

# VIVO and the role of librarians part 1

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# About me

<https://vioil.github.io/>



- Head of Cataloging & Metadata Services at Stony Brook University Libraries, July 2017 - present
- Head, Digital Systems and Collection Services - Northwestern University, Feinberg School of Medicine, Galter Health Sciences Library, Northwestern University Clinical and Translational Sciences Institute, November 2014 – July 2017
- Assistant Professor, Texas A&M University Libraries, February 2012 – October 2014
- Library Specialist I-III, Texas A&M University Libraries, November 2007 - February 2012

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# Goals for today - part I

- Gain a deeper understanding of the VIVO semantic web platform.
- Learn how to find the right resources for a new VIVO implementation, including data sources, team members, governance models, and support structures.

## Goals for part II

- Provide a valuable guide to best practices in modeling RDF data by utilizing data integration tools.
  - Ontology, SPARQL, and all that RDF jazz

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# A brief history

**2003-2005** Cornell created VIVO as a relational database for the life sciences

**2006-2008** Cornell expanded to all disciplines and converted VIVO to Semantic Web application

**2009-2012** VIVO was awarded a NIH grant

**2013-2015** VIVO joins DuraSpace open-source portfolio preserving digital scholarship

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# VIVO

An *open-source semantic web application* that enables the discovery of research and scholarship across disciplines in an institution.

VIVO harvests data from *verified* sources and offers *detailed profiles* of faculty and researchers.

*Public, structured linked data* about investigators interests, activities and accomplishments, and *tools to use that data to advance science*.

VIVO enjoys a *robust open community space* to support implementation, adoption, & development efforts around the world.

See <http://wiki.duraspace.org/display/VIVO>

The image displays a screenshot of the VIVO web application interface. At the top, the VIVO logo is accompanied by the tagline "connect • share • discover" and a search bar. Below the navigation menu (Home, People, Organizations, Research, Events), a profile for "Conlon, Mike | VIVO Project Director" is shown. The profile includes a photo, contact information (email: mconlon@ufl.edu, phone: (352) 214-7882), and a list of positions and websites. A "Publications in VIVO" graph shows 63 publications in the last 10 full years. Other features include a "Co-author Network", "Map of Science", and "Co-investigator Network".

OpenVIVO is a demonstration of a VIVO engine can join. Browse or search information on research, people, and organizations.

Search OpenVIVO

Research: 1,016 Academic Journals, 29 Books, 90 Chapters, 109 Conference Papers, 4 Datasets

People: Display Mike A, Robert M, Michael, Bobbie, George, Wade, Alex

Organizations: Montanera General Hospital, Apollo Central, Southern College, Ohio Institute of Chemical Physics, University of Akron, American Early Science Association

Create a Profile / Log in: OpenVIVO is available to anyone who has a registered ORCID identifier. Log in via ORCID

OpenVIVO is available to anyone who has a registered ORCID identifier. Log in via ORCID

Explore Research & Scholarship, Browse Academic Units, Find a Domain Expert, The Visualizations, Keyword Clouds, Related Content

VIVO

# VIVO is open

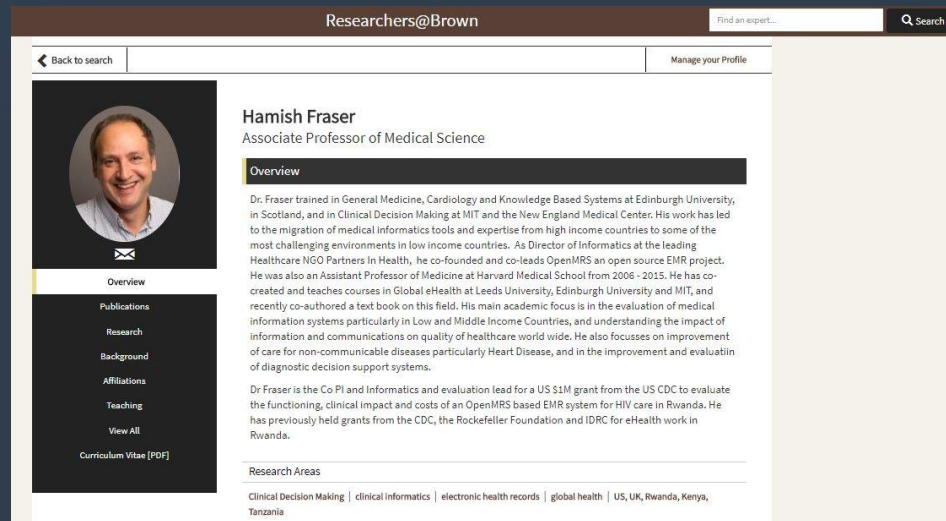
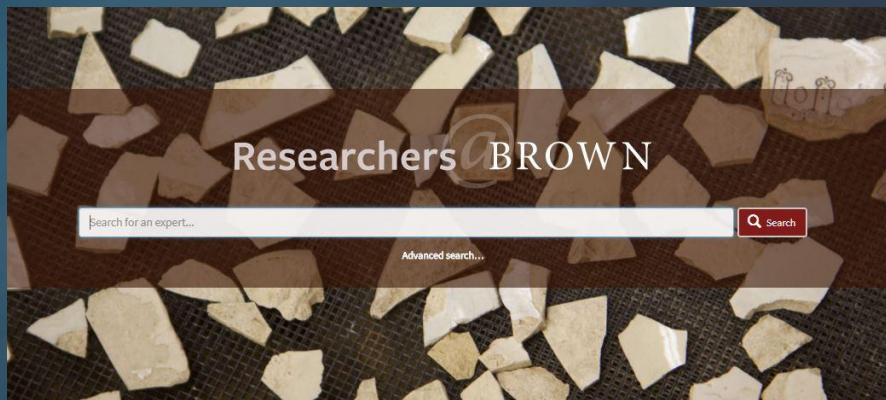
- Open source, open community, open data
- Flexible and customizable
- Enterprise application
- Authoritative, verified data



