



Latino Special Interest Group



Beyond the customary library services in instructional programs and reference, five health sciences librarians will discuss key aspects about their work in academia and public health information centers.

Allison Herrera

Technology & Communications Coordinator



The University of Massachusetts Medical School

National Network of Libraries of Medicine, New England Region

National Public Health Coordination Office

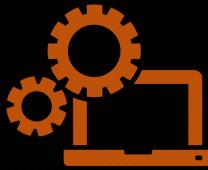




About Me

- BFA Visual Culture Education Concentration in 3D Media
- Masters Library & Information Sciences
- Computer Sciences JAVA, R, C++, _____ Data Analysis, Databases
- Archives, Museums, Public Libraries, Cultural Libraries, Health Sciences Libraries
- Diversity, Social Justice, and Cultural ----- Identity Exploration







Background of NNLM







U.S. Department of Health & Human Services (HSS)



National Institutes of Health



National Library of Medicine



National Network of Libraries of Medicine

The mission of the NNLM is to advance the progress of medicine and improve the public health by providing all U.S. health professionals with equal access to biomedical information and improving the public's access to information to enable them to make informed decisions about their health.



NNLM Regions & Offices





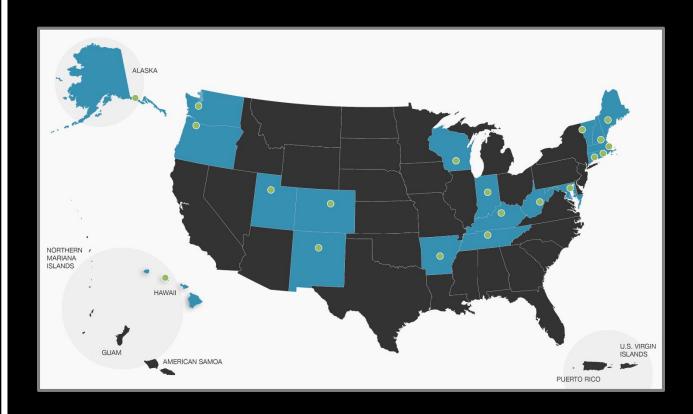
New England Region (NER)

NER proudly serves: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The New England Region is based in Worcester, MA, at the University of Massachusetts Medical School.

NNLM New England Region

NIH NLM NNLM About Us - National **Network of Libraries** of Medicine **Our Mission** The NNLM New England Region (NER) works to advance the progress of medicine and improve public health by providing equal access to biomedical information We're funded by the National Institutes of Health. Everything we offer is FREE. Biomedical Resources We offer online resources for health professionals, patients, educators, consumers, students, and more! PubMed and MedlinePlus are 2 of our well-known resources. Grants & Funding Free Training & Classes Whether you're a health professional, researcher, teacher, student, or We provide training for all of our resources as well as a variety of Contact: nnlm-ner@umassmed.edu

NINLIMI Public Health Coordination Office



The NPHCO provides access to library resources, including e-journals, e-books, and research through the Public Health Digital Library.

NNLM NER – Recently Funded Projects

University of New England – Extended Medical Education Virtual Reality





Pettaway Pursuit Foundation – Doula Technology Enhancement





CoughSpot – CoughEtiquette





Springfield City Library – Health in the Square



My Unique NNLM Responsibilities

- Data Analysis & Mapping
- Website Development & Design
- Storytelling with Data
- External & Internal Communications
- National & Regional Teams
- Government & University Policies
- 508 Compliance
- Curriculum Development
- Teaching Webinars
- Organizing Interest Groups
- Assisting Funded Projects



Professional Development for You!



Free classes nnlm.gov/professional-development



Topic examples: PubMed for Librarians, Healthcare Trends, Classroom Assessment, Consumer Health Information, Data Visualization, Community Collaborations, Exploring Nutrition, Genetic Information, Graphic Medicine, and so much more!

Questions?

