IAALD/2013 World Congress



VIVO Workshop

Brian J. Lowe
Jon Corson-Rikert

July 23, 2013

Workshop options

- Presentation what is VIVO, the technologies it uses, and how its used at Cornell and elsewhere
- Self-paced tour on the computer at your seat, using vivo.vivoweb.org and other VIVOs around the world
- Open Q&A with developers of VIVO and AgriVIVO

Self-paced tour

 https://wiki.duraspace.org/display/ VIVO/Short+Tour%3A+VIVO+Overview

- Uses the VIVO community sandbox:
 - http://vivo.vivoweb.org
 - Log in as editor@vivoweb.org
 - Search for IAALD

 Includes pointers to outside resources and a list of VIVO sites to explore

Presentation Option

What is VIVO?

- A semantic-web-based research and researcher discovery tool
 - People plus the research they do
- Publicly-visible information, across disciplines
 - For external as well as internal audiences
- An open, shared platform for connecting scholars, research communities, campuses, and countries using Linked Open Data

A brief VIVO history

- 2003-2005 First realization for the life sciences at Cornell, as a relational database
- 2006-2008 Expansion to all disciplines at Cornell, and conversion to Semantic Web
- 2009-2012 National Institutes of Health-sponsored VIVO: Enabling the National Networking of Scientists project transforms VIVO to a multi-institutional open source platform
- 2013-2014 VIVO Incubator Project with DuraSpace for open community development

Key VIVO principles

- Open software
- Open data
- Open ontology
- Open community
- Decentralized infrastructure
 - Local control

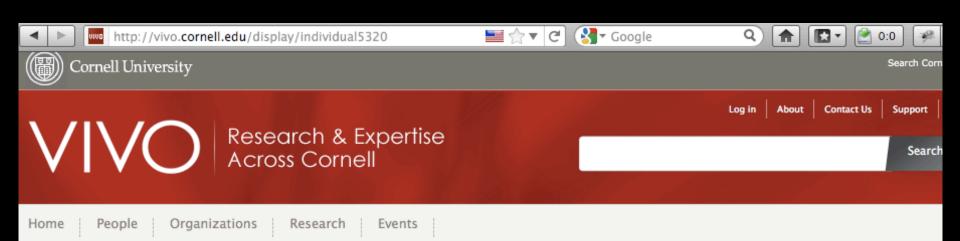
What does VIVO do?

- Integrates multiple sources of data
 - Systems of record
 - Faculty activity reporting
 - External sources (e.g., Scopus, PubMed, NIH RePORTER)
- Provides a review and editing interface
 - Single sign-on for self-editing or by proxy
- Provides integrated, filterable feeds to other websites

What does VIVO model?

- People and more
 - Organizations, grants, programs, projects, publications, events, facilities, and research resources
- Relationships among the above
 - Meaningful
 - Bidirectional
 - Navigable context
- Links to URIs elsewhere
 - Concepts, identifiers
 - People, places, organizations, events

