

Using the VIVO-ISF Ontology in Open Repositories

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Galter Health Sciences Library
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How *DO* we think about impact?
How *SHOULD* we think about impact?





Broad Economic and Social Benefits

Informing Decision Makers

Economy

Health

Capacity Building

Advancing Knowledge





Pathways

Advancement of Knowledge

Clinical Implementation

Legislation and Policy Enactment

Economic Benefit

Community Benefit

We need to make sure that we are counting everything and helping to make it more visible.

Northwestern University Clinical and Translational Sciences (NUCATS) Institute Evaluation and Continuous Improvement Program

Mission: Speeding transformative research discoveries to patients and the community

The screenshot shows the NUCATS website homepage. At the top left is the NUCATS logo with the text "Northwestern University NUCATS Clinical and Translational Sciences Institute". To the right is a search bar and the text "A CTSA partner in accelerating discoveries toward human health". Below this is a row of logos for participating institutions: Northwestern University, Northwestern Memorial HealthCare, Northwestern University Feinberg School of Medicine, Ann & Robert H. Lurie Children's Hospital of Chicago, and RIC. A purple navigation bar contains links: "About NUCATS", "Centers & Programs", "Resources & Services", "Funding", "Education & Career Development", and "Galter Library". The main content area is divided into several sections: "I AM" (Investigator/Research Staff, Student/Trainee, Industry Professional, Community Member or Organization, Patient or Research Participant), "I NEED" (Research Training, Data or Research Software, Research Study Assistance, Connections with Collaborators, Information about Research Studies), "Quick Links" (myNUCATS, Navigator Consultation Form, Voucher and Pilot Programs, NITRO Study Tracker, REDCap Intro Session, Chicagoland CTSA Shared Resources, Sign Up for Clinical Trials, Cite NIH CTSA Grant, NUCATS FAQs), "Newsroom" (March 31, 2015: Feinberg and NUCATS Announce Expanded Access to Clinical Research Professionals Training; March 30, 2015: Galter Library Supports Informatics and Computational Science; March 30, 2015: INVO and NUCATS CTI Can Help Bring Your Next Idea to the Marketplace; March 30, 2015: NUCATS and CTR Program at SMCRI), "Calendar" (APR 14: Northwestern Computational Research Day 2015; APR 14: Data Science and Informatics Tuesday cancelled today; APR 15: REDCap Office Hours; APR 16: CRC Basic Training Online), "Director's Message" (Donald M. Lloyd-Jones, MD, ScM), "Stay Connected" (Sign up to receive news alerts), and "The Impact of CTSA and NUCATS" (CTSA Clinical & Translational Science Awards logo).

<http://nucats.northwestern.edu/>

Northwestern University Clinical and Translational Sciences (NUCATS) Institute Evaluation and Continuous Improvement Program

Diverse outputs, diverse impacts,
diverse roles

Each a critical component of the research process



INVESTIGATORS
STATISTICIANS
STUDENTS
LAB TECHS
TRAINEES
TRIAL
COORDINATORS
DATA
WRANGLERS
LIBRARIANS
ADMINS
NURSES
COMMUNITY
PARTNERS
DEVELOPERS
ANALYSTS

- ✓ Measurement instruments
- ✓ Consent documents
- ✓ Continuing education materials
- ✓ Cost-effective intervention
- ✓ Consensus development conferences
- ✓ American Medical Association Current Procedural Terminology (CPT) codes
- ✓ Change in delivery of healthcare services
- ✓ Gray literature
- ✓ New experimental methods, databases, animal models, or software tools
- ✓ New diagnostic criteria or standards of care
- ✓ Biologics
- ✓ Curriculum guidelines
- ✓ Clinical/practice guidelines
- ✓ Quality measure guidelines

CTSA Clinical & Translational
Science Awards

Se

ABOUT US

Research Networking

Research Networking: These recommendations were approved by the CTSA Consortium Executive and Steering Committee on October 25, 2011.

1. **Recommendation:** All CTSA(s) should encourage their institution(s) to implement research networking tool(s) institution-wide that utilize **RDF triples** and an **ontology** compatible with the **VIVO ontology**.
2. **Recommendation:** Information in people profiles at institutions should be publicly available as data as a general principle, specifically as **Linked Open Data**. To ensure quality of information, **authoritative electronic data sources versus manual entry** should be emphasized. Institutions will vary in the amount of information that they will include and make publicly available but the value is enhanced by the quality and quantity of information.
3. **Recommendation:** Monitoring of the research networking landscape, technology, and tools should continue to be overseen by experts from the CTSA consortium (e.g., the Research Networking group of the Informatics KFC).