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# VIVO is about researchers

- Expert locator
- Public-facing web profiles



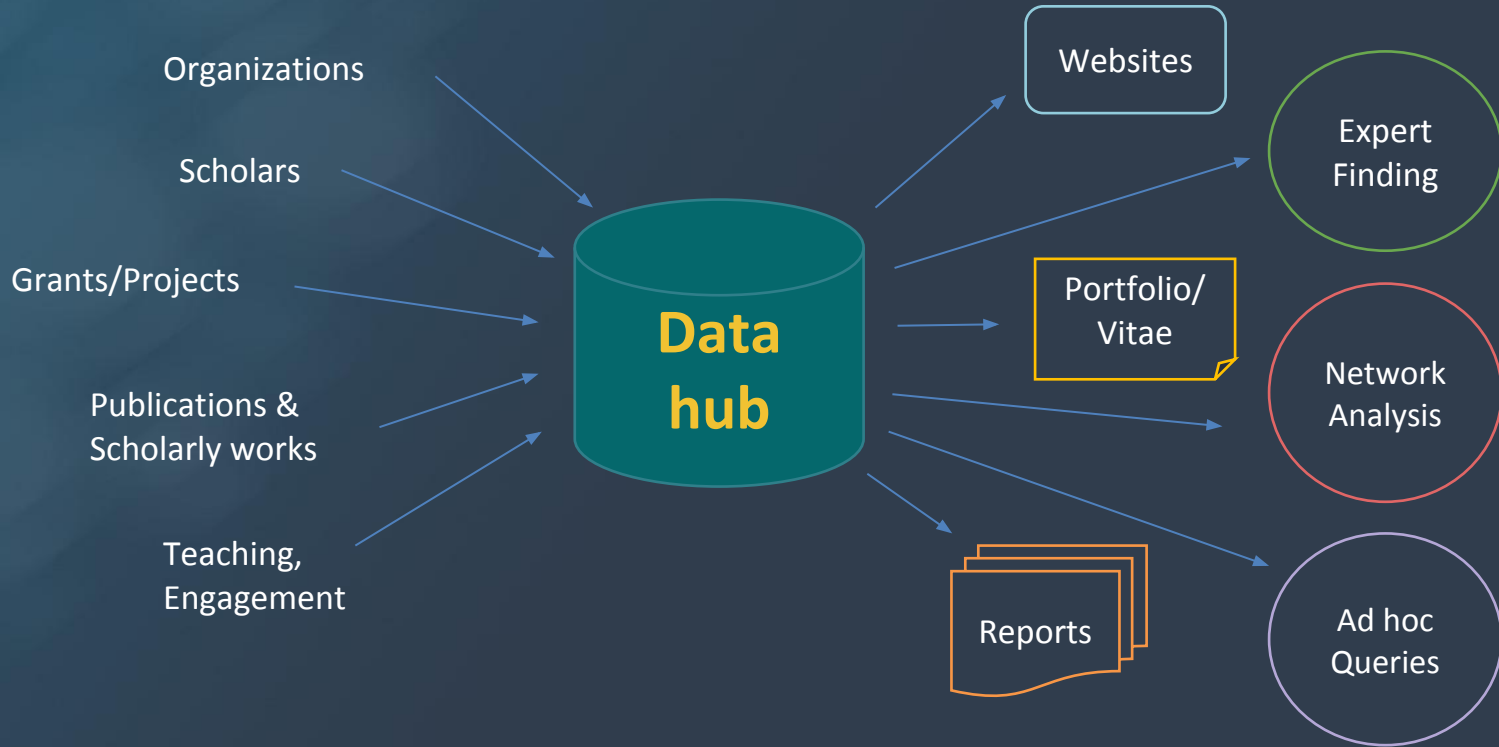
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Why do we want VIVO?



# Integrating institutional data



# VIVO data is visualized

## Browse global collaborations

(2012 - 2017)