Allison Herrera

Technology & Communications Coordinator





Allison.Herrera@umassmed.edu



@AllisonKHerrera



508-856-5979 (office)

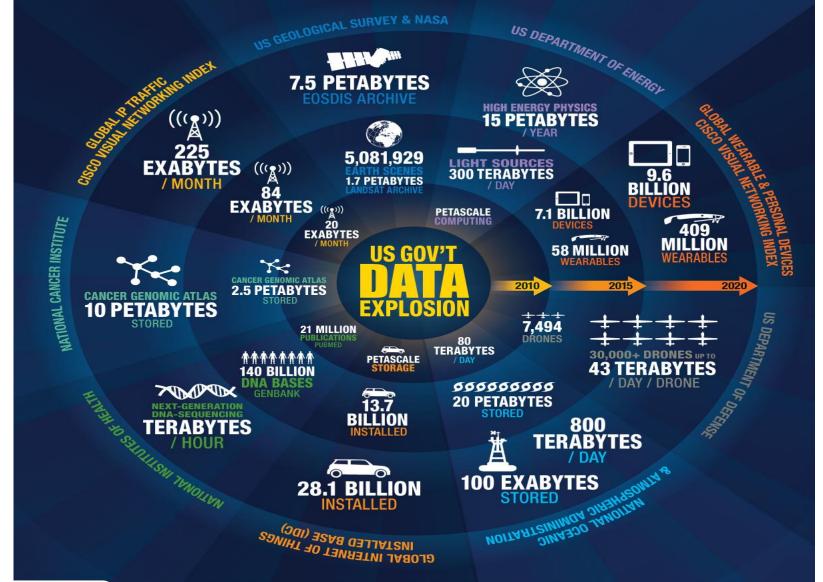




Bioinformatic Support at the Health Sciences Library

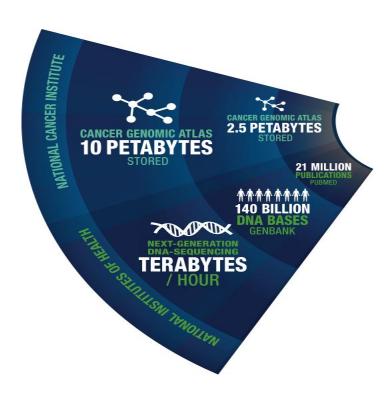


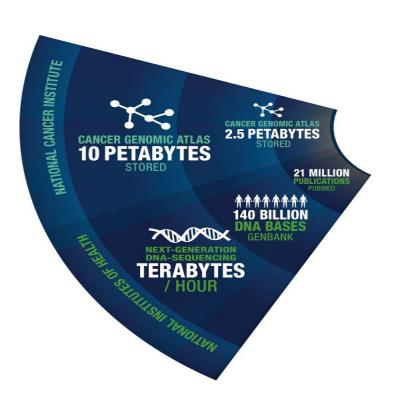
February 7, 2017 Jeffrey C. Oliver, PhD











Lots of data, but how are they actually used?

How many genes are on each human chromosome?

NCBI's RefSeqGene database has ~64,000 human gene records...

How many genes are on each human chromosome?

NCBI's RefSeqGene database has ~64,000 human gene records...

...but there are only ~19,000 protein-coding genes in the human genome

1	2	3	4	5	6	7	8	12	13
#bin	name	chrom	strand	txStart	txEnd	cdsStart	cdsEnd	score	name2
0	NM_001276351	chr1	-	67092175	67134971	67093004	67127240	0	C1orf141
0	NM_001276352	chr1	-	67092175	67134971	67093579	67127240	0	C1orf141
0	NR_075077	chr1	-	67092175	67134971	67134971	67134971	0	C1orf141
0	NM_000299	chr1	+	201283451	201332993	201283702	201328836	0	PKP1
0	NM_001005337	chr1	+	201283451	201332993	201283702	201328836	0	PKP1
1	NM_001042682	chr1	-	8352403	8423687	8355086	8364133	0	RERE
1	NM_001042681	chr1	-	8352403	8817640	8355086	8656297	0	RERE
1	NM_012102	chr1	-	8352403	8817640	8355086	8656297	0	RERE2
1	NM_001281956	chr1	-	33513998	34165274	33519517	34165097	0	CSMD2
1	NM_052896	chr1	-	33513998	34165842	33519517	34165813	0	CSMD2
1	NR_038261	chr1	-	41847188	42035925	42035925	42035925	0	HIVEP3

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How many genes are on each human chromosome?