People





■ Contact information

<u> ∂RDF</u>

Abawi, George Samuel | Professor

Positions

Plant Pathology at Geneva, Professor



Co-Auth

+ Help Improve

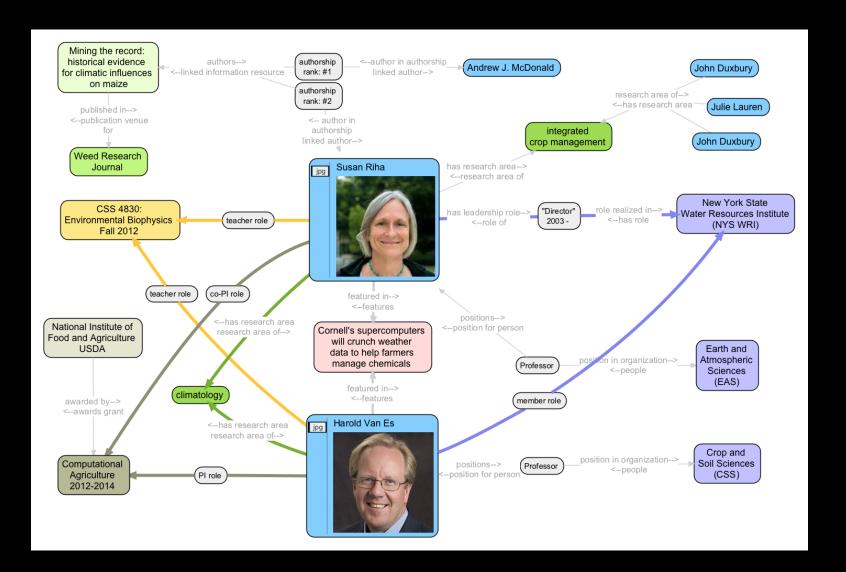
VIVO

George S. Abawi is a professor of Plant Pathology and International Agriculture at Cornell University. He received his MSc. And Ph.D. degrees from Cornell. He was a Postdoctoral Fellow in Plant Nematology at Cornell from 1970 to 1972, after which he was appointed as a faculty member in the Department of Plant Pathology at the NYS Agric. Expt. Station, Cornell – Geneva. The major area of his research responsibility deals with Vegetable Pathology, with emphasis on the biology and the integr (... more)

Research Areas

plant pathology collaborative research area (CALS)

People and what they do



Co-Author Network (GraphML File)

Structured data for

Profile



Riha, Susan Jean

Charles L. Pack Professor in t...

VIVO profile | Co-author network

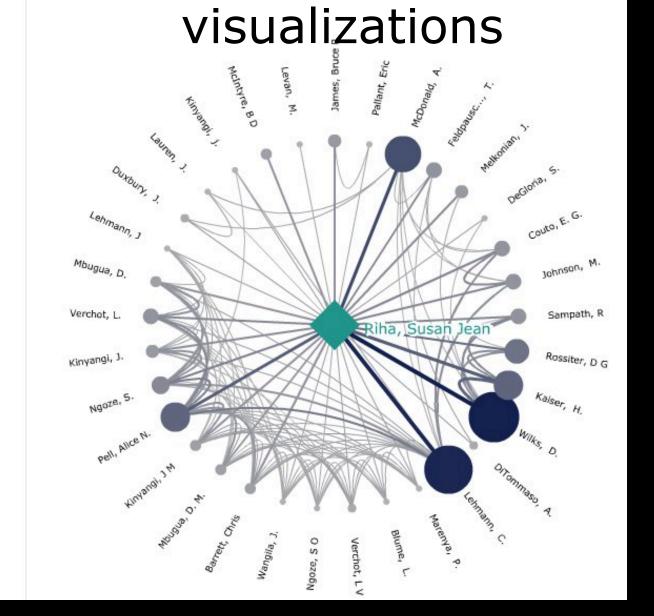
132 Publication(s)

33 Co-author(s)

1980 First Publication

2010 Last Publication

Note: This information is based solely on publications which have been loaded into the VIVO system. This may only be a small sample of the person's total work.



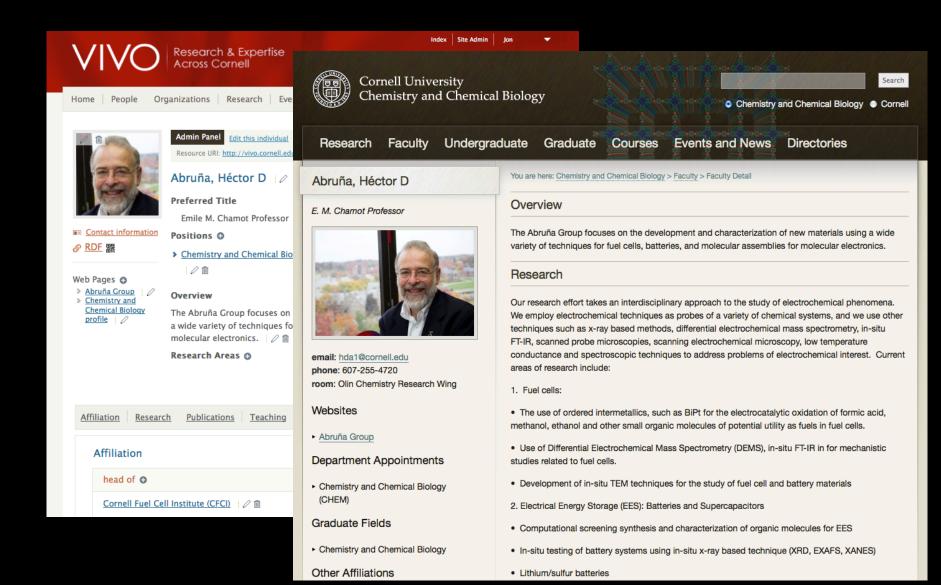
Typical data sources

- HR people, appointments
- Research administration grants & contracts
- Registrar courses
- Faculty reporting system(s)
 - publications, service, research areas, awards
- Events calendar
- Internal and external news
- External repositories e.g., Pubmed, Scopus