Filter by: Academic Unit

Filter by: Subject Area

Filter by: Publication Year

Clear Filter



## Global Collaborations

Show table format

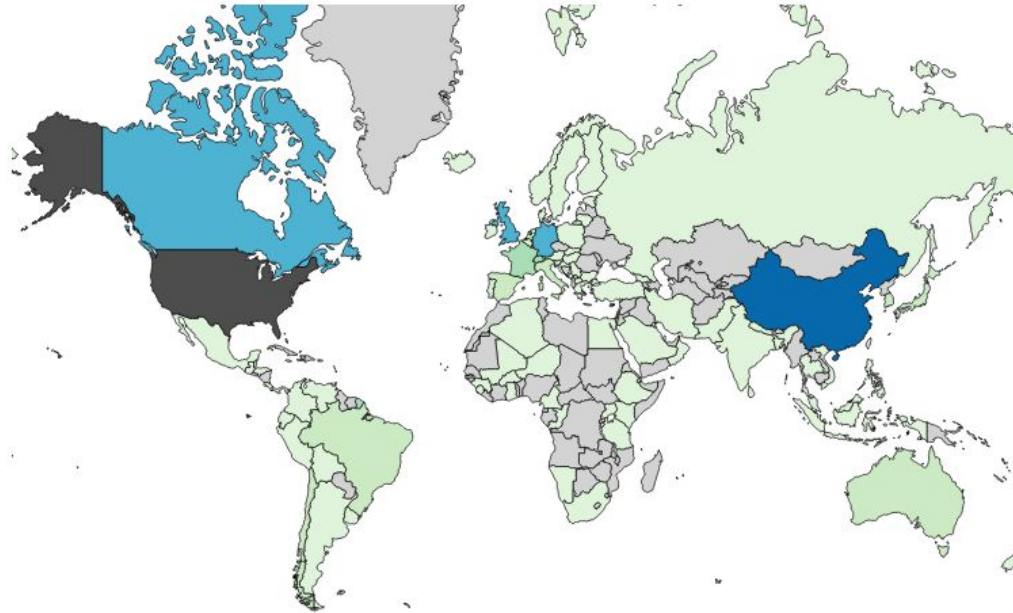


Export as SVG

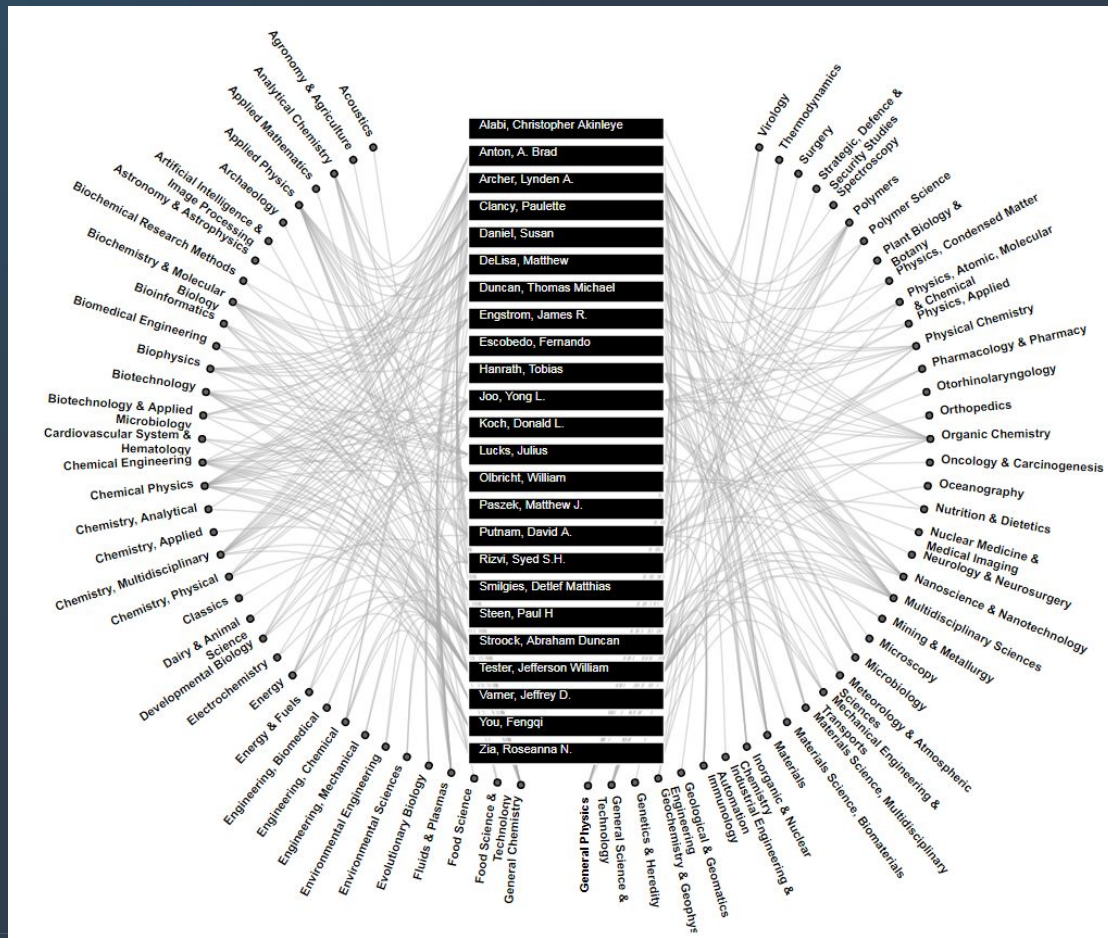
Export as JSON

Now Showing: All

World Map  USA Map



VIVO data  
is  
visualized



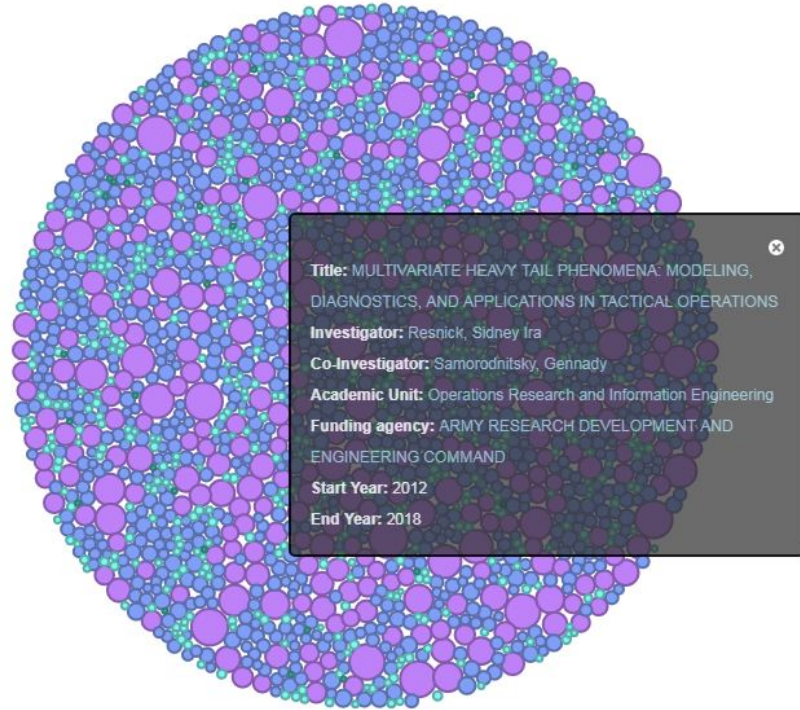
# VIVO data is visualized

2,153 grants

Show table format



Export as JSON



# VIVO data is visualized

## Browse publication venues

Select: Journal or Proceedings

- Proceedings of the National Academy of Sciences of the United States of America (508)
- Applied Physics Letters (408)
- Journal of Dairy Science (353)
- Journal of Geophysical Research (293)
- Science (New York, N.Y.) (292)
- Physical Review Letters (274)
- PLoS One 6 (265)
- Nature (242)
- Plant Physiology (239)

\* Some publications are co-authored by scholars who are in multiple academic units.