<https://ctsacentral.org/consortium/best-practices/research-networking/>

PATHWAYS

ADVANCEMENT OF KNOWLEDGE
CLINICAL IMPLEMENTATION
LEGISLATION AND POLICY ENACTMENT
ECONOMIC BENEFIT
COMMUNITY BENEFIT

<https://becker.wustl.edu/impact-assessment>
<http://nucats.northwestern.edu/>

Library ecosystem



Galter Digital Repository

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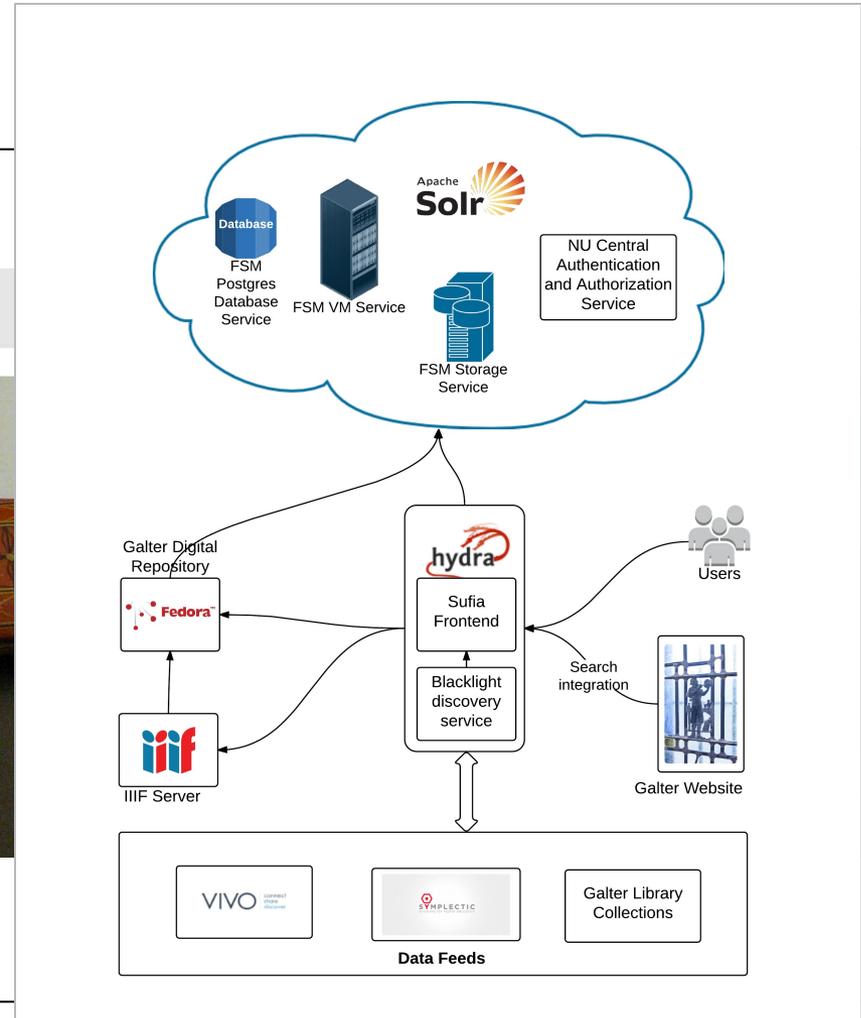
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Galter Digital Repository
Feinberg School of Medicine
Northwestern University Clinical
and Translational Sciences
Institute (NUCATS)

Featured Works

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We want to optimize discoverability and dissemination of content and enhance the impact of FSM, NUCATS, and our Northwestern Medicine community.

Using VIVO-ISF classes

- Descriptive, administrative and structural metadata
- Use of established controlled vocabularies
- Use of university databases – campus directory
- Use of established standards (date, language)
- **Using ontologies VIVO-ISF**

Edit Dos and Don'ts of extending the VIVO ontology

Descriptions

VIVO-ISF classes

Resource type ?

- Clinical Trial, Phase I
- Clinical Trial, Phase II
- Clinical Trial, Phase III
- Clinical Trial, Phase IV

Abstract ?

Bibliographic citation ?

Keyword ?

- OWL
- VIVO
- National Library

Rights ?

- Attribution-Non
- Attribution-Non
- Attribution-Non
- Attribution-Non

Publisher ?

Date Created ?

2015-03-16 – Remove + Add

Subject ? + Add

Subject: MESH ? + Add

Subject: LCSH ? + Add

Subject: Geographic Name ? + Add

Subject: Name ? + Add

Language ?

English – Remove + Add

Location ? + Add

Related URL ?