1	2
1995	chr1
714	chr10
1267	chr11
1002	chr12
312	chr13
590	chr14
568	chr15
803	chr16
1142	chr17
267	chr18
1380	chr19
1207	chr2

1	2
526	chr20
223	chr21
426	chr22
1039	chr3
722	chr4
848	chr5
1008	chr6
878	chr7
652	chr8
754	chr9
803	chrX
39	chrY



Galaxy

The future of health sciences: an opportunity for libraries





A career in cancer research? Computational skills wanted

Cancer researchers are generating mounds of molecular data on tumor biology. Scientists with molecular and computational backgrounds are needed to move the growing feld of precision oncology forward. Researchers with both skill sets, however, have a leq up. **By Gunjan Sinha**

DOI: 10.1126/science.opms.r1600163 sciencecareers.org SCIENCE



Big data biomedicine offers big higher education opportunities

John Darrell Van Horn a,b,1

6322-6324 | PNAS | J une 7, 2016 | vol. 113 | no.23 www.pnas.org/cgi/doi/10.1073/pnas.1607582113

Creating the Future Biomedical Research Workforce

Frederick J. Meyers and Claire Pomeroy

www.**ScienceTranslationalMedicine**.org 28 September 2011 Vol 3 Issue 102 102fs5





A career in cancer research? Computational skills wanted

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6322-6324 | PNAS | J une 7, 2016 | vol. 113 | no.23 www.pnas.org/cgi/doi/10.1073/pnas.1607582113

EMBRACING CHANGE If we accept this broade

If we accept this broader charge for biomedical science, then workforce development requires new approaches:

- - -

(ii) New skills. Biomedical science trainees require a new set of core knowledge competencies, such as bioinformatics, statistics, the "omics," nanotechnology, regenerative biology, economics, social and behavioral sciences, and communication.

Creating the Future Biomedical Research Workforce

Frederick J. Meyers and Claire Pomeroy

www.ScienceTranslationalMedicine.org 28 September 2011 Vol 3 Issue 102 102fs5

> echo "Hello world!"
Hello world!

Learn-r

A suite of lessons for learning the R programming language

Learn R

A collection of lessons for learning the R programming language. Generally designed for the novice, these lessons assume little background knowledge with R or programming in general. The majority of the least state of the

Introduction to R Graphing

Jeff Oliver

22 July, 2016

This brief tutorial will demonstrate how to create a basic plot in R from a text file of data. This introduction provides an entry point for those unfamiliar with R (or a refresher for those who are rusty). We will start with a very minimal piece of code and work our way up to code that automates the creation of 12 different pdf files, each with a different X-Y scatterplot.

Learning objectives:

- Gain familiarity with R
- · Read data from a file
- · Visualize data in a graph
- · Understand the principle of control flow

In this tutorial, we will be using the 'gapm

Introduction to R Statistics

Jeff Oliver

16 September, 2016

An introduction to using the R statistics package and the RStudio interface.

Learning objectives

- 1. Read data from files and output results to files
- 2. Extract relevant portions of datasets
- 3. Run standard statistical tests in R, including Student's t, linear regression and analysis of variance

Setup

First we need to setup our development environment. We need to create two folders: 'data' will store the data we will be analyzing, and 'output' will store the results of our analyses.

```
dir.create(path = "data")
dir.create(path = "output")
```





software carpentry



CARPENTRY

Questions?

