is essential that TAIR continues to exist. Heribert Hirt, Director URGV Plant Genomics (INRA/CNRS/University of Evry)
	2009-11-28 02:53:56.0	arabidopsis est un modele,cuttin off de son budget fera mal a tous...sauvez TAIR!!!!

	2009-11-28 08:10:56.0	I can't believe it happens... TAIR is WITHOUT ANY DOUBT indispensable for Plant Research all over the World!!! Definitely we need Tair!!!!!!!!!!!!!!!!!!!!
	2009-11-30 02:13:14.0	TAIR is one of the most important tools I need for my research on Arabidopsis.
	2009-11-30 04:49:07.0	I need TAIR!
	2009-11-30 06:31:32.0	TAIR is crucial to Arabidopsis research and for research on unsequenced species. It is critical that it remains a free service for smaller labs and for teaching purposes, otherwise these will be seriously disadvantaged.
Guillaume Pilot	2009-11-30 14:56:46.0	TAIR is essential for collecting the wealth of data provided by the Arabidopsis and the Plant community. How could plant research go forward at the present speed without TAIR? I do not think it is possible. The work TAIR people do as collecting all the information for every single gene is tremendous, it saves so much time for any of us. All plant researchers need TAIR! TAIR need support!
Dring Crowell	2009-12-02 21:16:54.0	More than any other online resource, TAIR has advanced my research. It is comprehensive, intuitive, and accessible. From its inception, TAIR was an invaluable tool for mining genomics data. But now it is much more than that - it is the central repository for information about Arabidopsis genes, transcripts, proteins, and mutants. For me, TAIR is indispensable.
	2009-12-03 16:22:59.0	TAIR is one of most important databases for plant science and technology. Supplying latest dataset for Arabidopsis that is curated manually (and also daily) is essential for all researchers (for plant, medical, food and fuel technology, etc) in the world.
Terrence Delaney	2009-12-04 13:34:21.0	TAIR is an essential tool for research and teaching. No other resource provides this level of access to plant data and analysis tools to users at all levels. The NSF has been a staunch supporter of plant research, and the power of Arabidopsis molecular genetics and genomics has grown substantially under the NSF's support of TAIR. While researchers worldwide depend upon TAIR services and data portals, so too do students in courses and in their laboratory research. A pay-for-service model will exclude these users, and also exclude many academic users who rely on TAIR for their research. The impact of reduced and eliminated TAIR funding will have a huge negative impact on both plant and non-plant researchers who rely on TAIR for access to high quality, comprehensive data and the tools for exploiting those data.
	2009-12-05 16:30:18.0	TAIR is the most complete, most reliable database for plant research and it's absolutely essential that it remains free and open access to the whole research community!!
	2009-12-06 14:57:28.0	TAIR is definitely a good resource. I am a grad student in computer science working in computational biology, and I found this site very helpful, especially when I did not know many of the resources out there. TAIR provided links, information, and visual aids that were very helpful to my understanding.
	2009-12-07 05:30:51.0	TAIR is a vital source of information and tools not just for those working on Arabidopsis, but for plant research in general. Cutting the funding of TAIR will cause a severe setback for plant scientists all over the world. This would be very short-sighted given the importance of plant research, especially regarding the environmental problems and food shortages we face.
	2009-12-07 10:49:41.0	TAIR is an invaluable resource for the plant scientist community all over the world. It should be taken as an example of how science resources and knowledge should be shared, allowing researchers to get a free and easy access to a tremendous variety of tools and materials, including seed collections, gene/transcript/protein databases, software, literature, etc. TAIR has clearly been an essential component in the success of most laboratories and should be congratulated for all the outstanding publications that relied on this facility. NSF has been pioneer in funding TAIR and should maintain its support for the future of plant science. Thierry Gaude, ENS Lyon, FRANCE.