<http://www.slideshare.net/violetaill/dos-and-donts-of-er> – Remove + Add

Digital origin ? + Add

Page number

1

Update Generic file

Using NLM MeSH

- Descriptive, administrative and structural metadata
- Use of established controlled vocabularies
- Use of university databases – campus directory
- Use of established standards (date, language)
- **Using ontologies VIVO-ISF**
- **Using NLM MeSH RDF**

Edit Dos and Don'ts of extending the VIVO ontology

The screenshot shows the VIVO ontology editor interface. The main heading is "Descriptions". A purple box highlights the "NLM-MeSH classes" under the "Resource type" field. The interface includes various metadata fields with "Add" and "Remove" buttons:

- Date Created:** 2015-03-16 (Remove/Add)
- Subject:** MESH (Add), LCSH (Add), Geographic Name (Add), Name (Add)
- Language:** English (Remove/Add)
- Identifier:** (Add)
- Location:** (Add)
- Related URL:** http://www.slideshare.net/violetaill/dos-and-donts-of-e- (Remove/Add)
- Digital origin:** (Add)
- Page number:** 1

There is also an "Update Generic file" button at the bottom.

Using data from VIVO

- Descriptive, administrative and structural metadata
- Use of established controlled vocabularies
- Use of university databases
 - campus directory
- Use of established standards (date, language)
- **Using ontologies VIVO-ISF**
- **Using NLM MeSH RDF**
- **Using data from VIVO**

*** Creator ?**
.....
Ilik, Violeta
✓ "Holmes, Kristi" is a valid NU directory name.Vivo Profile
Holmes, Kristi

VIVO
National Library of Medicine

*** Rights**
Attribution-ShareAlike 3.0 United States
Attribution-NonCommercial 3.0 United States
Attribution-NonDerivs 3.0 United States
Attribution-NonCommercial-NoDerivs 3.0 United States
Attribution-NonCommercial-ShareAlike 3.0 United States

Publisher ?

Date Created ?
2015-03-16

Subject ?

Subject: MESH ?

Subject: LCSH ?

Subject: Geographic Name ?

Subject: Name ?

Language ?
English

Identifier ?

Location ?

Related URL ?
http://www.slideshare.net/violetail/dos-and-donts-of-e-

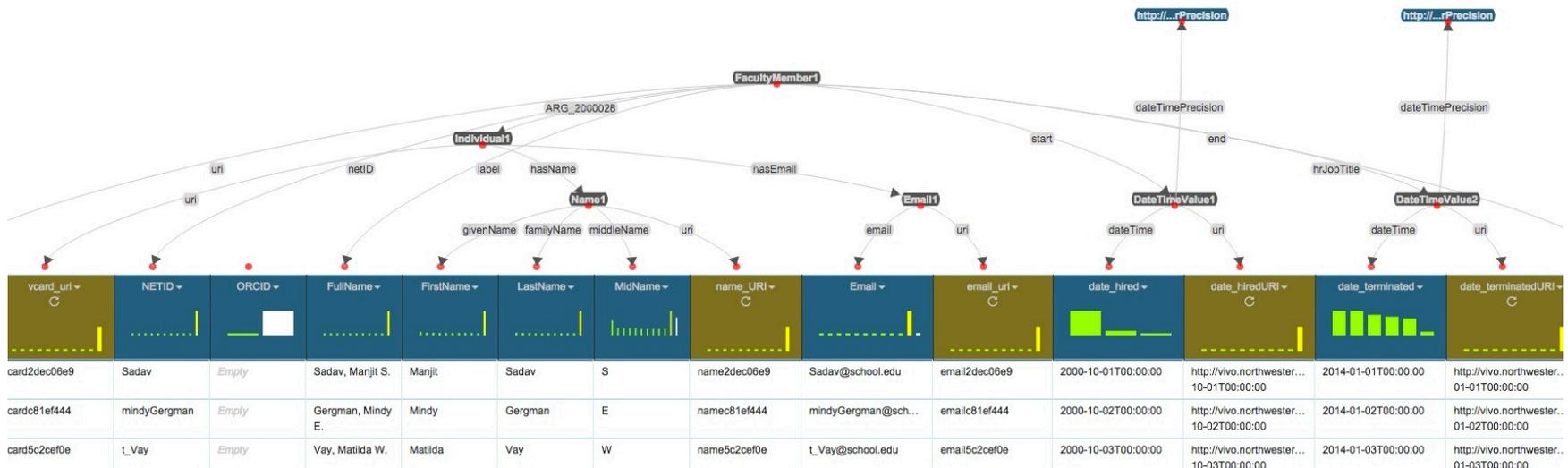
Digital origin ?

