

# University of Massachusetts and New England Area Librarian E-Science Symposium

*Final Report*

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**University of Massachusetts and New England Area Librarian E-Science Symposium  
Express Outreach Award  
Final Report**

**1. Abstract**

The Express Outreach Award was identified as an opportunity for funding to facilitate the development of a collaborative strategy for New England area librarians to support e-science. The funds were used by the University of Massachusetts (UMMS) Lamar Soutter Library to host a day-long e-science symposium at the Hoagland-Pincus Conference Center on Monday, April 6, 2009. This event served as an educational program, resource workshop, and think-tank for regional academic, health sciences, and sciences librarians. Specific details will be described further in this report.

The targeted population included science librarians affiliated with the University of Massachusetts and the Worcester region, Boston Library Consortium, and regional resource libraries of NN/LM-NER. The total representation of libraries was 29, with 62 librarians in attendance.

The symposium's programming was divided into the morning (a panel discussion, Biotoools and NCBI resources presentation, and the keynote address) and the afternoon (a lunch-time address and the breakout sessions and facilitated group discussion). The broad goal of this project was to increase awareness amongst New England area librarians of the importance of e-science and the role of the library in support for scientific research. Doing so entailed education in the definition of e-science, in identifying and using biotool resources, and on the roles that librarians play to support Life Sciences Initiatives. The symposium was intended to ultimately develop a strategy for regional collaboration in the delivery of e-science resources and services. The outcome will be a written report with specific recommendations for area librarians to explore in supporting scientific research in their institutions.

**2. Target Population and Geographic Area Covered**

The meeting was held at the Hoagland-Pincus Conference Center, University of Massachusetts Medical School, 100 Maple Ave, Shrewsbury, MA. The target population was science librarians affiliated with the University of Massachusetts and the Worcester region, Boston Library Consortium, and regional resource libraries of NN/LM-NER (including large academic health science libraries throughout New England). The estimate was about 38 libraries, with around 80 librarians in attendance.

The event administrator and coordinator believe that the expectations for our target audience were met. Of the 38 libraries that were formally invited, 29 were registered. Total registrations of librarians came to 62, with 70 people in attendance (including invited speakers and a non-registered attendee). The target population was science librarians located throughout New England, however, due to scheduling conflicts, New Hampshire and Maine were not represented.

The original list of invited libraries is attached, with a document reflecting actual event registrations for the target audience, broken down by state and institution.

**3. Project Goals**

The broad goal for the project was to increase awareness among New England area librarians of the importance of e-science and the role of the library in support for scientific research.

The morning's introductory panel, delivered from different perspectives of two health sciences librarians and one researcher, effectively contributed to this goal. Setting the stage for the remainder of the day, the panel began with a definition of e-science, an overview of its major issues, and the roles librarians might play to support it at our institutions. The following presentations, one describing the work done as a bioinformatics librarian at a major biomedical research institution, and the other explaining the UMMS International Stem Cell Registry, provided the audience with an opportunity to learn about specific applications of e-science within the scientific research arena.

The objectives for the project were also successfully met. These are itemized below, with descriptions of how they were accomplished through the event's programming.

- **To educate regional librarians in the definition of e-science and their role in supporting Life Sciences Initiatives.**

Generally speaking, the whole event met this objective. However, the programs predominately responsible for doing so were the morning's discussion panel, the keynote address on the Life Sciences Initiative at the University of Massachusetts, and the lunchtime presentation on Clinical and Translational Research at UMMS.

The discussion panel served as a valuable introduction to the concept and definition of e-science, how scientific research is affected by the changing capabilities of e-science, and some practical applications of e-science in scientific research, namely of those from the library in order to support their institutions, and from the experience of a scientist whose own research is especially affected by e-science.

The keynote address on the Life Sciences Initiative at the University of Massachusetts was delivered by UMMS Chancellor Michael Collins, MD. Dr. Collins explained how the University plans to utilize the \$1 billion funding it has received. Construction of a new research building will soon begin, and money will be allocated to strengthen stem cell, RNAi, and gene therapy research. As this presentation was delivered by an administrator at a major research university, it especially shed light that many other institutions will be/already are funneling substantial funding to support research initiatives in stem cell and RNAi technology. Librarians should be aware of similar trends at their own institutions, to be prepared to support the scientists, faculty, students, and staff working in these areas.