Value for institutions

- Common data substrate
 - Public, granular and direct
 - Discovery via external and internal search engines
 - Available for reuse at many levels
- Distributed curation
 - E.g., affiliations beyond what HR system tracks
 - Data coordination across functional silos
 - Feeding changes back to systems of record
 - Direct linking across campuses
- Data that is visible gets fixed

Enter data once, use it many times







Home People Organizations Research Events



Cornell Cooperative Extension Association of Chautauqua County Cornell Cooperative Extension Association &



Overview Affiliation Service Other

Overview

local program

4-H Beef Breeding Project at CCE Chautauqua

4-H Clothing and Textiles at CCE Chautaugua

CALS Research and Impact

Information about CALS research projects and their impact throughout the world

HOME

FEATURED PROJECTS

BROWSE PROJECTS

PROJECT LOCATIONS

Find CALS projects by date, geographic focus, or other criteria

995 projects

Mentor junior extension faculty in journal submission

2009 to 2012

Over the past two years, I have engaged a number of (7) EDI extension professionals in the writing of ten articles (Melissa Bjelland, Arun Karpur, Sarah von Schrader, Thomas Golden, Ray Cebulla, Sukeong Pi, Carol Blessing), as well supported Melissa Bjelland and Doug Webber in working on two articles to complete responsibilities on two grants that I oversee.

Nutritional needs of the developing chick embryo

2007 to 2008

Eggs contain approximately 200 mg of cholesterol. This project will determine how much of this cholesterol is needed for chick embryo development and will determine the consequences of cholesterol deficiency for the developing embryo.

CCE educators lend garden-based learning knowledge to Cornell students

2008 to 2009

Cornell Cooperative Extension educators increasingly find it challenging to make meaningful connections in a "too busy" world. In addition, they rarely have opportunities to engage with Cornell undergraduate. This is unfortunate for the educators, who benefit from the innovative engagement with the students, and for the students, who benefit from the real world connections and mentoring opportunities offered by interacting with educators.

SEARCH Q Enter keywords... FILTER BY NEW YORK STATE FOCUS: New York (424) Tompkins (89) Ontario (66) Delaware (63) Cayuga (62) Show more **FILTER BY UNITED** STATES FOCUS: New York (424) Pennsylvania (133) Vermont (99) Massachusetts (93)

New Jersey (81)