Contact me at:

Jeff Oliver
jcoliver@email.arizona.edu





Annabelle V Nuñez MEZCOPH Liaison Librarian Research & Learning Department



About Annabelle

- Worked for non-profit arts agency
 - Neighborhood and cultural programming

Community advocate & activist

Previous experience integrated into librarianship

Community engagement and activism

City eyes three-tier garbage charges

Arizona Daily Star, The (Tucson, AZ) - Sunday, January 30, 2005

Author: Joe Burchell, ARIZONA DAILY STAR

Size of can would govern 'Pay As You Throw'

11111

When it comes to your garbage, the city is looking to lighten your wallet if you don't lighten your load.

In an effort to get Tucsonans to recycle and compost more - and throw away less - the city may offer customers three different rates, depending on how

Neighbors are leery of taping drug deals

Arizona Daily Star, The (Tucson, AZ) - Sunday, September 17, 2006

Author: Rob O'Dell, ARIZONA DAILY STAR

Leal's office loans camera; some warn it's dangerous

11111

Councilman Steve Leal spent \$549 in city money on video-recording equipment for residents in his South Side ward to record drug deals.

Area gets speed bumps in wake of 2 kids' deaths

Friday, August 25th, 2006



New speed bumps and other safety improvements slow traffic in a Southwest Side neighborhood where two children were killed in a 2001 automobile accident.

National City neighborhood residents asked the county for the improvements after the deaths of Valeria Riley, 10, and Manuel Escarcega, 9, said Annabelle Nuñez, a past president of the neighborhood association.

A dedication ceremony for the improvements, funded with \$150,000 in county bond proceeds, is scheduled for Saturday. The work included installing two fountains and refinishing a pedestrian bridge at Rodeo Wash Park.



Mel & Enid Zuckerman College of Public Health (MEZCOPH)

- Established in 2000, (embedded in 2007)
- Top 5 colleges in American Indian and Hispanic students and graduates
- Academic divisions

Community, Environment and Policy

Epidemiology and Biostatistics

Health Promotion Sciences

MEZCOPH (con't)

- Bachelor of Science in Public Health (BSPH)
- Master of Public Health (MPH) Program
 - Seven concentrations
- Doctorate in Public Health (DrPH)
- Dual Degree Programs
- Certificate Programs
- Centers and Offices



Orientation & Integration

- Networking with the constituency
 - College orientation and course/class
 - Listserv, access to dept intranet, committee involvement, projects/programs, meetings, college events, seminars
 - Social functions
 - College of Public Health Appointment Lecturer

Orientation & Integration (con't)

- Subject specialist
 - Membership to APHA
 - Listservs
 - College presentations, seminars
 - Webinars,
 - Public health literature

Services - Faculty

- Curriculum support
 - Course integrated instruction

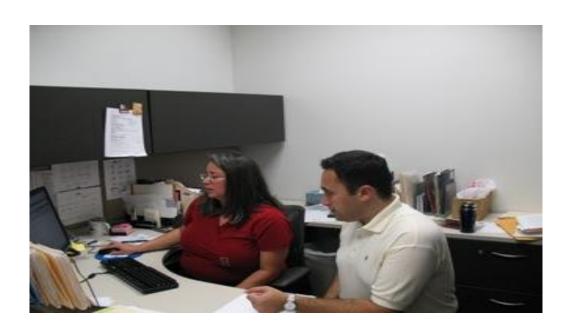
- Research support & integration
 - Grant opportunities, literature searches, information services and training included in grant Activity - Systematic Reviews



the neonatal intensive care unit compared with infants whose mothers did not use cannabis during pregnancy (pOR=2.02: 1.27 to

Services - Students

- Customized workshops
 - Research skills and resources
 - PubMed, PsychINFO, PHPartners, EndNote Online/RefWorks
- Grant opportunities or research projects
- Individual consultations
 - Student internships
 - Systematic reviews, scoping reviews



Thank you! Questions or follow-up

anunez@email.arizon.edu

(520)626-7508

Who I am



Brenda Linares, MLIS, AHIP
Outreach Librarian and Coordinator of Research
Assistants
UNC Chapel Hill Health Sciences Library

Education
MLIS, University of California, Los Angeles (UCLA)
BS in Finance, California State University, Northridge (CSUN)

MBA in progress, North Carolina State University (NCSU)





NC STATE UNIVERSITY



National Library of Medicine (NLM) Associate Fellowship

- https://www.nlm.nih.gov/about/training/associate/
- a one-year postgraduate training fellowship at the NLM in Bethesda, Maryland, The program is designed to provide a broad foundation in health sciences information services, and to prepare librarians for future leadership roles in health sciences libraries and in health services research.