	2009-12-08 06:38:14.0	I agree with comment above that addressed how crazy it is to fund something like iPlant while TAIR gets shafted. NSF seems to have fallen into a trap of believing what is "politically correct" (at least in some sections of the plant science community) today, that everything can be solved by some big giant collaboration. I think that many of the comments above can be distilled into one sentence: People love TAIR because TAIR is tremendously empowering to individual laboratories. One student alone at night can have an interesting idea and go to TAIR immediately to start checking it out. The work of individual labs and small groups is still where most of the innovation is coming from. TAIR has enabled this, quietly and without a lot of hype. And clearly the respect of the silent majority has not gotten TAIR a lot of credit with NSF. Maybe if some of the big talkers get involved that will change. One suggestion is that ABRC should increase its stock ordering fees and funnel some of that money to TAIR because without TAIR the stocks maintained by ABRC are less accessible and ultimately less useful. This would also capture some more money from users outside of the U.S. (myself included)

2009-12-09 03:17:32.0	It's always good to see how European errors of the past are repeated by the US. Swissprot was refused proper funding in the 1990s due to the lack of any "infrastructure" funding mechanism in Europe. The resulting mixed-funding structure with "commercial user license" and free academic access damaged the usability of Swissprot to the extent that finally NSF and EBI agreed to jointly fund a fused Swissprot - PIR protein database (known today as UniProt). However, even within Europe there still is no mechanism to ensure "infrastructure" funding and only recently has the lobbying for such a funding structure resulted in the FP7 ELIXIR project which at least started to gather the current status and requirements for life science data base funding. I strongly suggest to all US life science database providers (from Jackson Lab to Flybase and TAIR) to A) partner ELIXIR B) lobby NSF to generate a "infrastructure funding scheme" C) call all database users for support I for one will prefer to have a slightly smaller overall research grant budget and a fixed infrastructure budget instead for distribution by the NSF instead of the suggested pseudo-market approach with huge bureaucratic cost to funnel some research budget money from each individual user of a database into the database infrastructure budget (aka "submission or license fee").
2009-12-09 11:29:12.0	I use TAIR on a daily basis. It has been and hopefully will continue to be a fundamental resource for the scientific community.
2009-12-09 19:08:03.0	While phytozome is OK, TAIR is by far and away the best database for Arabidopsis sequence, gene/protein information and the like. This database was crucial for my PhD project and would have been much more difficult without such a reliable and user-friendly interface. I am especially impressed by the number of useful tools that TAIR has. Keep TAIR alive!
2009-12-10 13:25:08.0	It is obvious that many researchers find this databaase critical to their daily work. However, based on the statistics, most of the users are non-US researchers. If this is the case, why should the US tax payer continue to support research that is conducted in other countries? I think it is very reasonable to ask the EU, Japan and others capable governments to help fund the databse. I am sure it would be far easier to sell the program on an ongoing basis if the NSF only had to pay 25% of the operating costs. Or as an alternative solution, TAIR could be provided free of charge to those researchers operating in the US (based web address or some other indicator) and charge others.
2009-12-10 13:44:23.0	If the above argument stands, should US pay its share too for using resources largely funded by EU (for example <a href="http://www.ebi.ac.uk/">http://www.ebi.ac.uk/</a> )? As the Nature editorial pointed out: "The sharing of bioresources does not and should not stop at national borders." (Nature 462, 252). The push from NSF for alternative funding mechanism is a classical example of putting politics over science. It will hurt plant biology research in the US.
2009-12-11 03:39:10.0	how to work on plant biologie without tair? F.Bardou
2009-12-11 15:58:22.0	TAIR is critical for the projects in our lab. In particular I'm thinking of the effect it will have on our annual undergraduate projects. Each year our lab takes on 2-4 senior students who choose their favourite gene, order a knockout from ABAC and then perform a battery of tests on it. It would be impossible time-wise to complete their project if they had to construct their own mutant lines.
Ben Harris on 2009-12-13 17:25:13.0	TAIR is vital to our work. I work with Arabidopsis and make great use of TAIR. I definitely second the comments about the essential role that TAIR and other organism websites plays in research. The TAIR format allows researchers at all levels (undergrad to PI, anyway) to quickly and effectively find the information and resources that they need. Additionally TAIR provides the Arabidopsis community a central repository to organize and view published and unpublished information. I have worked with several model organisms (flies and yeast) and the TAIR site is as good or better in many ways than sites that support research with these organisms. It would be shameful and harmful to science to see TAIR diminished or become static due to lack of funding.