As the director of the steering committee for the UMass Center for Clinical and Translational Sciences, Dr. John Sullivan educated the audience on Clinical and Translational Research and how it is applied at UMMS. He explained that, fundamentally, its goal is to strengthen collaboration among all sciences programs, i.e. biomedical departments and clinical departments. Research should no longer be conducted in isolated capacities, in individual labs. Rather, interdisciplinary collaboration will enable "benchside" research discoveries, conducted within labs, to have better odds of translation into clinical practice- for the ultimate well-being of the public. This presented another example of e-science in practice.

One of the defining factors of e-science is that, through high-computing technologies, interdisciplinary networking and collaboration between labs and departments is especially capable. As Dr. Sullivan explained that Clinical and Translational Research aims to encourage interdisciplinary research and collaboration, this illustrated how far e-science extends within the work of many of our institutions. As librarians, it is our responsibility to maintain awareness of these initiatives so that we may support them to the best of our abilities.

- **To educate regional librarians about Biotools, including those provided by NCBI.**

One session was specifically devoted to this objective. Led by Drs. David Lapointe and David Osterbur, they presented on various research resources and tools, and how librarians can support the researchers using them. Dr. Lapointe, director of Scientific Computing at UMMS, demonstrated and presented databases and internet-based tools used by bioinformatics researchers. Dr. Osterbur presented NCBI resources that can be used to support our researchers. A librarian at Countway Medical Library at Harvard Medical School, he also has a PhD in genetics, so he did a terrific job of explaining the information needs of our researchers, while also highlighting and explaining the specific tools librarians can use to support them.

- **To begin engaging the New England area library community in the structured development of a strategy for regional collaboration to deliver e-sciences resources and services.**

The afternoon breakout sessions and facilitated group discussion was dedicated to this objective. While many in the audience had previous knowledge about e-science, a substantial number did not, and were unaware of how to begin supporting it at their own institutions. The breakout sessions consisted of nine tables with assigned talking points for discussion, each recording their ideas onto flip chart paper. Following the sessions, Elaine Martin facilitated the group discussion, with each table presenting their ideas. After the symposium, the content on the flip chart papers was recorded as a Word document. Elaine Martin and Raquel Rivera have planned that, after submitting this report, the Word document will be used to create a strategy for regional collaboration for e-science.

#### 4. Methodology/Approach

Since notification of funding in December, 2008, the past four months have been devoted to preparatory work to plan the program. This includes identifying and securing speakers; reserving the space and ordering supplies, food, and promotional materials; advertising the event; registering and keeping track of attendees; and preparing promotional and informational materials for the day of the program. The University of Massachusetts and New England Area Librarian E-Science Symposium was a day-long event. It was organized in two parts:

**Morning:** The day began at 9:00 with a continental breakfast and networking. At 9:30, the programming began with a panel discussion featuring three individuals: two health sciences librarians and one biomedical researcher. The panel discussion lasted for 90 minutes. After this session was the Biotools and NCBI resources presentation. A 45 minute session split into two different presentations, each presenter spoke for a little more than 20 minutes. Immediately following was Chancellor Michael Collins' keynote address about the Life Sciences Initiative at the University of Massachusetts, lasting about 20 minutes.

**Afternoon:** After Dr. Collins' presentation, there was a brief break, and lunch was served. Towards the end of lunch, Dr. John Sullivan delivered his presentation on Clinical and Translational Research at UMMS, speaking for about 30 minutes. The remainder of the event was concentrated upon the breakout sessions and facilitated group discussion, lasting about 90 minutes total. Attendees broke into small group discussions; there were nine tables of eight participants. Each table had a pre-determined e-science topic to discuss, and prior-designated attendees facilitated each group.

After these discussions, the larger group reconvened to engage in a conversation facilitated by Elaine Martin. Each group presented their ideas of next steps for action, pertaining to their assigned talking point. This discussion served as a collaborative effort towards a structured strategy for regional delivery of e-science resources and services. This discussion will ultimately be reported as specific recommendations for area librarians to explore in the support of their institutional scientific research.

Since the event, attention has been concentrated on creating documents representing the day's programming. This includes four facets: the final report, a summary of program evaluations, a Word document of the content from each flip chart paper, and a breakdown of registrations. A Symposium Homepage has been built, housing all the documents generated for and from the event. It is available to the public ([http://library.umassmed.edu/escience\\_symposium09.cfm](http://library.umassmed.edu/escience_symposium09.cfm)). The next two-three months will involve the compilation of the recommendations from the event into an e-science report. This report will be included on the homepage, along with the above-mentioned documents. It will be submitted as a final product to the NER.

