

## AMPLIFIED Data Management Plan

1. Raw electronic data (sequences, digital images, digitized field notes) will be backed up once per week (as per protocols already implemented in our labs) by all AMPLIFIED participants. Copies will be stored in multiple locations (UH, SU, Uruguay, Brazil) and full backups will be maintained in off-site safe locations (external hard drive, Mozy Backup, UH and SU servers).
2. Upon entry into the AMPLIFIED team, each student will be given a hard cover, "Write in the Rain" notebook for recording lab and field activities. New books will be issued as needed.
  - a. During the in-country research period, scans of the students' laboratory and field notebooks will be made every week and backed up to a hard drive at their home institution, which in turn will be backed up on institution servers and other safe locations (see above).
  - b. All raw data from students' laboratory notebooks will also be stored in a digital format using a combination of free Laboratory Notebook server based software (i.e. TheLabNotebook.com) or MediaWiki (<http://www.mediawiki.org>) and standard software (i.e. Word document, Excel, SPSS).
  - c. Redundant offsite backup will be provided through a combination of freely available cloud computing sites (e.g. Dropbox, Google docs & sites, Mozyhome backup) and server space allocated to each student at their home institution. Training in the use of these services will be done prior to students starting on their projects and practiced as they develop their proposals.
3. Upon entry into the AMPLIFIED team, each student will also be given an 8 GB USB flash drive for dedicated use on their research project.
  - a. Students will store backups of all project-related files on their personal flash drive.
  - b. Students will maintain an index file of their digital files.
  - c. Standard coding will apply:
    - i. Folders: Data, Literature, Writing, Statistics
    - ii. File Names: LASTNAMEFileDescriptionDate.xxx
4. All raw project data (i.e. lab notebooks and digital files) will be saved until the work has been published, and then archived. Permanent records such as scanned project notebooks and final analyzed data will be reproduced under the PIs' supervision for storage on an external hard drive in the laboratory and on a university supported server.
5. All data will be shared among AMPLIFIED team members. All PIs, host scientists and students will have a commitment to disseminate results through peer-reviewed journals, presentations at professional meetings and conferences, and other public formats as has been the standard for all work in our labs. Determinations of authorship will follow the guidelines of Weltzin et al. (2006) and Burks and Chumchal (2009).

6. To ensure that the broad academic community has the opportunity to learn about and share in AMPLIFIED research beyond published reports, up-to-date descriptions of our work will be maintained on the institutional servers at both Southwestern University and the University of Hawaii via pages dedicated to the AMPLIFIED project (e.g. [people.southwestern.edu/~burksr/AMPLIFIED/html](http://people.southwestern.edu/~burksr/AMPLIFIED/html)). Maintaining these pages will be an integral part of the students' activities upon returning from their experience. In this way, all students will develop a thorough understanding of all projects and activities within the program, while learning additional software skills.
7. The PIs will be the points of contact and will determine formats and protocols for additional sharing of research results with interested external parties.
8. Physical specimens and samples will be catalogued according to the procedures at the respective institutions (*Instituto Oswaldo Cruz, Museo Nacional de Historia Natural*).
9. Tissue samples and extracted DNA will be stored in -80 °C freezer in accordance with practices already used in the Cowie Lab at UH. All sequence data will be submitted to Genbank and made publicly available at the time of publication.
10. Anatomical data (illustrations, microscopy, digital photos, descriptions and character codes) from ampullariid specimens will be entered into Morphobank (<http://www.morphobank.org/>), and summaries of these data distributed to the general public via the *Encyclopedia of Life*.

#### References:

- Burks, R. L. & M. M. Chumchal. 2009. To co-author or not to co-author: How to write, publish, and negotiate issues of authorship with undergraduate research students. *Sci. Signal.* 2, tr3.
- Weltzin, J. F., R. T. Belote, L. T. Williams, J. Keller & E. Cayenne Engel. 2006. Authorship in ecology: attribution, accountability, and responsibility. *Front Ecol Environ* 4(8): 435–441.