2009-12-14 01:11:07.0	I am using TAIR database for Fruit tree genomics study. Because fruit tree species doesn't have useful database, we always refer TAIR's annotation. TAIR is a kind of dictionary for plant molecular genetics, I hope continuing funding for TAIR.
2009-12-14 09:04:54.0	My lab works on maize mostly, but TAIR has been, and continues to be, an invaluable resource for analysing the function of potentially orthologous genes from Arabidopsis. The TAIR site also serves as a model for other plant species that will have their genomes sequenced, especially in terms of organization (it is precise and intuitive) and for collating and dissemination of data from diverse labs.
2009-12-15 07:09:54.0	I was shocked to hear the bad news of phasing out TAIR's funding over the next few years. For three years (2004-2007) I had the privilege to work as a TAIR curator with one of the most dedicated and skillful teams I ever worked with during my career as a scientist. It was an exciting coincidence that just last month our Lab (Rod Savidge PI, University of New Brunswick, Canada) launched our willow experiment on reaction wood formation together with the Transgenic Arabidopsis Gene Expression System (TAGES) on board the shuttle Atlantis. This way our paths crossed again. While up there cutting edge research on Arabidopsis is performed down here funding for one of the most prolific bioinformatics resources supporting innumerable aspects of Arabidopsis research is scheduled for nemesis. That is not only ironic but short thinking as well. TAIR is not only a most valuable resource for Arabidopsis researchers with all the bells and whistles anybody could wish for but also an indispensable database for cross references across taxon and kingdoms. TAIR's work is still far from completion and needs many more years of support. No one, researcher or research team, will be able to do the work TAIR is doing with thousands of publications every year to be annotated without severely compromising its own research in terms of scientific soundness. For that reason alone resources like TAIR have to be provided with the necessary financial means to serve the international research community the best way they can, any mediocrity will slow down scientific progress irresponsibly. Even in financial tough times it is common sense to rather maintain a successful working organization than to cut it down now and reinvent or resuscitate it later with an even higher strain on the taxpayers' dollars. Hartmut Foerster University of New Brunswick, Canada

	2009-12-15 07:28:36.0	The TAIR data base and the availability of knockout plants as the center and all the other services have provided an extremely valuable research tool. It provided a quantum jump in plant research and must be kept open. The cost against the gain is a ridiculous argument. If the American system really is prone to let down such an instrument then the American system must be changed on this occasion. I would understand that the financial support could/should be internationalized but it must remain open and viable, it simply is too important! Günther Scherer, Leibniz University Hannover, Germany
	2009-12-15 07:38:16.0	I can't imagine how we would work without TAIR. I hope we find a way to save TAIR, i.e. to save Plant Science!
	2009-12-15 09:25:23.0	This is a tragedy! Again the same lack of vision and wisdom by funding agencies. Lets pour billion of dollars in sequencing everything that move or does not move in the biosphere, but lets not spend even 1% of that making sure that the data is safeguarded in databases and that knowledge is extracted from the noisy data. Amos Bairoch Former head of the Swiss-Prot database and head of the CALIPHO project at the Swiss Institute of Bioinformatics
	2009-12-15 11:41:03.0	TAIR is the most important website for me, and I gained a lot. But now, TAIR is dying and I feel so sorry. "NSF, please keep supporting TAIR with the same amount of funding as previous, lots of researchers can't work without TAIR, please, thank you".
	2009-12-15 15:23:21.0	Margie Gruber: Funding reduction and the lack of maintenance and updating of TAIR resources would be disastrous for basic plant science and crops research all around the world. NSF should strongly reconsider its decision.
	2009-12-16 05:26:33.0	The knowledge is a fundamental right, and TAIR is knowledge. There must be a solution.