Show more

CALS Research and Impact

Information about CALS research projects and their impact throughout the world

HOME FEATURED PROJECTS

BROWSE PROJECTS

PROJECT LOCATIONS

International and domestic locations where CALS research focuses

International

United States

New York State

International

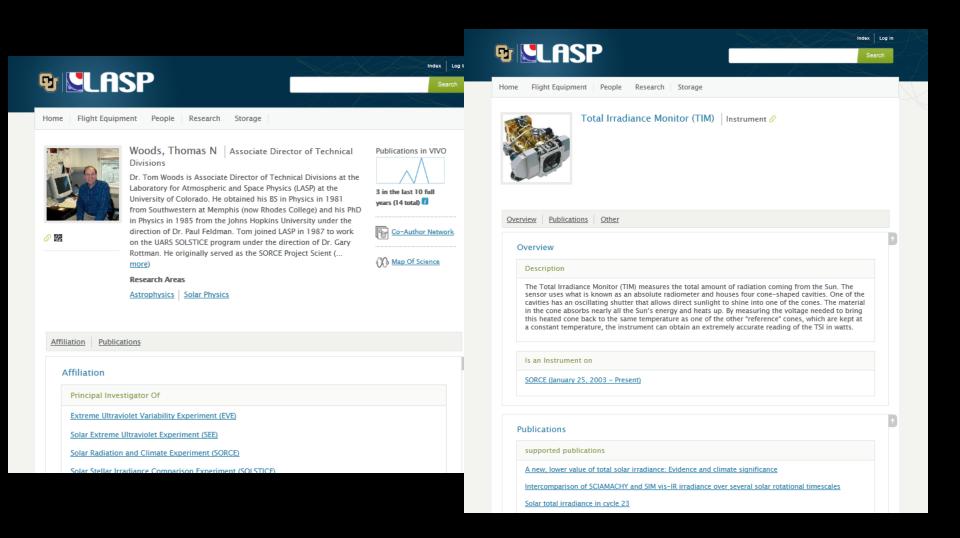
280 projects focusing on 142 countries

- Choose a country -

Show projects



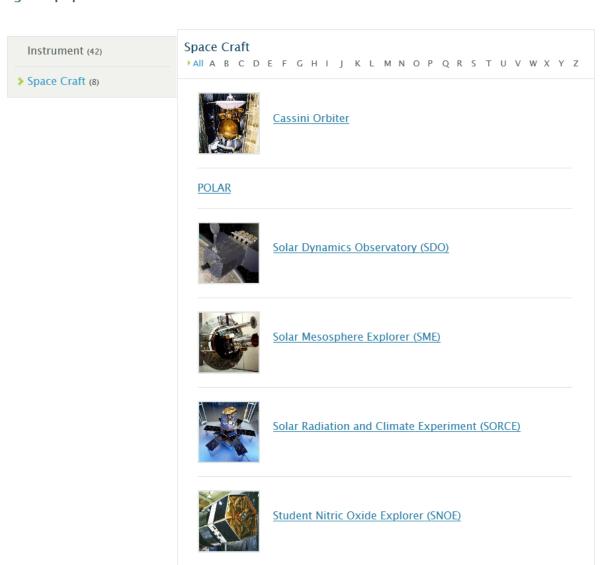
VIVO for atmospheric and space physics







Flight Equipment





Q

Home Datasets Projects C	Collections People	Research Groups	
My Collections			Create new collection
Curated Ecology Datasets	14 datasets	4 citations	4 publication links
Institutional Philosophy Datasets	21 datasets	1 citations	0 publication links
Curated Biology Datasets	1 datasets	24 citations	4 publication links
Entomology Datasets	14 datasets	0 citations	0 publication links
Analytics and Discovery Datasets	4 datasets	4 citations	4 publication links



Q

Home | Datasets | Projects | Collections | People | Research Groups

Archaeological Findings | All datasets

Cited 14 times

All citations

Linked to

All links

Related datasets

2

All related datasets

Part of

2 projects

collections

Identifier DOI: 12

Authors Hardy, Thomas Jehan Sorour

Contributors Dickens, Charles

Description

Description lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus viverra commodo purus sed euismod. Vestibulum volutpat pellentesque mauris, quis fringilla augue feugiat eget. Nulla quis nibh ac ligula condimentum mollis. Ut sit amet arcu diam, vel ornare dui. Aliquam vestibulum sodales mi non

ultrices. Morbi tristique laoreet imperdiet. Proin

Cite this dataset: Why Cite?

Thomas, Hardy, URL: www.urlsample.com

Rights and Restrictions: Rights and restrictions content.

