



Genetics Society of America

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Genetics Society of America Response to NIGMS Request for Information

Inviting Comments on the Need for and Support of Research Resources for the Biomedical Research Community

[Request for Information \(NOT-GM-16-103\)](#)

Thank you for providing an opportunity for the Genetics Society of America (GSA) to submit our perspective on the need for and support of research resources for the biomedical research community. The GSA community encompasses over 5,400 researchers worldwide who are working to deepen our understanding of the living world by advancing the field of genetics from the molecular to the population level using model organisms. These researchers depend on model organism databases and stock centers to continue to address the fundamental biological questions that enable biomedical breakthroughs. Thus, these resources should have long-term, sustained support from NIGMS.

Our community relies upon a number of shared model organism databases and stock centers that not only help provide central access to research results, but also enable the community to use the same research infrastructure, helping ensure consistency and reproducibility among different laboratories. These resources are also often interconnected with each other, helping to facilitate interactions across experimental systems. The importance of these model organism databases and stock centers cannot be overstated. Members of the research community often make daily use of these resources, which serve as the locus for those working with that model system around the world.

The long-term and consistent support for shared resources like model organism databases—as well as organismal stock centers—has been a crucial component of the strength and success of biomedical research in the United States and will be necessary for its future vigor. Centralized stock centers and databases provide optimal resource sharing that maximizes the return on the investments made by the NIH and other government agencies. These community resources provide “off-the-shelf” research tools and thus increase the efficiency and speed of hypothesis-driven research supported by other grants. In addition, public support for these community resources allows them to operate on an open access model, thus assuring that all researchers have the tools they need for discovery. Shared data resources and stock centers serve to preserve data and model systems well beyond the length of the original grant and make them easily accessed by other researchers. The alternative to community databases and stock centers would be for laboratories to store their own data and samples without an expectation of centralization, interoperability, or consistency. This alternative would reduce the return on investments in research, since data and

established model systems would remain inaccessible to the research community at large.

GSA appreciates the challenge of sustaining shared resources, but does not believe that all such tools should be self-sustaining. These national databases and stock centers are essential to the overall research enterprise as they serve the collective needs of the community. They perform a public good that is significantly greater than the sum of the value to individual investigators. It may be tempting to suggest that costs should be borne by the most active researchers. However, we point to the experience with The Arabidopsis Information Resource (TAIR), which had been supported by the National Science Foundation, but has more recently been forced to move toward a self-sustaining, subscription-based model. If an institution does not maintain its subscription, its researchers may not have access to the most current and validated information, thus limiting the quality of research conducted.

Therefore, GSA cautions that charging users to access shared research resources would have negative consequences on the exchange of information. Even a small fee would be a disincentive for accessing validated and current data. It would also have a negative impact on the use of such resources by those who lack significant funds, such as researchers at under-resourced institutions. To alleviate this concern, the GSA recommends that a defined portion of the NIGMS annual budget be dedicated to sustaining widely used research resources. We recognize that not all shared resources can be funded indefinitely and suggest that NIGMS focus its support on those that exemplify efficient operations and impact larger numbers of researchers.

We appreciate the opportunity to provide input into your deliberations about research resources at NIGMS. We are happy to provide any additional information about the impact of NIGMS on our community and the advancement of genetics research. Please contact GSA's Policy and Communications Manager, Chloe N. Poston, PhD (CPoston@genetics-gsa.org) with any questions.



ABOUT GSA: Founded in 1931, the [Genetics Society of America](http://www.genetics-gsa.org) (GSA) is a professional scientific society with more than 5,500 members worldwide working to deepen our understanding of the living world by advancing the field of genetics, from the molecular to the population level. GSA promotes research and fosters communication through a number of GSA-sponsored conferences including regular meetings that focus on particular model organisms. GSA publishes two peer-edited scholarly journals: [GENETICS](http://www.genetics-gsa.org), which has published high quality original research across the breadth of the field since 1916, and [G3: Genes|Genomes|Genetics](http://www.genetics-gsa.org), an open-access journal launched in 2011 to disseminate high quality foundational research in genetics and genomics. The Society also has a deep commitment to education and fostering the next generation of scholars in the field—as well as helping to enhance public understanding of genetics and model organism research. For more information about GSA, please visit www.genetics-gsa.org. Also follow GSA on Facebook at [facebook.com/GeneticsGSA](https://www.facebook.com/GeneticsGSA) and on Twitter [@GeneticsGSA](https://twitter.com/GeneticsGSA).