	2009-12-16 05:27:58.0	I work with Arabidopsis thaliana stomatal development and this database is my principal support.
Sam Mugford	2009-12-21 04:51:34.0	TAIR provides access to the most meticulously curated and annotated repository of plant genomic information. I have worked on a range of plant species; model and non-model; monocot and dicot, and TAIR is always the first port of call for functional information about uncharacterised sequences. This is an essential resource to all plant biologists, and should serve as a template for all functional genomics networks.
	2009-12-21 12:02:51.0	TAIR is a very useful resource, there exists no alternative to it.
	2009-12-21 14:25:24.0	TAIR is an essential data source and platform, not for Arabidopsis researchers, but for the whole plant research community. TAIR has been a must-go website for a long time during my learning and studies. I can not imagine what a loss will be if this source is down. I really hope the policy makers and funding givers can find a way to save it
	2009-12-22 02:14:41.0	As a plant sciences worker, I can not imagine the day without TAIR!
	2009-12-23 04:54:50.0	I don't remember how many times I told myself and my colleagues "check it on TAIR"! Many, many, many times.... TAIR is useful and easy to use. All the links and tools it offers simplify the daily work for any Arabidopsis researcher. Thanks to TAIR!
	2009-12-31 02:28:17.0	TAIR is very important for my research. It is of great value for people to investigate plant genetics and breeding like me. I think it is a pity to reduce funding for TAIR.
	2010-01-01 13:04:23.0	TAIR is INSTRUMENTAL for Arabidopsis research and plant research in general. Funding bodies have invested a lot of money during last years to establish (from nothing) genomics tools in this species. There are still many plant traits of utmost importance for future agriculture that cannot be at present evaluated without recourse to model species such as Arabidopsis. We are in a context where globally 900 million people suffer from malnutrition. Therefore stopping this funding effort is both a waste of money and a severe block in future successful plant research that could see important developments not only to understand the plant system but also to help achieving enhanced food/feed production in an environmentally sustainable manner. Although this could be an extremely difficult task it is a vitally important enterprise that requires proper funding. Dominique Job, CNRS, France
	2010-01-06 02:33:11.0	I use TAIR several times daily in my plant science research and so do the rest of my colleagues. It is a very valuable site which is easy to use. I cannot imagine what I should do without TAIR. It would definitely reduce research efficiency and productivity.

	2010-01-06 19:20:50.0	I am particularly grateful for the rapidity and accuracy in which TAIR curators answer my often arcane questions about Arabidopsis data sets. I have grown so used to having TAIR resources at my fingertips that I cannot imagine doing plant biology research without them. If some way could be devised for me to contribute funds from my grants I would most definitely do it. TAIR should create a mechanism allowing proposal writers to add a line item to their budgets to contribute to TAIR funding. Obviously, it would be more efficient for NSF or other funding agencies to fund TAIR directly, but if a subscription model is what NSF desires, then so be it.
	2010-01-07 14:10:09.0	I think it is just a good beginning. TAIR should get more money to guarantee TAIR can continue to rich and integrate the databases until we have ability to set up new projects like TAIR, such as, TBIR TCIR TDIR.....
	2010-01-08 08:32:33.0	I am shocked to hear that NSF do not strongly support TAIR any more! I don't think it's wise for NSF to cut the support of TAIR. TAIR databases are not only essential for Arabidopsis researches, but also for the plant biology communities of crops and other model plants. I am working on agri-biotechnology and TAIR databases are very useful for my research and no other resources that can replace it.
Luis Barboza	2010-01-08 09:48:25.0	I work at the University of Costa Rica, thus TAIR is very useful for our research and educational activities. In developing countries is very difficult to have resources in order that students can have proper practices in their courses. In our case TAIR has been very useful to fulfil these necessities because it provides several tools and plenty of molecular and genetics information that students (undergraduates) can use for their learning process. Besides we are trying to use this information in our research to understand the molecular mechanisms of germination in crop plants. Besides, it is remarkable that TAIR have supported us with seeds and workshops.