Select

Library Catalog 🔤

Selected items

Search history

Refine your results

Access 0 At the Library 613 Online 128 0 Format Book 688 39 ☐ Video 10

Journal Musical Score

0

0

0

0

Author/Creator

Publication year

0 Language

Subject/Genre 0

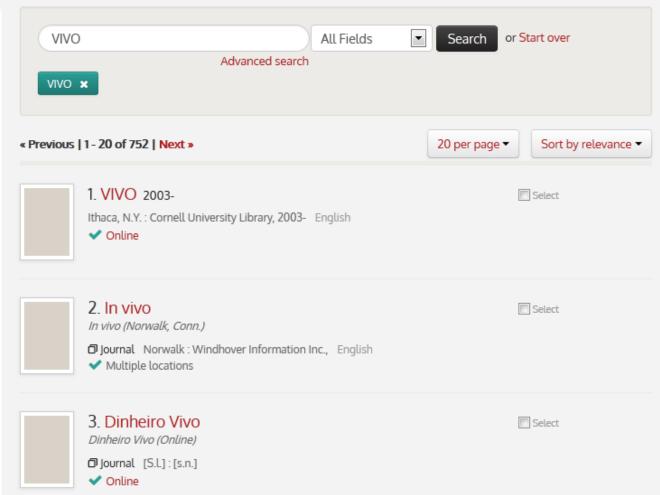
Subject: Region 0

Subject: Era 0

Fiction/Non-fiction

Call number 0

Library location



4 In vivo neuromethods c1998

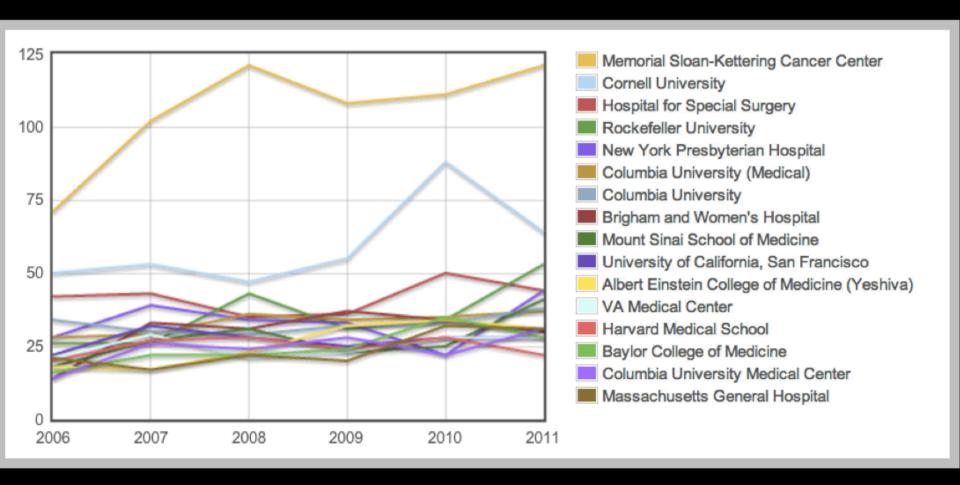
General neurochemical techniques.





38

Weill Cornell research reporting



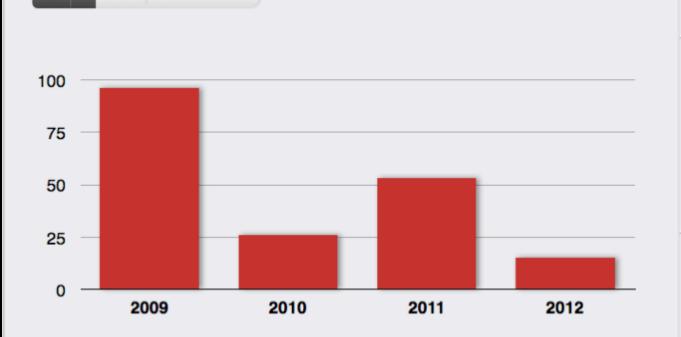


Papers created with federal funding but not deposited in PubMed Central

List

Graph

Create Alert



Federal law mandates publications resulting from NIH-funded research must be deposited in the open access archives PubMed Central within twelve months...Read more



Policy issues

- Dirty data
- Lack even of common definitions of organizations or who's faculty
- Data ownership
- Many dimensions of privacy
- Short-term "go it alone" vs. common good

The Semantic Web

Turn data into a web of simple links

 Use ontology to explain how things are linked

Use reasoning to add new links automatically

Be flexible and extensible

CTSAconnect and the ISF

- VIVO and eagle-i project for research resources won NIH funding in 2012 for a project to unify their ontologies and extend both in the clinical domain
- The unified ontology is known as the Integrated Semantic Framework, or ISF
- VIVO 1.6 and eagle-i's next release will use the ISF
- This combined ontology is modular to allow selective data population based on local needs