## Journal/Proceedings Insights

Show table format

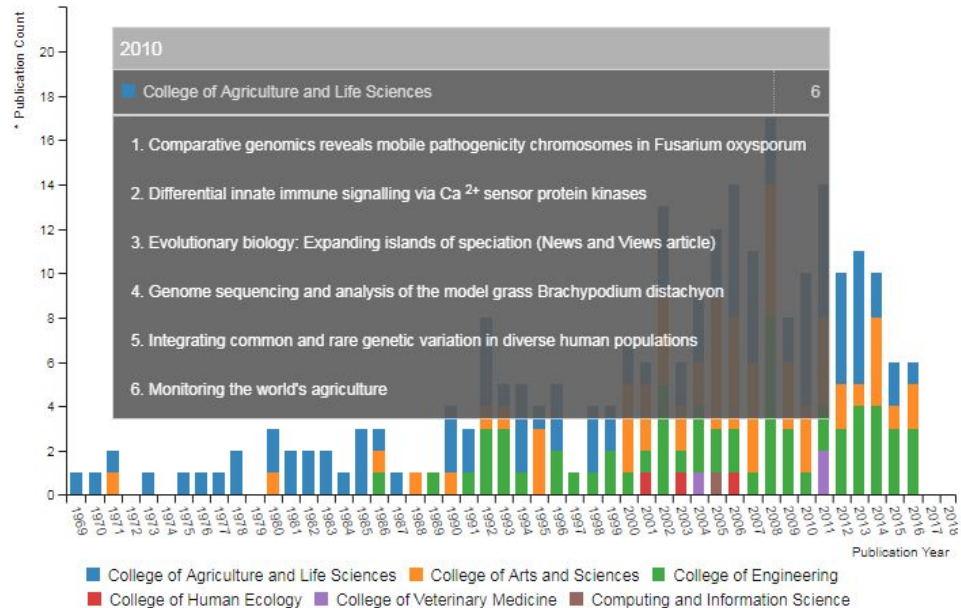


Now showing: Nature

Click on a bar to view the list of publications for an academic unit. Click on an academic unit name to filter the data in the view.

Export as SVG

Export as JSON



# VIVO data is **linked**

Automatically links people to pubs,  
grants, collaborators--any data element

Sinnott-Armstrong, W. "[Explanation and justification in moral epistemology.](#)" 1999. [Link to item](#)

### Digital Publications

Sinnott-Armstrong, W. "[My Brain Made Me Do It — So What?](#)" (March 2015). [Link to item](#)

Sinnott-Armstrong, W. "[Does Philosophy Matter?](#)" (March 2015). [Link to item](#)

Sinnott-Armstrong, W. "[My Brain Made Me Do It, but Does that Matter?](#)" (December 2014). [Link to item](#)

Sinnott-Armstrong, W. "[Moral Skepticism.](#)" (2004). [Link to item](#)

Sinnott-Armstrong, W. "[Consequentialism.](#)" (2003). [Link to item](#)

[Show More Digital Publications...](#)

### Journal Articles

Clifford, S, Iyengar, V, Cabeza, R, and Sinnott-Armstrong, W. "[Moral foundations vignettes: a standardized stimulus database of scenarios based on moral foundations theory.](#)" *Behavior research methods* 47, no. 4 (December 2015): 1178-1198. [Full Text](#)

Summers, JS, and Sinnott-Armstrong, W. "[Scrupulous agents.](#)" *Philosophical Psychology* 28, no. 7 (October 3, 2015): 947-966. [Full Text](#)

Schlegel, A, Alexander, P, Sinnott-Armstrong, W, Roskies, A, Tse, PU, and Wheatley, T. "[Hypnotizing Libet: Readiness potentials with non-conscious volition.](#)" *Consciousness and cognition* 33 (May 2015): 196-203. [Full Text](#)

Home | People | Schools / Institutes | [Research](#) | About

## My Brain Made Me Do It — So What?

Digital Publication

Full Text  
[Link to Item](#)

Duke Authors  
[Sinnott-Armstrong, Walter](#)

Cited Authors  
[Sinnott-Armstrong, W](#)

Published Date  
[March 2015](#)

Published By  
[Oxford Uehiro Center for Practical Ethics](#)

# VIVO can:

- Include researchers in all disciplines
- Be internationalized in many languages
- Consume data from ORCID, Figshare, ...
- Be used on mobile devices

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# VIVO is customizable


Duke UNIVERSITY | SCHOLARS@DUKE Support | Index

Home | People | Schools / Institutes | Research | Search


With all of these words

Query: heart found 13123 results


People (774)	Publications (12074)	Grants (155)	Courses (1)	Artistic Works (7)	Subject Headings (53)	Other (59)
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**Adrian Felipe Hernandez**  
Professor of Medicine  
...Do Patients with **Heart** Failure and Atrial Fibrillation Adhere to Warfarin After Hospital Discharge? Findings from the Get With The Guidelines-**Heart** Failure Registry...



**Gary Michael Felker**  
Professor of Medicine  
... in **heart** failure and sinus rhythm Felker, Gary Michael Plasma Renin Activity on Admission Predicts Diuretic Resistance and Poor Outcomes in Acute Decompensated **Heart** Failure...



**Eric David Peterson**  
Fred Cobb, M.D. Professor of Medicine  
... Cardiac Database (ACC-NCDR) and the American **Heart** Association Get With the Guidelines Database (AHA-GWTG). Dr Peterson participates on multiple national committees, as well as CV...

**James Louis Januzzi Jr.**  
Adjunct Associate Professor in the Department of Medicine  
...Analysis of BAG3 plasma concentrations in patients with acutely decompensated **heart** failure. Januzzi Jr., James Louis B-type natriuretic peptide, vascular endothelial growth...