	2010-01-17 23:24:54.0	I think TAIR is a very useful database for those who are working on Arabidopsis. We use this almost everyday for our research work. Swadhin Swain. Ph.D. Student, JNU , India
	2010-01-20 04:54:10.0	TAIR is an indispensable resource for plant scientists and bioinformaticians as well. I can't imagine my work without TAIR. Vered Chalifa-Caspi, Ph.D., Head, Bioinformatics Core Facility, Ben-Gurion University, Israel.
	2010-01-20 12:13:14.0	TAIR is one of the most useful databases available. Any decrease in funding will slow down research on plants drastically.
	2010-01-20 23:33:52.0	I'm a Chinese Ph.D student and my research interests are plant miRNAs and other small RNAs. The huge datasets provided by TAIR really help us doing bioinformatics analysis of small RNAs in Arabidopsis. So, I think that it is necessary to support the TAIR in the coming years. Sincerely, Yijun Meng Department of Bioinformatics, Institute of Biochemistry, State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, P. R. China Email: <a href="mailto:mengyijun@zju.edu.cn">mengyijun@zju.edu.cn</a>
	2010-01-21 06:37:48.0	As Arabidopsis served and will served more as a perfect model system to study nearly every expects of high plant life, TAIR must be kept for the benefit for we human. I am happy with the idea to charg the users.
	2010-01-21 06:52:42.0	I think TAIR is a very useful resource for everyone who are working on plant science and bioinformatics as well. I use TAIR often for my research. <a href="mailto:chendijun@zju.edu.cn">chendijun@zju.edu.cn</a>
	2010-01-21 07:22:23.0	TAIR is an essential and top-quality resource for Plant Biologists all around the world. The costs of running TAIR should be shared by the international community. <a href="mailto:bianchi@univ-paris12.fr">bianchi@univ-paris12.fr</a>
	2010-01-22 08:28:48.0	I have been using TAIR for many years. This has streamlined my research, therefore reducing the cost of research output. Investing in TAIR, is a saving on the long run.
	2010-01-22 08:57:27.0	TAIR is an absolutely fundamental resource to researchers in the plant science community worldwide. It underpins both teaching and research for the Plant Science Research Group here at the University of Glasgow (UK) and any reduction in its funding that could have a knock-on effect on the quality and up-to-date reliability of the information TAIR provides might have serious implications for the progress of Arabidopsis research in the medium to long-term. Dr Bobby Brown (Research Technologist - University of Glasgow, UK)
	2010-01-22 20:26:37.0	WE need Tair we Love It!!
	2010-01-27 12:49:26.0	I had received important data for my research. And I definately can say that most people research do rely on the information we get from this database. Cutting off the funds to this database will have an impact on the result of numerous research going on in America as well as world.

	2010-01-27 23:50:11.0	To my opinion, TAIR is the most powerful and fundamental resource in plant research. Dismantling such key tools somehow means to return to the pre-genomic era.
	2010-02-03 11:11:23.0	I certainly don't think research on Arabidopsis could continue with this much of success without TAIR !!!!
	2010-02-05 06:44:13.0	I think TAIR is a good database as a starting point in several tasks as genomic comparisons, data gathering and other information. So far, Arabidopsis genome is the best understood sequenced genome so it would be bad to lose this database or its improvement because of no funding. US government should care about this things since databases such as TAIR are the reference point for many researchers (if not all) in plant biology. Otherway we will get stucked trying (as earlier) to improve gene models, gathering information from many other databases and have information all splitted in other websites. Perhaps the plant scientist community could make a collaboration in order to sustain this database, not only via NSF funding but from other countries' science foundations. Daniel Rodriguez-Leal. MS student at CINVESTAV, IRAPUATO, MX.