The ISF/VIVO ontology

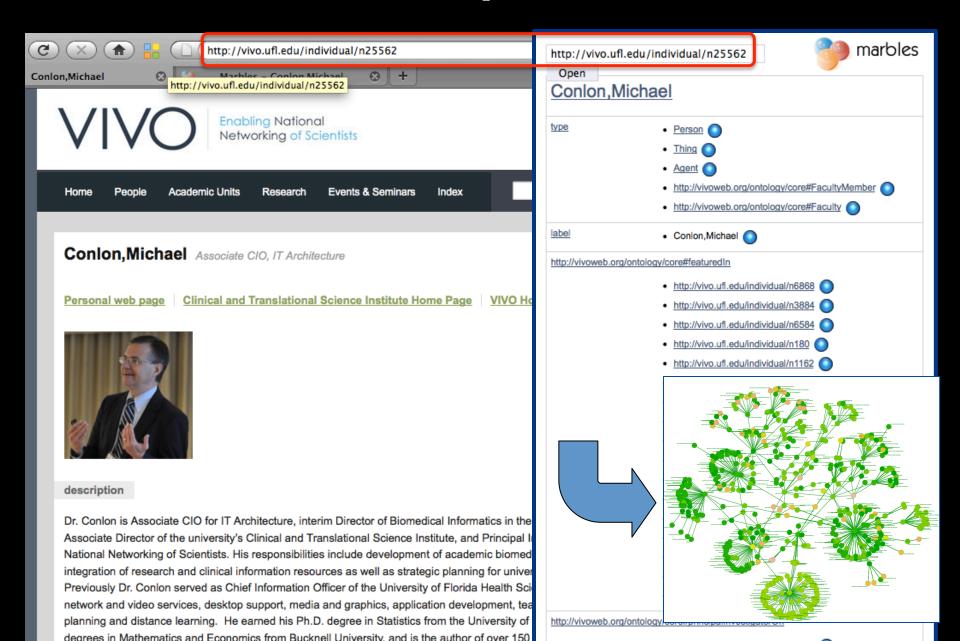
 Describe people, organizations, and research resources in the *process* of doing research

- Stay discipline neutral
- Use existing scientific domain terminology to describe *content* of research

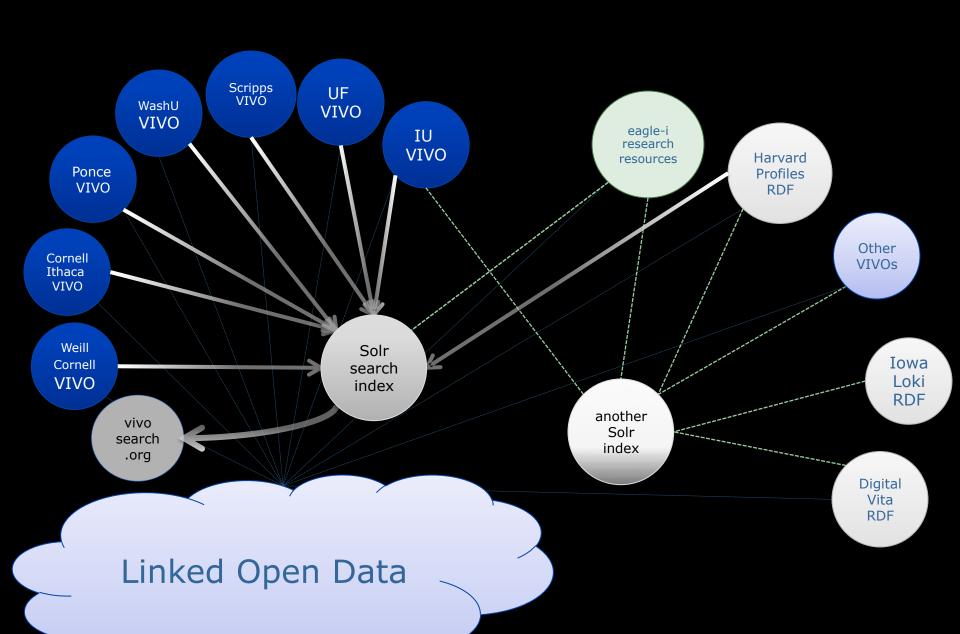
What is Linked Open Data (LOD)?

- Data
 - Structured information, not just documents with text
 - A common, simple format
- Open
 - Available, visible, mine-able
 - Anyone can post, consume, and reuse
- Linked
 - Directly by reference
 - Indirectly through common references and inference

Linked Open Data



Linked data indexed for search







Find research and expertise

child abuse

People





People

Publications 44

Organizations 16

Activities 12

Events

Courses

Equipmen

45 results

Eckenrode, John

...: BUILDING INFRASTRUCTURE AND CAPACITY: ARRA FUNDING NATIONAL DATA ARCHIVE ON CHILD ABUSE AND NEGLECT AT CORNELL UNIVERSITY AGE-27 FOLLOW-UP OF EARLY _

Cornell University

Nackashi, John A

... - Fifth Judicial Circuit **Child Abuse** Prevention Project (Capp) District 3 Capp Program District Xiii North Florida Area Health Education Centers Program ...

University of Florida

Nunno, Michael A

... and Understanding **Abusive** Families, **Child Abuse** and Neglect: An International Journal, Children and Society, Protecting Children, Children and Youth Services Review ...