## 5. Schedule/Time

The following work plan is organized by the original timeline, and by the actual timeline. It encompasses the work involved in meeting all objectives listed above.

Month	Items ( <i>Proposal Timeline</i> )	Month	Items ( <i>Actual Timeline</i> )
<b>Month 1 (November 2008)</b>	<ul style="list-style-type: none"> <li>• Identify speakers</li> <li>• Schedule &amp; plan educational workshops</li> <li>• Generate list of speakers &amp; CE opportunities</li> <li>• Contact instructors &amp; speakers for availability &amp; topics</li> <li>• Finalize a date</li> <li>• Reserve the space at the Hoagland-Pincus Center</li> <li>• Order Supplies</li> </ul>	<b>Month 1 (December 2008)</b>	<ul style="list-style-type: none"> <li>• Identify speakers</li> <li>• Schedule &amp; plan educational workshops</li> </ul>
<b>Month 2 (December)</b>	<ul style="list-style-type: none"> <li>• Finalize program schedule</li> <li>• Develop program brochure</li> <li>• Develop web page to advertise the event</li> <li>• Mail &amp; e-mail invitations to potential attendees</li> </ul>	<b>Month 2 (January 2009)</b>	<ul style="list-style-type: none"> <li>• Identify speakers</li> <li>• Finalize a date</li> <li>• Reserve the space at the Hoagland-Pincus Center</li> <li>• Finalize program schedule</li> <li>• Mail &amp; e-mail invitations to potential attendees</li> </ul>
<b>Month 3 (January 2009)</b>	<ul style="list-style-type: none"> <li>• Accept &amp; track registrations</li> <li>• Write &amp; submit quarterly report to NER</li> </ul>	<b>Month 3 (February)</b>	<ul style="list-style-type: none"> <li>• Generate list of speakers &amp; CE opportunities</li> <li>• Order supplies</li> <li>• Contact instructors &amp; speakers for availability &amp; topics</li> <li>• Finalize program schedule</li> <li>• Accept &amp; track registrations</li> <li>• Write &amp; submit quarterly report to NER</li> </ul>
<b>Month 4 (February)</b>	<ul style="list-style-type: none"> <li>• Finalize food order</li> <li>• Finalize speaker arrangements &amp; workshop plans</li> <li>• Prepare packets</li> <li>• Prepare evaluation materials</li> </ul>	<b>Month 4 (March)</b>	<ul style="list-style-type: none"> <li>• Order supplies</li> <li>• Develop program brochure</li> <li>• Develop web page to advertise the event</li> <li>• Accept &amp; track registrations</li> <li>• Finalize food order</li> <li>• Finalize speaker arrangements &amp; workshop plans</li> <li>• Prepare packets</li> <li>• Prepare evaluation materials</li> </ul>
<b>Month 5 (March)</b>	<ul style="list-style-type: none"> <li>• Host event</li> <li>• Record recommendations from participants</li> </ul>	<b>Month 5 (April)</b>	<ul style="list-style-type: none"> <li>• Develop web page to advertise the event</li> <li>• Prepare packets</li> <li>• Prepare evaluation materials</li> <li>• Host event</li> <li>• Record recommendations from participants</li> <li>• Compile evaluations &amp; include in final report to NER</li> </ul>
<b>Month 6 (April)</b>	<ul style="list-style-type: none"> <li>• Compile recommendations into e-science report</li> <li>• Post report on project website with link to NER website</li> <li>• Compile evaluations &amp; include in final report to NER</li> </ul>	<b>Month 6 (May)</b>	<ul style="list-style-type: none"> <li>• Compile recommendations into e-science report</li> <li>• Post report on project website with link to NER website</li> </ul>
<b>Month 7 (May)</b>	<ul style="list-style-type: none"> <li>• Develop &amp; produce poster for presentation at NER, NAHSL, &amp; other events</li> </ul>	<b>Month 7 (June &amp; beyond)</b>	<ul style="list-style-type: none"> <li>• Develop, produce poster for presentation at NER, NAHSL, &amp; other events</li> </ul>

## **6. Evaluation Plan**

A two-part evaluation is applied to this project. The first consists of a written evaluation form given to all attendees. Asked to rate symposium content, presenters, and the overall quality of the symposium, attendees had room to write in the most useful aspects of the event, suggestions for improvement, suggestions for future regional e-science events, and other commentary. Of 66 attendees, 64 were given evaluations (Drs. Collins and Sullivan did not receive evaluations), and of these, 26 were completed. The majority were positive, with feedback suggesting points for future regional events. A summary of the evaluations accompanies this report.