What do I do as a Health Sciences Librarian?

- Training/Instructor
- Special Projects
 - NC Health Info
 - Global Health
- Co-Liaison to the School of Public Health
- Collaborate with the community and community organizations
 - Public Libraries
 - Community Colleges
- Users
 - Students
 - Researchers
 - Faculty
 - Nurses
 - Doctors
 - Librarians
 - The public



Health Literacy

- Is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.
- Health literacy is dependent on individual and systemic factors:
 - Communication skills of lay persons and professionals
 - Lay and professional knowledge of health topics
 - Culture
 - Demands of the healthcare and public health systems
 - Demands of the situation/context



Outreach Services

- Partnership with community colleges
- Partnership with Public Libraries
- Consumer health and health literacy











Funding Opportunities/Training

- National Library of Medicine (Regional Medical Libraries)
- https://nnlm.gov/regions





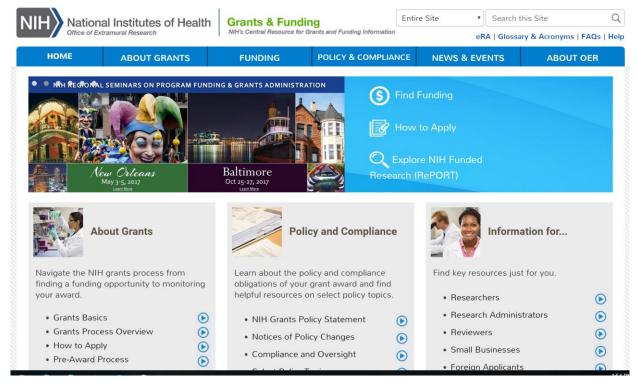
http://www.nchealthinfo.org/

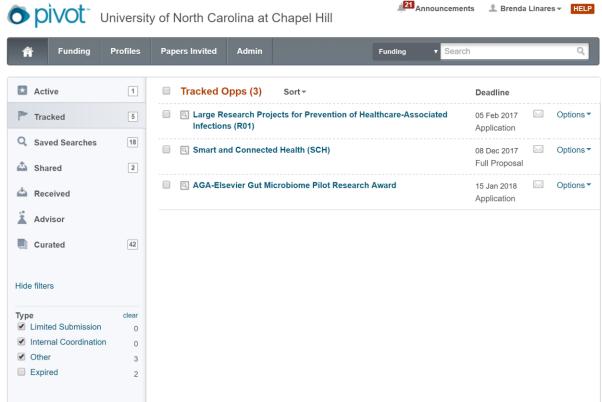


- Assist with consumer health questions
- Seek out more consumer health information resources in Spanish
- Promote NC Health Info to people of North Carolina



Other Responsibilities: Grants







Citation Managers



Citation Management







zotero



UNC Libraries Research Hub

http://library.unc.edu/hub/

The UNC Libraries Research Hub provides spaces, technology, and expertise to assist with all phases of research.

The Hubs form an interdisciplinary network, complete with partners across campus.

Idea Development

Funding

Proposal

Conducting

Disseminating

- Find background literature
- Utilize research tools effectively
- Locate data sources
- · Identify collaborators

- Learn grant seeking tools
- Identify specific grant opportunities
- Find alternative funding sources
- Prepare data management plan
- · Describe data
- Navigate repository options
- Track compliance with NIH Public Access Policy

- Manage citations
- Review IRB and IACUC protocols
- Conduct systematic reviews

- Select journals
- Identify open access journals in field
- Manage copyright
- · Design effective posters
- Cite grants
- Track research impact
- Deposit work in digital repository

Assistance with the Research Process



Medical Library Association http://www.mlanet.org/





Please feel free to email me I will be happy to talk to you Brenda Linares

blinares@email.unc.edu 919-962-0801



Outreach at the University of Arizona

Yamila El-Khayat



WHY?

