

## **Policy on Sharing Publication-Related Materials, Data and Software**

### I. Principle

Publishing a scientific paper is a *quid pro quo* in which authors receive credit and establish priority in exchange for disclosure of their scientific findings. A responsibility of authorship is to make available materials, databases, and software integral to the publication so that others may validate or falsify the results and extend them in new directions (1). Indeed, the mission of HHMI is to move biomedical science forward, and broad dissemination of research tools and reagents created by its investigators very much supports that mission.

### II. Responsibilities of HHMI Authors

Upon publication of their work, investigators are expected to make materials, data and databases, and software integral to their publication freely available for research use by other scientists and to handle requests expeditiously. The determination of which items are integral rather than peripheral to a published work will in some cases require expert judgment; it would be useful if reviewers and editors helped make this determination prior to publication in cases of ambiguity. More specific expectations are listed below.

#### A. Materials, including organisms

1. Materials sent to academic or government scientists should be accompanied by the HHMI MTA (Materials Transfer Agreement) for non-profit transfers which the recipient should sign and return upon receipt of the materials. If HHMI and the investigator's host institution have developed a joint MTA for non-profit transfers, that MTA should be used instead, and any procedures required by the host institution should be followed. At some sites, if no such joint MTA has been developed, both the Institute short form and the host institution form may need to be used.

2. Materials requested by for-profit companies should be sent only after the HHMI MTA designed for this purpose has been signed and returned by the company in accordance with HHMI MTA policies (again, at some sites both the Institute form and the host institution form may need to be used). Depending on host institution policies, a license may be used rather than an MTA (see Section E below).
3. Although it is appropriate and often useful to discuss the possibility of a research collaboration with the requestor, it is inappropriate to insist on collaboration, coauthorship, or prior review of manuscripts as a condition for sending materials.
4. If a material is patented, the author should make available to the recipients a license for research use. If a proprietary resource that is integral to the published research is one with respect to which the author is not an inventor, the author should provide information about obtaining such resource from the holder of the proprietary rights.
5. In the case of transgenic or knock-out mice, investigators may in general fulfill their responsibility by sending out either animals or ES cells. It may also be appropriate to ask prior recipients of such mice to assist in making animals available to requesters.
6. For materials sent to academic researchers, investigators may at their discretion request or require that the recipient reimburse costs directly associated with filling the request, such as postage, packaging, and cost of reproducing the materials (but not overhead, profit or a *pro rata* share of the

costs of research). For materials sent to commercial scientists, see section E below.

## B. Data and databases

1. If data or a database is central or integral to a publication but too large to be included in the publication itself, it should be made freely available by other means. Typically this means making it available on-line at no cost, with no restriction on research use, and in a highly accessible manner.
2. If a public repository has been agreed upon by the research community (such as GenBank for DNA sequences or the Protein Database for X-ray structure coordinates), then that repository should be used to optimize the ability of others to compare, search, merge, and build upon the data.

## C. Software

1. If the central result of a publication is a new algorithm, the author should provide a detailed description or the source code.
2. If a paper announces a new software package claimed to be useful, the author should provide an executable file and — ideally — the source code.  
  
Executable files and source code may be provided under a license agreement with restrictions comparable to those of an MTA (at no cost to academic researchers).
3. Selling an enhanced version of the software with upgrades and user support is not precluded.

#### D. Time to fulfill request

Authors should commit to providing requested materials, data or software within 60 days, which includes the time required for negotiation of an MTA. If this is impractical, e.g. because of complications that can arise in arranging the shipment of live animals, then the author should communicate with the requestor regarding an appropriate timescale for fulfilling the request.

#### E. Requests by academic vs commercial scientists

The Institute encourages but does not require that materials and software that are sent out for research purposes only be made available on identical or similar terms to academic and commercial scientists . The Institute will in general defer to the policies of the host institution at which the investigator is located in this regard. For example, some institutions send out materials and software without cost to academic researchers and charge a fee to companies.

#### F. Limits to responsibilities to share

1. The responsibility of investigators to provide materials integral to their publications does not require them to turn their labs into supply centers for the community. If investigators receive a burdensome number of requests, they are encouraged to use established repositories or to arrange for a company to provide the materials at reasonable cost.
2. If a reagent is nonreplicable or scarce and burdensome to reproduce (e.g., an antibody that is highly purified and/or in short supply), the investigator may

supply starter materials (e.g., the antigen used to raise the antibody) or a detailed protocol.

3. In rare cases where an investigator has reason to suspect that a requestor might use a material for bioterrorism or other unethical purposes, the investigator may have a responsibility not to share the material.
4. Human subjects protection may require clinical researchers not to share certain data or databases.
5. Sending out materials is always subject to the limitations of applicable law.

### III. Responsibilities of Those Requesting HHMI Materials

- A. Request only those materials that will in fact be used in your research. Given the time and effort required to fulfill requests, the investigator sharing the materials deserves reasonable expectation that they will actually be used, not simply collected. After all, the responsibility to share derives from the goal to move science forward.
- B. Make your request specific, identifying the specific material and the publication in which it was described.
- C. Be able and prepared to care for any animals or other sensitive materials properly upon their arrival.
- D. Promptly sign and return to HHMI (or the appropriate HHMI host institution) the MTA or license covering the transfer of materials to you.
- E. Acknowledge the source of materials appropriately in all resulting publications.
- F. Do not distribute HHMI materials to a third party without permission of the original provider. Refer such requests to the investigator who supplied the materials initially.

#### IV. Recourse

If a request to an HHMI investigator for published materials, data, or software is not fulfilled within 60 days, then the requestor should contact the editor of the journal that published the paper. If the journal is unable to resolve the matter, then the requestor may contact the office of the Vice President and Chief Scientific Officer (301-215-8803). In these cases, the Institute will take steps to assess whether the request is reasonable and, if appropriate, to obtain the transfer of published materials, data, or software.

(1) Sharing Publication-Related Data and Materials. National Academy Press (2003).

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