	2010-02-08 01:49:15.0	All the comments here attest to the value of TAIR, the value and convenience to international plant researchers. However we have no information on the cost of TAIR, a cost to the US taxpayer via NSF funding. And what about the costs of depositing information apparently for free by researchers, but actually at the expense of the taxpayers in their own countries? Can the TAIR administrators assess the levels of both the use and contribution by each country and find a way to share the burden? How much are researchers prepared to pay from their tax-funded grants (not their own pockets) to do research. In real terms (or dollars) what value do they put on access to this information? As much as subscribing to a journal, paying a PhD student for a month, the cost of a new laptop or lab gadget? It's a fact of life that good quality costs money, but you can forgive the taxpayer in the guise of NSF for seeing only the cost not the value of Arabidopsis research, if researchers see only the value and not the cost.
	2010-02-10 07:56:24.0	Think vision. Arabidopsis data in TAIR provide a vital baseline, not only for plants but for all species. Support from multiple benefitting agencies, most notably NIH, DOE, and USDA, might well be sought. Likewise internationally. The Plant Genome Initiative brought these agencies and NSF and internationally together to accomplish outstanding advances specifically for plants, but the outcome is much broader. Note that Drosophila data historically provided models for both humans and plants, including crops ... Now is the moment to turn that example about.
	2010-02-10 11:33:26.0	It seems to me that Arabidopsis 2010 is just at its beginning. Are you done with the functions of Arabidopsis genes? Far from it!
	2010-02-10 14:25:37.0	This user-friendly, complete and updated tool has become vital for plant research, a future without TAIR is most unwelcome!
	2010-02-12 05:16:48.0	Within the last few years TAIR has become one of the most valuable and absolutely indispensable "free" tools for our research. Since scientists all over the world depend on getting unrestricted and free access to information, research without TAIR would definitely slow down our progress and therefore have global impact, ranging from patients, who suffer from severe disease to people starving in poor countries. If we'd find a way to draw the public's attention to this problem, we might be able to find new ways of funding institutions like this.
	2010-02-16 08:20:48.0	TAIR is vital for our work. Thierry DESNOS
Rafael Perl-Treves	2010-02-18 02:05:59.0	TAIR is a great database that brings genomics tools to researchers world-wide. It helps us on daily basis. Moreover, I use it to teach my students in "Plant Molecular Genetics" courses - they do exercises using it and get exposed to the world of genomic research through it. Rafi Perl-Treves, Bar Ilan University, Israel
	2010-02-18 02:51:35.0	TAIR contribution to Arabidopsis research has been vital. We need a comprehensive data resource for this model organism and TAIR has been fulfilling the requirement aptly. We would like it to continue in it's effort without any hindrance at the cost of funding
	2010-02-18 07:37:09.0	Long life to TAIR and all other great databases! It sounds like an irony that funding agencies worldwide want researchers to build integrated databases and to provide a great service to the broadest users base, just to withdraw their support once such a challenging task has been achieved. It takes years to build it, 1/2 min to destroy it. Dr Claire GACHON
	2010-02-18 17:37:02.0	I work at a bioinformatics lab and use tair extensively in my research involving arabidopsis. It has been a great resource for my research and it would totally suck if tair were to go away or not run properly due to funding issues.
	2010-02-18 17:44:25.0	How resources like TAIR should be funded?: Donation, maybe? If researchers at profit generating companies are using TAIR, the company can afford to donate some money. Or people using it can donate whatever they can! I know i would. And maybe have a way to get some tax deductions for companies and people - always a great incentive :)

	2010-02-23 01:08:22.0	TAIR is like Google to Arabidopsis researchers.
	2010-02-24 05:15:25.0	TAIR Website is backbone for plant science research.
	2010-03-18 15:58:40.0	i recently switched labs, and went from working exclusively on Arabidopsis to both Arabidopsis and maize. This switch highlighted the exceptional resource that TAIR is. The number of manhours in a broad spectrum of research veins that TAIR saves me; and the richness and accuracy of the data it provides is exceptional - and I have missed it very much in my new studies on maize! TAIR funding is a highly effective way to spend research money - the information provided to all labs, by bioinformatics experts, enhances the effectiveness of research done (and funded) elsewhere.