**Filter By**

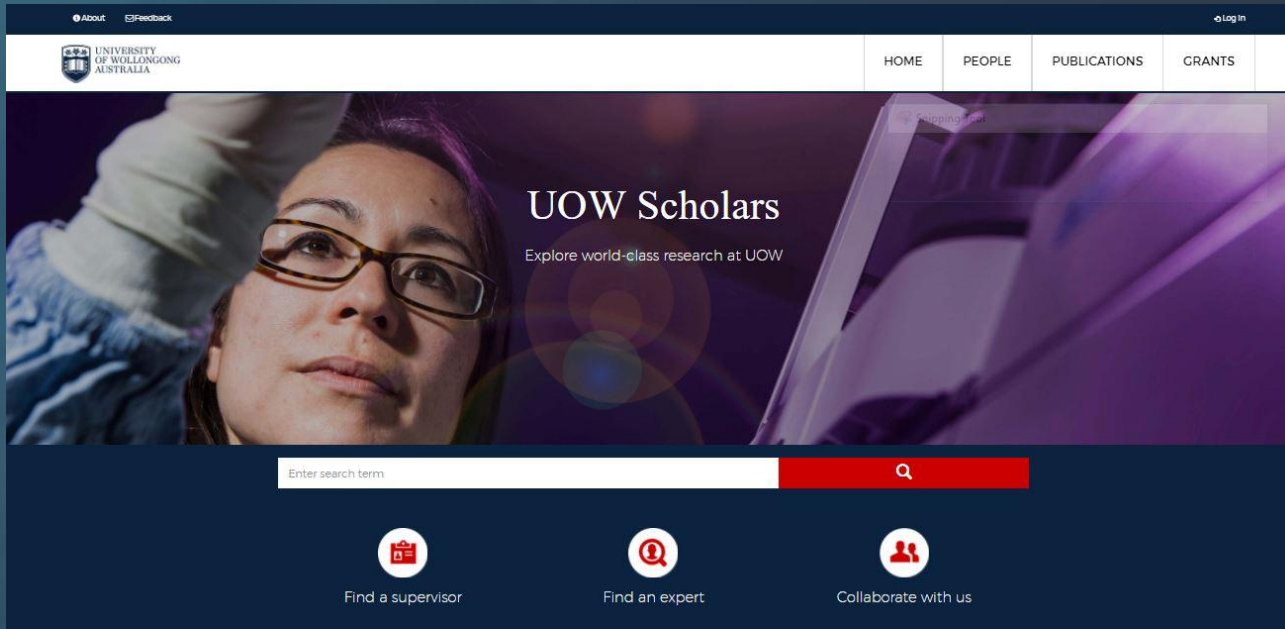
School/Unit

- School of Medicine (657)
- Institutes and Provost's Academic Units (90)
- Trinity College of Arts & Sciences (80)
- School of Nursing (40)
- Pratt School of Engineering (33)
- Divinity School (11)
- Sanford School of Public Policy (10)
- Duke Law School (6)
- Nicholas School of the Environment (6)
- Fuqua School of Business (4)
- Graduate School (2)

Extended search



# VIVO is customizable



The screenshot displays the UOW Scholars website interface. At the top, there is a dark blue navigation bar with links for 'About', 'Feedback', and 'Login'. Below this is a white header containing the University of Wollongong Australia logo and a menu with 'HOME', 'PEOPLE', 'PUBLICATIONS', and 'GRANTS'. The main content area features a large image of a woman in a lab coat and glasses, with the text 'UOW Scholars' and 'Explore world-class research at UOW'. A search bar with the placeholder 'Enter search term' and a red search button is positioned below the image. At the bottom, three circular icons represent 'Find a supervisor', 'Find an expert', and 'Collaborate with us'.

Site tailored to finding experts

<https://scholars.uow.edu.au/>

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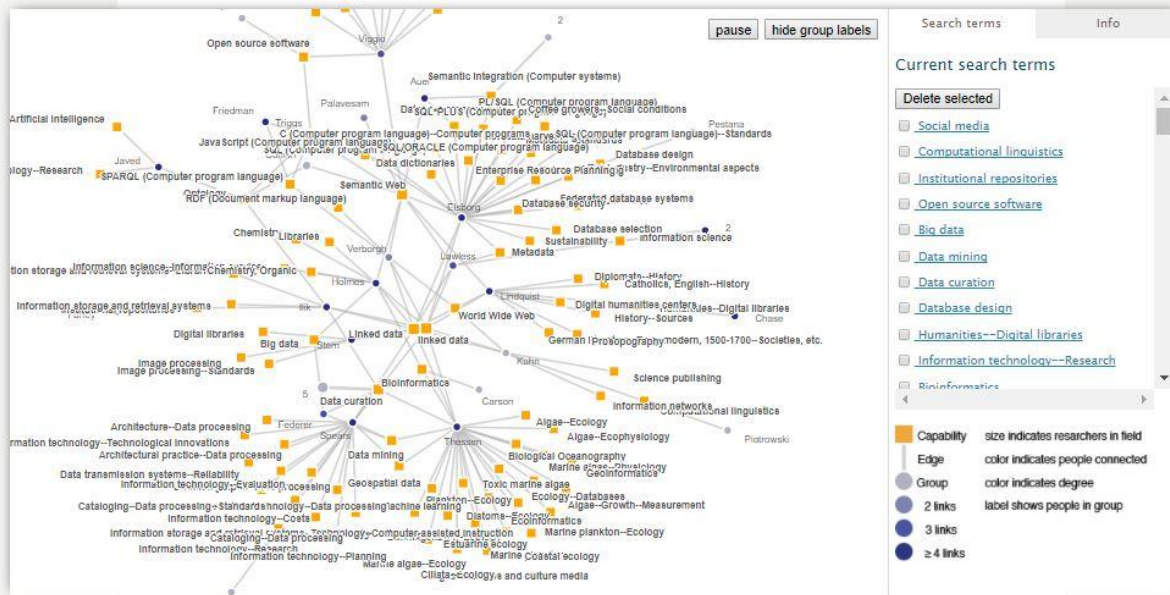
VIVO

# VIVO is customizable

## Capability Map

Build a 'first pass' capability map by typing in a search term that could be said to represent a broad research capability.

