



# NIF AND NEUROLEX

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The screenshot shows the NIF website homepage. At the top left is the NIF logo. Below it is a navigation menu with sections: ABOUT, NIF PRODUCTS, NIF COMPONENTS, NEUROLEX, REGISTER A RESOURCE, and THE NIF FORUM. The main content area features a search bar with the text "Search for Neuroscience Resources" and a search button. Below the search bar is a "Welcome to NIF 3.0" section with introductory text and a "What is NIF?" section with a brain image. At the bottom, there are links for "Community News & Events" and "Twitter".

## NIF NAVIGATOR

### LITERATURE +

PubMed (20179878)  
Open Access ( )

### DATA TYPE +

Animals (247941)  
Antibodies (890595)  
Brain Activation Foci (56591)  
Clinical Trials (97276)  
Connectivity (25443)  
Dataset (341135)  
Disease (7717)  
Drugs (61340)  
Grants (2651235)  
Images (600513)  
Microarray (32342105)  
Models (620)  
Pathways (43013)  
People (377)  
Plasmids (10505)  
Software (916)

### NERVOUS SYSTEM LEVELS +

Brain Regions (49148)  
Cellular Level (25310)  
Genes (45632483)  
Molecular Level (103770)  
Multi-Level (2850991)  
Nervous System Function (57890)

### NIF REGISTRY (3788) +



A portal to finding and using neuroscience resources

A consistent framework for describing resources

Provides simultaneous search of multiple types of information, organized by category

NIFSTD Ontology, a *critical* component

- Enables concept-based search

- The largest catalog of human-curated biomedical resources (data, tools, materials, services) freely available and accessible (3800+)
- The largest ontology for neuroscience (modular, BFO compliant, where possible)
- Neurolex Wiki: A community wiki serving neuroscience concepts and the registry (easy to edit forms)
- NIF search portal: simultaneous search over data, NIF catalog and biomedical literature
- Assembled the largest searchable collation of neuroscience data on the web (~50M records)

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- What is a neuroscience resource?
- What is neuroscience?
- Can the answer to Parkinson's come from a corn field in Iowa?
- Web Resource: The NIF will catalog any website that has significant value to the greater neuroscience community and shall be considered an individual resource if it is maintained by a single entity, and has the properties of one or more individual web pages that are related by a theme and html links. Most often the individual pages share portions of the url, however, unrelated urls may be incorporated into a single web resource. In the event that a subgroup of pages represents a sufficient shift in theme, it should be classified as an independent resource. For example, the department of neuroscience of a university (resource 1) may have a lab led by a researcher (resource 2). All NIF resources are cataloged in the [NIF Registry](#).



# NIF REGISTRY: KEYWORD SEARCH

Data Federation **NIF Registry (3,788)** literature Grants

The NIF Registry catalogs web accessible neuroscience research resources and is searchable by content and resource type. A central part of the NIF, the NIF Registry is sponsored by the NIH Blue Abuse. For a full description of curation policies and best practices, see <https://confluence.crbs.ucsd.edu/display/NIF/Resources+and+Curation>