(E) Cornell University

Thomas, Margaret Gilboy

... PROJECT **CHILD** AND SPOUSE **ABUSE** PREVENTION: UNITED STATES MARINE CORPS ARMY COMMUNITY SERVICES PROGRAM ACCOUNTABILITY DOD EXCEPTIONAL FAMILY MEMBER PROGRAM ...

Cornell University

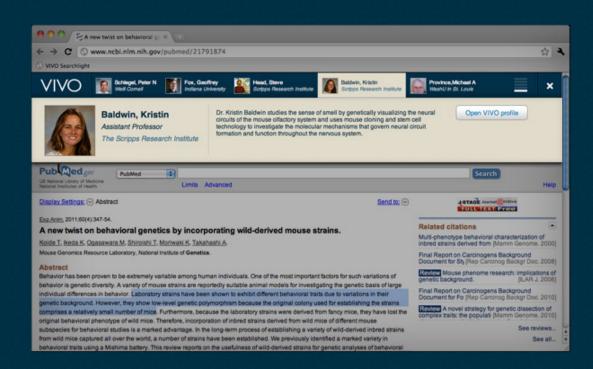
Results by Institution	
Cornell University	[16]
₩ WashU in St. Louis School of Medicine	9
Harvard University	8
University of Florida	7
Weill Cornell Medical College	4
Ψ Indiana University	
Ponce School of Medicine	
The Scripps Research Institute	





Searchlight A convenient way to find researchers

Searchlight is a small app that automatically shows you VIVO profiles related to the page you're reading.





HOME RESEARCH EDUCATION CHILD HEALTH VOLUNTEER RESEARCH NAVIGATOR

CTSAsearch Home

What is CTSAsearch?

CTSA Search

Participation Details

Google Search

CTSAsearch is a prototype demonstrating federated search using Linked Open Data published by members of the CTSA Consortium and other interested parties. To try it out, use the form below or click on the "CTSA Search" entry in the menu on the left.

Polyglot Home

Search for Investigators at Multiple Institutions

Federated Search

child abuse	Search

Current Status

- # Total persons indexed: 48,544
- ** Total publications by those persons indexed as part of their profile: 450,131

Currently Harvested Sites	Platform
Cornell University	VIVO
Northwestern University	SciVal Experts and VIVO
Oregon Health Science University	SciVal Experts
University of California, San Francisco	Profiles
University of Florida	VIVO
University of Iowa	Loki

Indexed Content

- # Persons and their associated properties (name, research statement, etc.)
- ** Academic Articles for each person with associated properties. Where DOIs or PMIDs exist additional information is added from MEDLINE, including

Multi-institutional scenarios for VIVO

- Multiple campuses of one university
- University and federal lab connections
 - E.g., Colorado ties with regional federal labs
- Consortia
 - 60 NIH Clinical & Translational Science Awards adopted VIVO as an ontology standard in 2011
- International
 - 13 Netherlands universities and the National Library
 - AgriVIVO

AgriVIVO



http://agrivivo.net

HOME

SEARCH

TOOLS

ABOUT

CONTACT

AgriVIVO is a search portal built to facilitate connections between all actors in the agricultural field, bridging across separately hosted directories and online communities. *This is a prototype*

You can search for people, organizations and events. Read more on how to have data included in AgriVIVO. Read our new F.A.Q. and our terms of use.







Read more

Last import date: 12/07/2013 - Next import: beginning of August 2013

Q Search for people

Enter keywords...

Search

Examples: "climate change", "capacity building", "rural development", "information management"

Search by location

- Choose a country - \$

View map

10 data providers 526

4,474 ORGANIZATIONS

150 EVENTS

AgriVIVO

Search

http://agrivivo.net

People

Organizations

Events

Current search

plant protection

Narrow your results

plant protection Search

Filter by expertise:

Plant Protection
Crop Management

Entomology

Botany

Information Science

Show more

Filter by location:

The United Kingdom Of Great Britain And Northern Ireland Switzerland 57 people

Last import date: 12/07/2013

Name: A B C D E F G H I J K L M N O P O R S T U V W X Y Z





17

Yelitza, Colmenarez

CABI

Brazil

Source: CABI







Show map

Benefits across institutions/consortia

- Sharing experience provides clarity and new ideas
- Incentives from sharing development, tools, customizations
- Potential data-level connectivity
 - Research is happening increasingly in teams that span institutions
 - Meeting the needs of short and long-term virtual organizations