Cutoff: 10



Extended  
capability map  
in OpenVIVO

<http://openvivo.org/>

# VIVO is customizable

Search multiple VIVO sites

**MOUNTAIN WEST RESEARCH CONSORTIUM**

VIVO enabling national networking of scientists

Accelerating Discoveries Toward Better Health  
CTSA Clinical & Translational Science Awards

Cross-Consortium Search

diabetes Search

**Institutional VIVO Sites:**

- ALASKA  
[University of Alaska, Anchorage](#)  
[University of Alaska, Fairbanks](#)
- HAWAII  
[University of Hawaii \(RTRN Profiles\)](#)
- IDAHO  
[Boise State University](#)  
[Idaho State University](#)  
[University of Idaho](#)
- MONTANA  
[Montana State University](#)  
[University of Montana](#)
- NEVADA  
[University of Nevada, Las Vegas](#)  
[University of Nevada, Reno](#)
- NEW MEXICO  
[New Mexico State University](#)  
[University of New Mexico](#)
- WYOMING  
[University of Wyoming](#)

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VIVO connect • share • discover

CTSC G  
NIGMS

Cross-Consortium Search

Search

Home > Search > VIVO > diabetes

All People <sup>98</sup> Research <sup>1</sup>

99 results

**Grandinetti, Andrew**  
*Associate Professor*  
... "Obesity and Metabolic Diseases" Food Habits: **Diabetes** Mellitus Energy Intake Diet **Diabetes** Mellitus, Type 2 Townsend C, Takishima-Lacasa JY, Latner JD ...  
UNIVERSITY OF HAWAII SYSTEM

**Mau, Marjorie**  
*Professor and Chair*  
... Coronary Artery Disease: **Diabetes** Complications Blood Glucose Heart Failure **Diabetes** Mellitus Kaholokula JK, Wilson RE, Townsend CK, Zhang GX, Chen J ...  
UNIVERSITY OF HAWAII SYSTEM

**Prossnitz, Eric**  
*Professor*  
... GPER in **diabetes** and atherosclerosis. Prossnitz, Eric Introduction of D-phenylalanine enhanced the receptor binding affinities of gonadotropin-releasing ...  
University of New Mexico

**Select a Consortium Member**

University of New Mexico	64
University of Hawaii	23
Idaho State University	3
University of Alaska, Anchorage	2
University of Idaho	2
University of Nevada, Las Vegas	2
University of Alaska, Fairbanks	1
University of Montana	1
University of Nevada, Reno	1

**Select a type**

Faculty Member	98
Continuant	2
Entity	2
Independent Continuant	2
Concept	1
Idaho INBRE	1

“Is VIVO for  
you?”



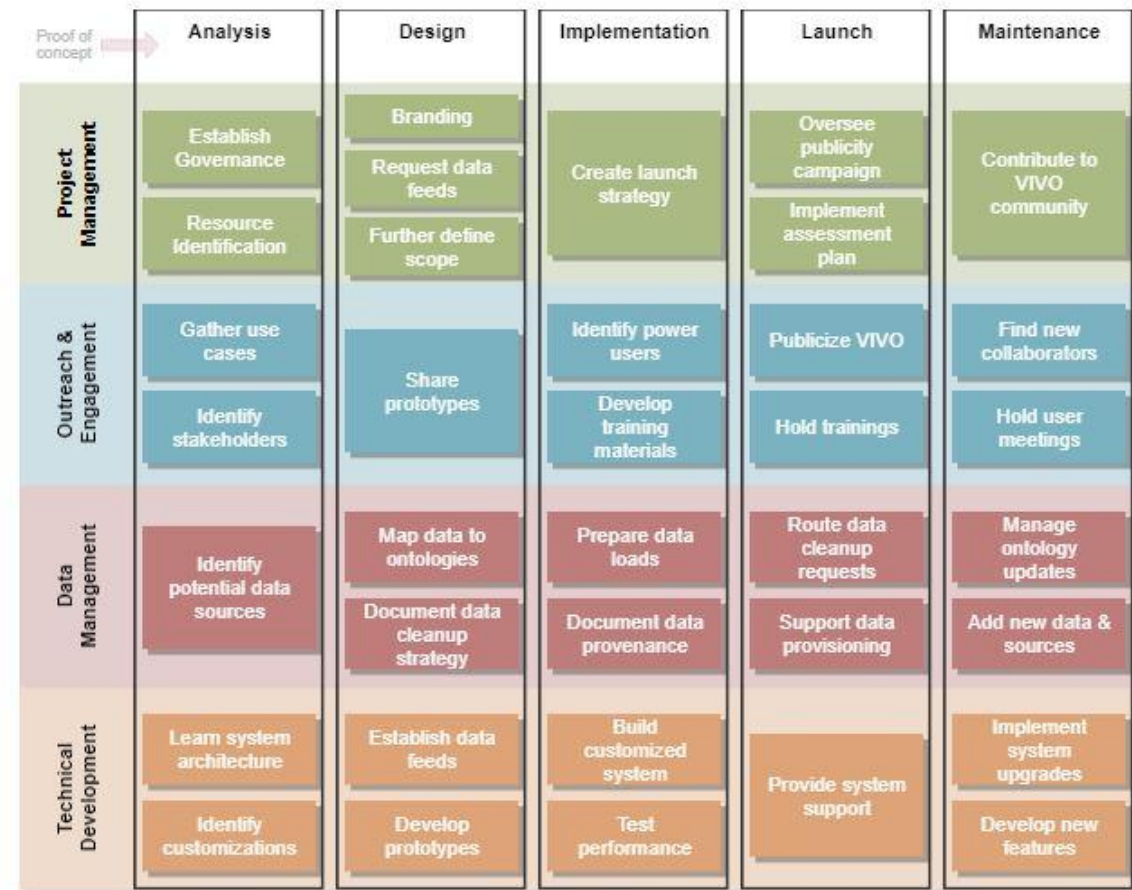
VIVO

# Planning a VIVO implementation

<https://wiki.duraspace.org/display/VIVO/Planning+a+VIVO+Implementation>

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# VIVO: The Big Picture



# VIVO Implementation includes roles:

- **Project Management**

Managing a VIVO project can require everything from finding resources to facilitating the structure, mission and strategies.

- **Outreach and Community Engagement**

Your VIVO community includes many stakeholders and sponsors from across the institution -- communications are critical.

- **Data Management**

VIVO is all about the data: where to find it, how to load it, and how to keep it as updated as possible.