	2010-03-22 18:24:53.0	TAIR is really doing great job for plant biologists all over the world. If TAIR closed then it will produce significant negative consequences in plant research. Lots of update on each and every gene/protein is very helpful for all plant research community people in the world. Funding can be done partly by the govt. and majorly can be done by the top (ranked) 100 or 200 plant institutions in the world. They might be using more than small institutes and also it is not so big deal for them. I hope my suggestion would have heard. Thank you.
	2010-04-08 18:23:54.0	TAIR is very important for plant biological research. It's not wise to cut down the support.
Dave Berger	2010-04-09 00:00:18.0	Thank you to TAIR for an exceptional useful resource, as well as to NASC for efficient supply of seed. We are several labs in South Africa at the University of Pretoria that use Arabidopsis as a model system to assist our research on plant-pathogen interactions (myself in the Plant Science Department & Dr Sanushka Naidoo in the Genetics Department) and xylogenesis in Eucalyptus trees (Prof Zander Myburg in the Genetics Department). Many of our students are dependent upon TAIR tools, and such as useful resource mitigates the geographical distance from most Arabidopsis labs. We fully support continued funding of TAIR.
Marie-Theres Hauser	2010-04-09 03:36:49.0	TAIR is tremendously important not only Arabidopsis research but also as excellent source for all life sciences. It is perfect to introduce students and help young researchers to the richness of data and approaches that the community has gathered. I really appreciate the excellent management efforts and continuous extension of databases. For our laboratory TAIR is so central that I can imagine to pay a reasonable fee for usage in the future.
	2010-06-03 11:43:41.0	TAIR services are vital for all scientists. TAIR has to be saved.
	2010-07-19 14:57:06.0	As many others have eloquently pointed out, TAIR is an invaluable resource. If need be, we will be more than willing to support TAIR via subscriptions and this money will come from USDA and NSF grants if we are unable to have access to TAIR--this seems pointless. TAIR is not a repository of information for a tiny little weed anymore. We use TAIR on a daily basis. We primarily work with crop species and now we find that this site is actually become MORE invaluable than before. Congress, please find a way to support and fund this site and allow both basic and applied research to progress in the plant sciences.
	2010-07-21 16:56:52.0	I can't count how numerous times I had valuable and timely help from the TAIR and I can't imagine how difficult so many scientists would be frustrated if the TAIR operation is scaled down. TAIR is trasure we have had and must stay for long near to all of us from every corners on the world. PLEASE do not let science fall to darkness.
	2011-03-15 23:30:09.0	TAIR is like an ocean of source, is really doing great job not only Arabidopsis research but also helping for other plant biologists all over the world.
	2011-07-08 17:07:00.0	My interests are in data management and computer science research. The TAIR team supports one of the best informatics portals currently online. In addition to advancing biological research, TAIR is a key enabler of computer science and informatics research. My computer science colleagues and I would not have been able to develop our PattArAn methodology and tools to mine patterns from annotated graph datasets if we could not rely on the EXCELLENT resources and documentation from the TAIR site. In addition to the PattArAn project which targets Arabidopsis annotations, we are extending our link prediction and pattern mining methodology to a project on HIV-1/AIDS and to mining the clinical trial datasets from LinkedCT. Our experience while tuning PattArAn to the TAIR datasets and the PO and GO annotations and ontology structure has been invaluable.
	2013-08-31 13:47:16.0	This site belongs to humanity and should be maintained exclusively by public/government, grants or charity money or private donations with no hidden agenda of any kind. Getting researchers to subscribe directly or via their institutions (even better) should be considered of course. I like to share my true opinion on this weird paradox though: I read today that governments spend billions on their spying agencies (USA for instance spends >57 billions USD) and when I hear that a service like TAIR might scale down its services because of lack of funding which would represents a tiny little minute fraction of what is spent by counties to spy and get ready to destroy each other...it makes me sick and ashamed to be a human being to the point that I wish to become a citizen of another PLANET if it was possible.
	2013-09-04 11:49:08.0	Support to TAIR, support to TAIR!!!!!!

2013-09-08  
16:27:  
22.0

TAIR is important to plant research and please keep TAIR alive. Thank you.