International engagement



Strategic partnership of euroCRIS and VIVO

23 November 2011 euroCRIS

euroCRIS, a not-for-profit scientific association registered in the Netherlands, and the leaders of the project team of VIVO, an open source Semantic Web sofware application originally developed at Cornell University, have entered into a strategic partnership.

euroCRIS (www.eurocris.org) is furthering the implementation and linking of Current Research Information Systems (CRIS) based on the Common European Research Information Format (CERIF) - commonly indicated with the acronym CERIF-CRIS - and promotes best practice in CRISs, spanning the field from raw experimental and simulated data through research management systems to research publications.

International engagement





PROGRAM

UPDATES

Home » About » Announcements »

VIVO joins CASRAI in advancing research interoperability

Posted by Asha Law on Mon, 2012-04-23 09:18

The Leaders of the VIVO Project team (VIVO ©) and the Consortia Advancing Standards in Research Administration Information (CASRAI) are today announcing a collaboration to advance a common global approach to research interoperability.

VIVO is an open source ontology and software system designed at Cornell University for researchers and used in many universities in the USA that has attracted interest more widely internationally. It is based on the Semantic Web / Linked Open Data

Partnerships – ORCID

- Open Researcher and Contributor ID
 - Attribution for works of any type
- ORCID and VIVO
 - ORCID is an attribute in a VIVO profile
 - Tools being tested for submission of researcher registrations from VIVO

http://orcid.org

VIVO/DuraSpace Partnership

- DuraSpace is a not-for-profit organization supporting the DSpace and Fedora repositories
- Proven track record of managing community developed open source projects
- Two-year initial startup period
- Serves as the open source community home for ISF/VIVO ontology, software, tools, and engagement in eScience, research networking, and other initiatives

The VIVO Community





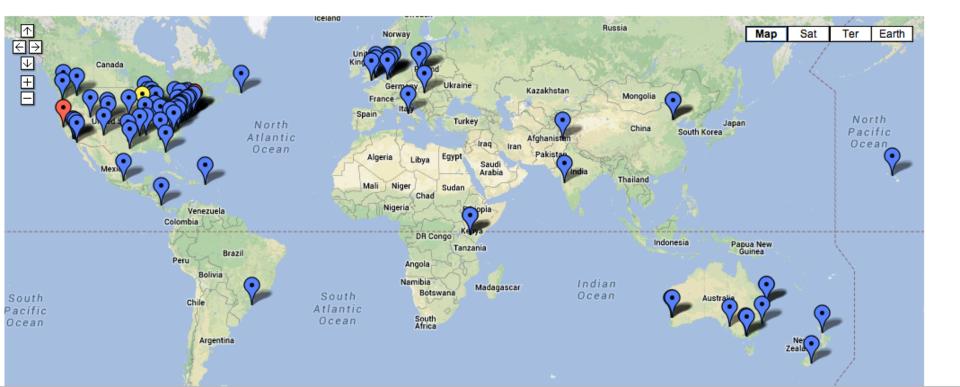
Added by Jon Corson-Rikert, last edited by Jon Corson-Rikert on May 24, 2013 (view change)

Map of VIVO projects around the world

Tell us about your project, send us updates or corrections, or edit for yourself

This map shows adopters, partners, and collaborators on the VIVO project, primary identified through participation on the VIVO development or implementation mail lists — note that many do not yet have public VIVO sites. Please only add symbols for sites that will be capable of offering VIVO RDF via SPARQL endpoints and/or linked open data requests.

Blue for VIVO, Red for Profiles, Yellow for Loki, Green for SciVal Experts





For more information

vivoweb.org , vivoweb.org/blog

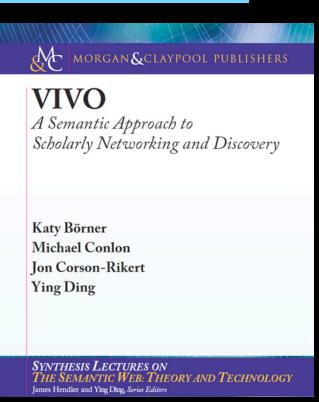
wiki.duraspace.org/display/VIVO/VIVO+Main+Page

linkedin.com/groups/VIVO-connect-share-discover

facebook.com/VIVOcollaboration

github.com/vivo-project

@VIVOcollab



Questions?