- **Technical Development**

Developers, programmers, system admins, and other technical folks - System Architecture, Identify Customizations, Establish Data Feeds, Develop Prototypes, Build Customized System, Test Performance, Provide System Support, Implement System Upgrades

# VIVO Implementation includes phases:

- **Analysis**
- **Design**
- **Implementation**
- **Launch**
- **Maintenance**

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# VIVO Implementation

- **Project Management**

**Analysis:** Establish Governance; Resource Identification

**Design:** Branding, Further Define Scope, Request data Feeds

**Implementation:** Create Launch Strategy

**Launch:** Oversee Publicity Campaign, Implement Assessment Plan

**Maintenance:** Contribute to VIVO community

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# VIVO Implementation

- Outreach and Community Engagement

**Analysis:** Identify Stakeholders, Gather Use Cases

**Design:** Share Prototypes and/or existing VIVOS: <http://duraspace.org/registry/vivo>

**Implementation:** Identify Power Users, Develop Training Materials

**Launch:** Publicize VIVO, Hold Training Sessions

**Maintenance:** Find New Collaborators, Hold User Meetings

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# VIVO Implementation

- **Data Management**

**Analysis:** Identify Potential Data Sources

**Design:** Map Data to Ontologies, Document Data Cleanup Strategy

**Implementation:** Prepare Data Loads, Document Data Provenance

**Launch:** Route Data Cleanup Requests, Support Data Provisioning

**Maintenance:** Manage Ontology Updates, Add New Data & Sources

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# VIVO Implementation

- **Technical Development**

**Analysis:** Learn System Architecture, Identify Customizations

**Design:** Establish Data Feeds, Develop Prototypes

**Implementation:** Build Customized System, Test Performance

**Launch:** Provide System Support, Implement System Upgrades

**Maintenance:** Develop New Features

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# VIVO success indicators

- High-level sponsorship
- Commitment to ongoing support
- Alignment with institutional plan

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# It's all about **goals**

What's most important to your institution:

- ❖ Public-facing web profiles?
- ❖ Research discovery?
- ❖ Platform for open science?
- ❖ Others?

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Your goals must  
inform the  
strategy



# Rollout strategies

- Broad and shallow?
  - Lots of people, less data
  - Add data over time
- Narrow and deep?
  - Fewer people, more data
  - Add people over time



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# Example 1

## Goal:

Public profiles for 3,000  
faculty members

## Strategy:

Implement “extended  
directory” first and add  
data in phases

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# Example 2

## Goal:

Show collaborations  
within a research group

## Strategy:

Create profiles for group  
members with  
publications, grants,  
research interests,  
keywords

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# Example 3

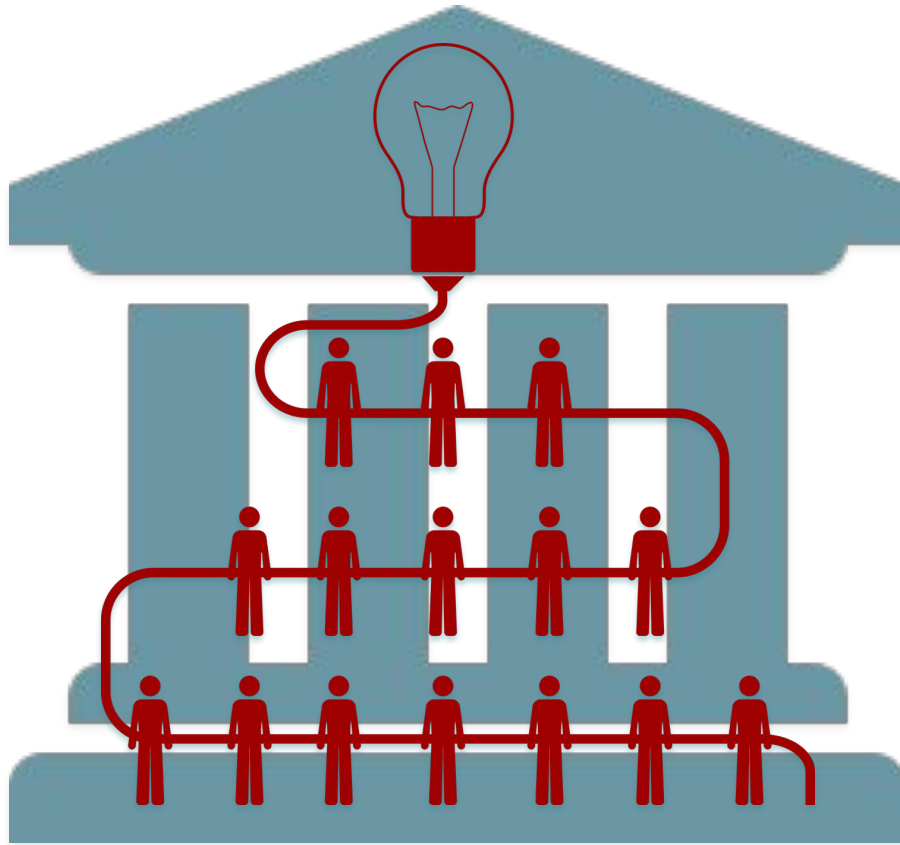
## Goal:

Encourage users to improve data

## Strategy:

Introduce editing process in private profiles; communicate plans for going live

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# Staffing your VIVO project

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# Assembling a project team

## Technical:

- Programming lead (0.5 – 1 FTE)
- Programmers/developers (1 – 3 FTEs/2 bodies)
- Database administrators
- Systems administrators (networks, servers)

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# Assembling a project team

Project/business:

- Project or product manager (0.5 – 1 FTE)
- Data analyst or curator, plus ontologist (0.5 – 1 FTE)
- Communicator or trainer or outreach person (0.25 – 1 FTE)

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# Other allies

- Librarians, scholarly communications officers
- Chief academic officer (faculty titles, appointments)
- Grants offices, other data stewards
- News office, communicators
- Web designers, corporate identity
- Anyone who cares

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# Budgeting & funding

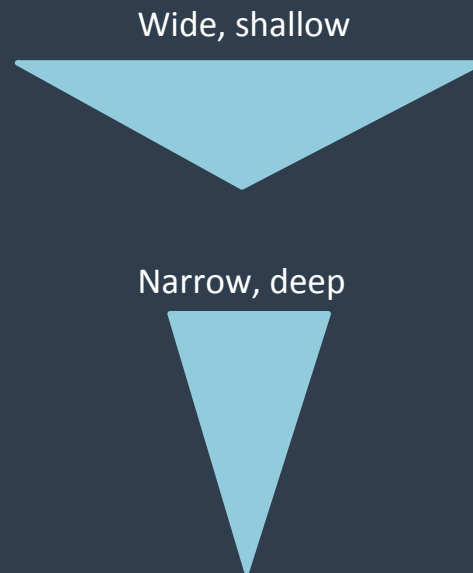
- Costs involved IT infrastructure and human resources
- Always estimate pessimistically
- Funding model can evolve (starter funding now, ongoing funding later)
- Provost, library split
- Or contributions by % of faculty organization
- Budget for DuraSpace membership