Page number
1

RDF for VIVO: from CSV to RDF via Karma

UID	NETID	FullName	FirstName	LastName	MidName	Email	date_hired	date_terminated	Title
2dec06e9	Sadav	Sadav, Manjit S.	Manjit	Sadav	S	Sadav@scho	2000-10-01T00:00:00	2014-01-01T00:00:00	Professor
c81ef444	mindyGergman	Gergman, Mindy E.	Mindy	Gergman	E	mindyGergm	2000-10-02T00:00:00	2014-01-02T00:00:00	Associate Professor
5c2cef0e	t_Vay	Vay, Matilda W.	Matilda	Vay	W	t_Vay@scho	2000-10-03T00:00:00	2014-01-03T00:00:00	Lecturer
b6f25071	sBach	Bach, Susan A.	Susan	Bach	A	sBach@scho	2000-10-04T00:00:00	2014-01-04T00:00:00	Clinical Associate Professor
613870d1	kRoberts	Roberts, Kathryn J.	Kathryn	Roberts	J	kRoberts@sc	2000-10-05T00:00:00	2014-01-05T00:00:00	Assistant Professor
980e771d	jasenMaldonado	Maldonado, Jasen J.	Jasen	Maldonado	J	jasenMaldon	2000-10-06T00:00:00	2014-01-06T00:00:00	Assistant Professor
ea52a51f	Sahrana20	Sahrana, Krishan C.	Krishan	Sahrana	C	Sahrana20@	2000-10-07T00:00:00	2014-01-07T00:00:00	Visiting Associate Professor

Person.tsv | Prefix: s | Base URI: http://vivo.northwestern.edu/individual/n



Look-up service for person names

- Descriptive, administrative and structural metadata
- Use of established controlled vocabularies
- Use of university databases – campus directory
- Use of established standards (date, language)
- **Using ontologies**
- **Creating RDF data**

The screenshot shows a VIVO profile page for 'Holmes, Kristi'. At the top, there is a box labeled 'VIVO' with an arrow pointing to the profile. The profile header includes a red asterisk and a question mark icon next to the word 'Creator'. Below this, the name 'Ilik, Violeta' is displayed. A green checkmark icon is followed by the text: '"Holmes, Kristi" is a valid NU directory name.Vivo Profile'. The name 'Holmes, Kristi' is highlighted in a light green box. Below the profile information, there are two panels for adding or removing metadata. The left panel has a date field '2015-03-16' with '- Remove' and '+ Add' buttons. It lists several 'Subject' fields: 'Subject: MESH', 'Subject: LCSH', 'Subject: Geographic Name', and 'Subject: Name', each with an '+ Add' button. The 'Language' field is set to 'English' with '- Remove' and '+ Add' buttons. The right panel has a 'Location' field with '+ Add' and '- Remove' buttons. It also has a 'Related URL' field with a value 'http://www.slideshare.net/violetail/dos-and-donts-of-e...' and '+ Add' and '- Remove' buttons. Below that is a 'Digital origin' field with '+ Add' and '- Remove' buttons. At the bottom of the right panel, there is a 'Page number' field with the value '1' and an 'Update Generic file' button.

VIVO profile look-up

The screenshot shows a VIVO profile page for Kristi Lee Holmes. At the top left is the Northwestern Medicine logo. Below it, the text reads "Northwestern University Clinical and Translational Sciences" and "VIVO". A search bar is located on the right side of the header. A navigation menu includes "Home", "People", "Organizations", and "Research". The profile section features a portrait of Kristi Lee Holmes, her name "Holmes, Kristi Lee", and her title "Faculty Member". Under "Positions", it lists her membership in the "Northwestern University Clinical and Translational Sciences Institute (NUCATS)" and her primary role in "Preventive Medicine-Health and Biomedical Informatics". To the right of the profile are several interactive links: "Co-author Network", "Map of Science", "FSM Faculty Profile", "Chord Diagram", "Wordle", and "Publication Types". At the bottom, a tabbed interface shows "Overview" as the active tab, with other tabs for "Publications", "Research", "Contact", "Identity", "Other", and "View All".

Northwestern
Medicine

Northwestern University Clinical and Translational Sciences

VIVO

Home People Organizations Research



Holmes, Kristi Lee
Faculty Member

Positions
Member, **Northwestern University Clinical and Translational Sciences Institute (NUCATS)**
Primary, **Preventive Medicine-Health and Biomedical Informatics**

- Co-author Network
- Map of Science
- FSM Faculty Profile
- Chord Diagram
- Wordle
- Publication Types

Overview Publications Research Contact Identity Other View All



Thank you!

Galter Health Science Library
<https://galter.northwestern.edu/>