The second evaluation is more formative. Based on the afternoon's breakout sessions and facilitated group discussion, a written document with recommendations for future e-science initiatives will be created. A structured strategy for collaboration among New England-based librarians and libraries to ultimately deliver e-science resources and services for our users will be identified. This portion of the evaluation plan is in progress, and upon completion, the primary goal for the symposium will be met.

## Appendix A

### Target Audience: Symposium Registrations- by State- by Institution

#### Connecticut-

Hartford Hospital: 1  
University of Connecticut: 2  
Yale University: 3

#### Maine-

Maine Medical Center: 0

#### Maryland\*-

University of Maryland, Baltimore: 1

#### Massachusetts-

Amherst College: 0  
Assumption College: 2  
Baystate Medical Center: 2  
Boston College: 3  
Boston Library Consortium: 1  
Boston Public Library: 0  
Boston University: 2  
Brandeis University: 0  
Clark University: 1  
College of the Holy Cross: 1  
Harvard University: 0  
Marine Biological Laboratory & Woods Hole Oceanographic Institute: 1  
Massachusetts College of Pharmacy & Health Sciences: 3  
Massachusetts General Hospital: 2  
Massachusetts Institute of Technology: 2  
National Network of Libraries of Medicine- New England Region RML: 2  
Northeastern University: 0  
Simmons College: 0  
State Library of Massachusetts: 1  
Tufts University: 1  
University of Massachusetts- Amherst: 6  
University of Massachusetts- Boston: 3  
University of Massachusetts- Dartmouth: 3  
University of Massachusetts- Lowell: 2  
University of Massachusetts- Worcester: 6  
Wellesley College: 2  
Williams College: 1  
Worcester Polytechnic Institute: 3

#### New Hampshire-

Dartmouth College: 0  
University of New Hampshire: 0

#### Rhode Island-

Brown University: 3  
Rhode Island Hospital: 1  
University of Rhode Island: 1

#### Vermont-

University of Vermont: 1

Total: 63

### Invited Speakers- by State- by Institution

#### Massachusetts-

Harvard University: 1  
University of Massachusetts- Worcester: 4

#### Minnesota-

University of Minnesota: 1

#### Florida-

University of Florida- Gainesville: 1

Total: 7

*\*An invitation was sent to all Regional Medical Libraries, resulting in 1 attendance, represented by the RML at the University of Maryland, Baltimore. Due to the last-minute notification, this attendee was not formally registered.*

## Appendix B

### Discussion Questions for Breakout Sessions

#### Data

- Table 1** -Has your institution been addressing data management and data-sharing issues? Is your library involved? How are other universities dealing with digital storage of various electronic data formats?  
-Who is generating data?  
-What types of data are generating and how much data?  
-What are they doing with it now?

#### Web Portal

- Tables 2 & 7** -What components should a web portal for e-science include?

#### Delivery

- Table 3** -What organizational structure would facilitate regional delivery of e-science resources and services? What are essential components of regional delivery of e-science resources and services?

#### Staffing/ Building New Roles

- Table 4** -How can our current library staff obtain the training and credentials necessary to support e-science resources and services? How interested/comfortable/knowledgeable/expert are your library's staff in understanding or contributing to the data landscape and challenges at your institution?

- Table 5** -What are data librarians or data professionals?  
-What kinds of qualifications does an e-science specialist need?  
-Where do you find people with these skills?  
-How do you train people for these roles?

#### Regional

- Tables 6 & 9** -How can we find out about e-science initiatives in the region & facilitate collaboration among libraries/librarians and their researchers?

#### General

- Table 8** -Given today's presentations, what roles do you see for libraries in e-science initiatives & potential strategies? What are practical approaches for understanding the scope of this issue at your institution?
- Bioinformatics and E-Science: Are they the same thing? Where are the overlaps? What are the differences?