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# Communication strategy

- Big implementation?
  - Use institutional resources
  - Keep message simple
- Smaller group?
  - Use local resources
  - More events
  - More complex information



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# You need a plan

- Strategy, timeline, goals, tactics, resources
- Tactics: home page, email lists, Twitter, news stories, promotional videos
- Events are important:
  - Demos
  - Development events
  - Attend faculty meetings

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# Best practices for marketing

- Focus on specific benefits to each stakeholder
- Repetition is important
- Keep emails short with links to more info
- Be positive and patient
- Facilitate community engagement, conversations

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# Things you may hear

- Faculty don't like to be surprised.
- Don't notify faculty until it is ready.
- Faculty won't come to training or demos.
- "How was I supposed to know about this?"
- "I don't read email."
- "I don't read instructions."

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# How to Pitch your VIVO

# Tailoring your VIVO Pitch

- How do you explain VIVO?
- Complex, multi-layered system
- Different people care about different aspects
- Don't bury people with technical details

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# Summary

- Identify organizational goals
- Choose a stakeholder group
- List unique, strategic benefits
- Create pitch:
  - short
  - sweet

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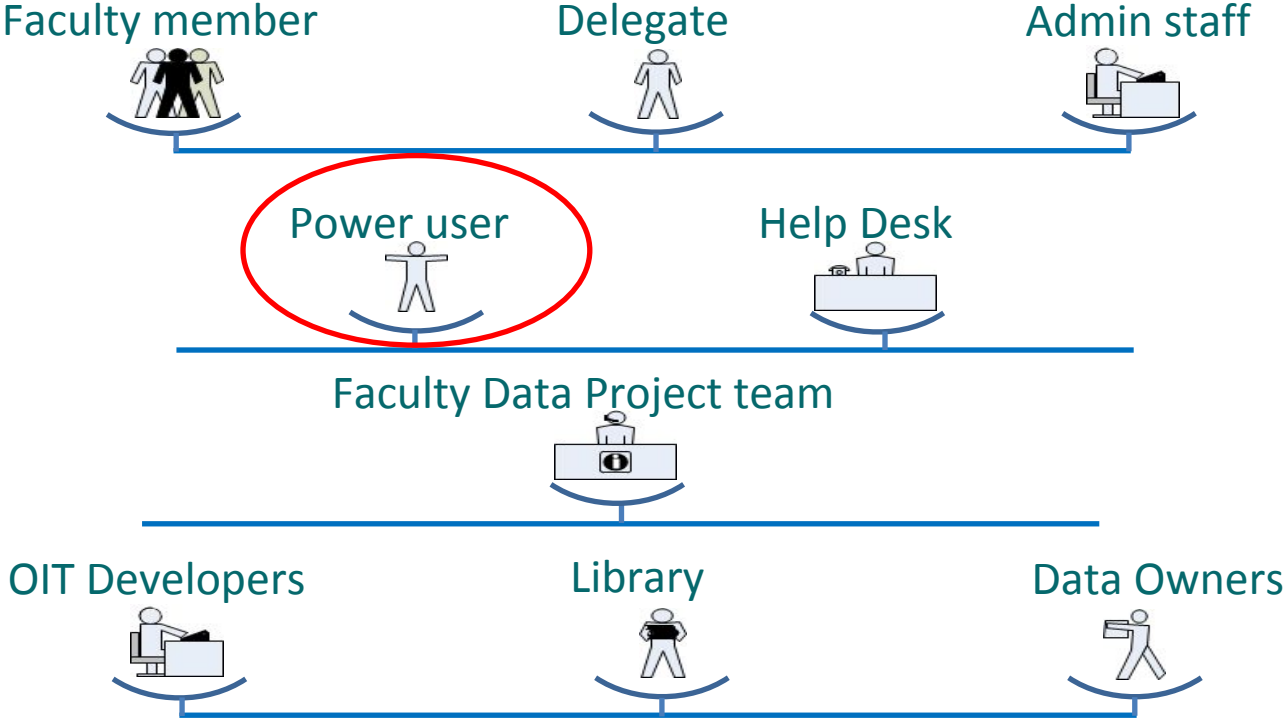
# Best practices for support:

- ★ Create a local network
- ★ Provide documentation, videos
- ★ Enable help ticket submission
- ★ Give ongoing “info sessions”
- ★ Hold events and user meetings

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# Duke's Support Model



# Acknowledgments:

Paul Albert - Weill Cornell Medicine

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Michael Conlon - VIVO Project Director

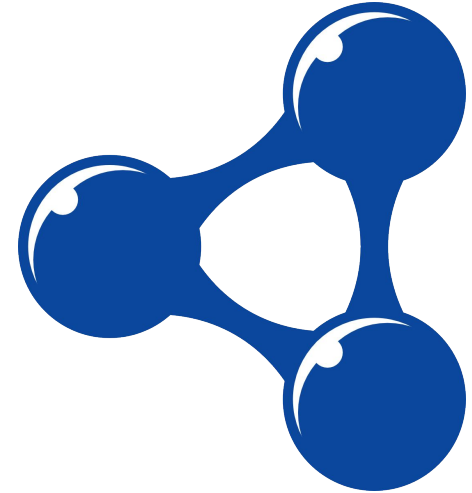
★ **Jon Corson-Rikert**

John Ferreira - Cornell University

Huda Kahn - Cornell University

Muhammad Javed - Cornell University

Julia Trimmer - Duke University



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# Thank you

## See you on March 14th

### VIVO and the role of librarians

### part 2

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<http://openvivo.org/a/orcid0000-0003-2588-3084>

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