

Sept. 1st, 2015
Melissa Haendel
Letter of Intent to run for ISB executive committee

To the ISB Nominating committee:

I am running for a position on the ISB executive committee because I believe that biocurators are a critical part of the scholarly communication cycle and because I think I can help promote their inclusion and attribution throughout the research landscape.

Biocurators are a new breed of scientist, they are trained in biology as well as in information science. This makes them highly skilled to support the process of science - all the way from conception to extraction of knowledge from the literature. Unfortunately, the lion's share of a biocurators' time is spent on the latter, often chasing down authors for information that they did not know they needed to include in their publication. Their work to make the fuzzy details of science exact so as to make the data operational has been largely unrecognized.

I work in a biomedical library. I see that libraries everywhere are now trying to understand how can they better support their local research communities with respect to data management and the publication of data. For the most part, libraries do not yet have these skills and are unaware of the Biocuration Society and yet, this is exactly the community that is most aligned with the needs of biologically focused-libraries and their research communities. If only more biocurators were situated in libraries, and consulted on grants and projects whereby they could help design data management and publication plans *a priori*. This is really akin to the statistician being consulted after the data has been collected - it is often too late to perform sophisticated and/or sufficient analysis. Biocurators simply need to be part of the research planning process. Similarly, during the publication process, it is often possible to check a box saying that the work needs to be reviewed by a statistician. It seems to me that given that the content of the paper, data reuse, and scientific reproducibility all depend on how specific the elements of the science are conveyed, that a biocurator should be part of the review process as well.

I think that the ISB should continue efforts to coordinate with journals and funding agencies to include biocurators on editorial boards and review panels for publications and grant submissions. Further, biocurators need better attribution for their silent work - open reviews, authorship, and use of provenance models for their stewardship of the data are all important. Finally, biocurators need a career development just like any scientist. Putting into place computational training for those more biologically focused, and biological training for those more technical, all help grease the wheels of data processing and publication. Attribution for such contributions is no different than attribution in a publication - helping biocurators record their scholarly work, develop their reputations, and find their career paths in this emerging field.

I have responded to a number of NIH Requests for Information, where I regularly point out how biocuration, inclusion of biocurators, and/or development of biocuration skills are all lacking in program announcements and requests for proposals. The recent NIH supplement available for “informationists” to be added to one’s existing grant is a step in the right direction, but we need this idea to become commonplace in researcher’s and funder’s minds. I also am a member of the US NIH Big-Data-to-Knowledge (BD2K) program. Recently, I co-chaired a BD2K workshop at NIH to identify barriers in the development of data standards – financially, technically, and socially – much of which is performed by biocurators. Finally, biocurators can also be teachers – we can actually help researchers learn data curation skills that can help support the whole scholarly communication cycle as well as attribution of biocurators. Libraries can be a key partner to execute this plan, but are not the only vehicle.

As a current member of the ISB executive committee, I would continue to aim to further partnership with libraries, publishers, data repositories and inclusion of biocurators in the whole scholarly communication cycle.

Declaration of Interest

Person or organization	Nature of relationship and/or nature of conflict of interest
Journal: Journal of Biomedical Semantics	Editorial Board member, guest editor
Person: Suzanna Lewis	Co-author and co-investigator
Person: Marc Robinson-Rechavi	Co-author
Activity: Reproducibility Initiative	Board member
Activity: OBO Foundry	Coordinating member
Activity: Phenoscape	Project member
Activity: Resource Identification Initiative	Co-Director
Activity: Monarch Initiative	PI
Person: Monte Westerfield	Previous employer and co-author
Person: Chris Shaffer	Current employer
Journal: Database	Editorial board member

Biography:

Dr. Haendel has a BA from Reed College in Chemistry and a Ph.D. in Neuroscience from the University of Wisconsin, Madison. She was trained in molecular and developmental biology, using chick, mouse, and zebrafish model systems. She is currently the basic

research PI of the Monarch Initiative, with the aim of providing integrated access to human and model systems genotype-phenotype data for the purposes of disease hypothesis exploration. Dr. Haendel led zebrafish genome nomenclature and ontology interoperability efforts for the Zebrafish Model Organism Database (ZFIN). More recently, she has been leading efforts to assess reproducibility relating to specification of model systems in the literature. She also participates in development of eagle-i and VIVO, designed to collect and disseminate information about biomedical resources and enable research profiling, and to promote collaboration across translational boundaries. Her research interests are in using ontologies to promote synthetic science through connections within biomedical data, to utilize information science during the course of research and its publication, to promote team science, and to enable scientific reproducibility. She has been a strong proponent of attribution for all types of contribution to the research landscape, including biocuration.