Land Grant Institution



Festivals/ Fairs



Tucson Festival of Books



Phoenix Disability Fair

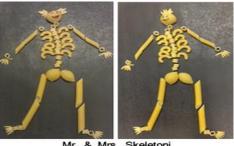


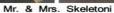
Flagstaff STEM Fair



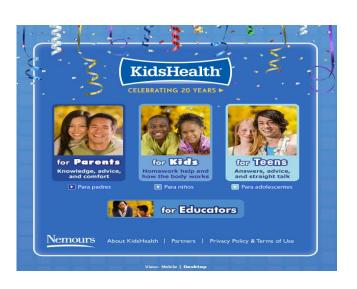
Miami AZ STEM Fest

K -12 Activities



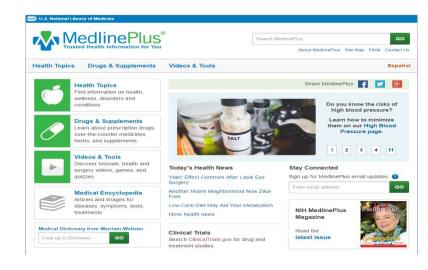




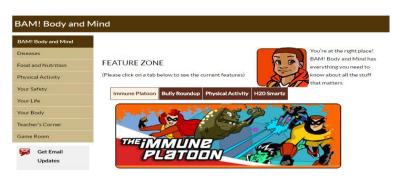




High school students learning about health information



Centers for Disease Control and Prevention CDC 24/7: Saving Lives, Protecting People™



U.S. Mexico Border/ Spanish Speakers





Left to Right: Teresa Niño, Yamila El-Khayat and Alejandra Gepp.



National Promotoras and Community Health Workers Conference
Promotores Binational Conference



Promotoras posing for a picture during a short break



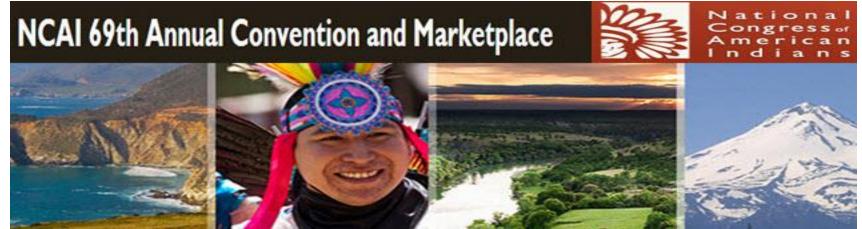
Rural Communities



Ft. Defiance Indian Hospital



Canyon de Chelly Chinle



Seattle



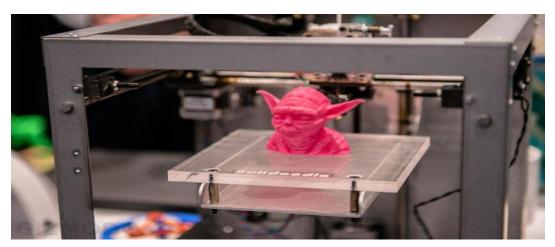
Az Rural Health Conference

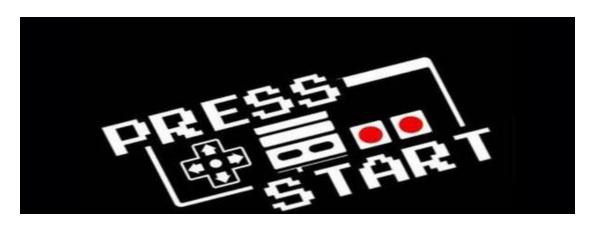
Outreach Data

- 2011-Present
 - 185 events
 - 12120 people reached



Future Directions







Thank you

Yamila El-Khayat
Outreach Services Librarian
University of Arizona Health Sciences Library
520-626-6770

yme@emailarizona.edu