Categories

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Resource Name	Description	Resource Type	Date Updated	Full Record
<a href="#">ProSAS</a>	The ProSAS (Protein Structure and Alternative Splicing) database provides a unified resource to analyze the effects of alternative splicing events on the structure of the resulting protein isoforms. ProSAS comprehensively annotates protein structures... <a href="#">More</a>	Database	05/27/2011	<a href="#">See full record</a>
<a href="#">Human Potential Tumor Associated Antigen database</a>	HPTAA is a database of potential human tumor-associated antigens (TAA's). 3518 potential targets have been included in the database, which is freely available to academic users. It successfully screened out 41 of 82 known Cancer-Testis antigens.... <a href="#">More</a>	Database	05/27/2011	<a href="#">See full record</a>
<a href="#">German Neuroinformatics Node</a>	The global scale of neuroinformatics offers unprecedented opportunities for scientific collaborations between and among experimental and theoretical neuroscientists. To fully harvest these possibilities, coordinated activities are required to improve... <a href="#">More</a>	Topical portal	05/27/2011	<a href="#">See full record</a>
<a href="#">Psychoactive Drug Screening Program Ki Database</a>	The PDSP Ki database is a unique resource in the public domain which provides information on the abilities of drugs to interact with an expanding number of molecular targets. The Ki database serves as a data warehouse for published and internally-derived... <a href="#">More</a>	NIF Data Federation; Database	05/26/2011	<a href="#">See full record</a>
<a href="#">Neuron database</a>	NeuronDB provides a dynamically searchable database of three types of neuronal properties: voltage gated conductances, neurotransmitter receptors, and neurotransmitter substances. It contains tools that provide for integration of these properties in... <a href="#">More</a>	NIF Data Federation; Database	05/26/2011	<a href="#">See full record</a>
<a href="#">Visiome Platform</a>	Visiome Platform is the Neuroinformatics Search Service in vision science that provides several types of contents, such as experimental data, mathematical model, illusion stimulus, and analytical tools. This platform provides a data sharing framework.... <a href="#">More</a>	NIF Data Federation; Database; Topical portal; Note; Video	05/26/2011	<a href="#">See full record</a>
<a href="#">Autism Genetic Database</a>	The Autism Genetic Database currently contains the full list of autism susceptibility genes as well as all Copy Number Variations (CNVs)...	Database	05/26/2011	<a href="#">See full record</a>

Resource tree narrows search

Names link to websites

First 3 sentences

Links to NeuroLex

BASIC

ADVANCED

FACTBOX

## NIF NAVIGATOR

### DATA TYPE →

Images (53)

Grants (19)

### NERVOUS SYSTEM LEVEL →

Nervous System Function (904)

Cellular Level (957)

### NIF REGISTRY (3) →

### PUBMED (6) →

### OPEN ACCESS () →



Name:	Resource:Neuron database
Description:	<p>NeuronDB provides a dynamically searchable database of three types of neuronal properties: receptors, and neurotransmitter substances. It contains tools that provide for integration of the compartment, and for comparison of properties across different types of neurons and comparison. There is a tutorial available for searching for Neuron Properties in NeuronDB. This resource is intended to:</p> <ul style="list-style-type: none"> <li>• Support the genomics and proteomics of neuron types</li> <li>• Support research on neuron properties</li> <li>• Facilitate the creation of computational neuronal models</li> <li>• Identify receptors across neuron types to aid in drug development</li> <li>• Serve as a teaching aid</li> </ul> <p>Search the Database By:</p> <ul style="list-style-type: none"> <li>• Neuron List Alphabetically</li> <li>• Neuron List By Brain Regions</li> <li>• Membrane Properties Comprehensive Inventory: Channels, Receptors, Neurotransmitters</li> <li>• Membrane Properties for NeuronDB: Currents, Receptors, Neurotransmitters/Neuron</li> <li>• Canonical forms of neurons (see explanation)</li> <li>• Bibliographic citations</li> </ul>
Other Name(s):	NeuronDB
Resource Type(s):	database, NIF Data Federation
Keywords:	brain, cellular, cerebellum, cortex, dendrites, human, invertebrate, ion channel, molecular, mouse, neuroinformatics, neuron, neuronal properties, neurotransmitter receptors, neurotransmitter substances, olfactory, physiology, rat, receptor, receptors, retina, voltage gated conductances
Resource:	Resource
URL:	<a href="http://senselab.med.yale.edu/neurondb">http://senselab.med.yale.edu/neurondb</a>
Id:	nif-0000-00054
Link to OWL / RDF:	Download this content as OWL/RDF

Editing any entry is simple

History of a page is kept including contributors

If data are not present, the form does not display blanks, hitting "edit" will reveal all fields

Adding properties is also simple so the data model can change if needed

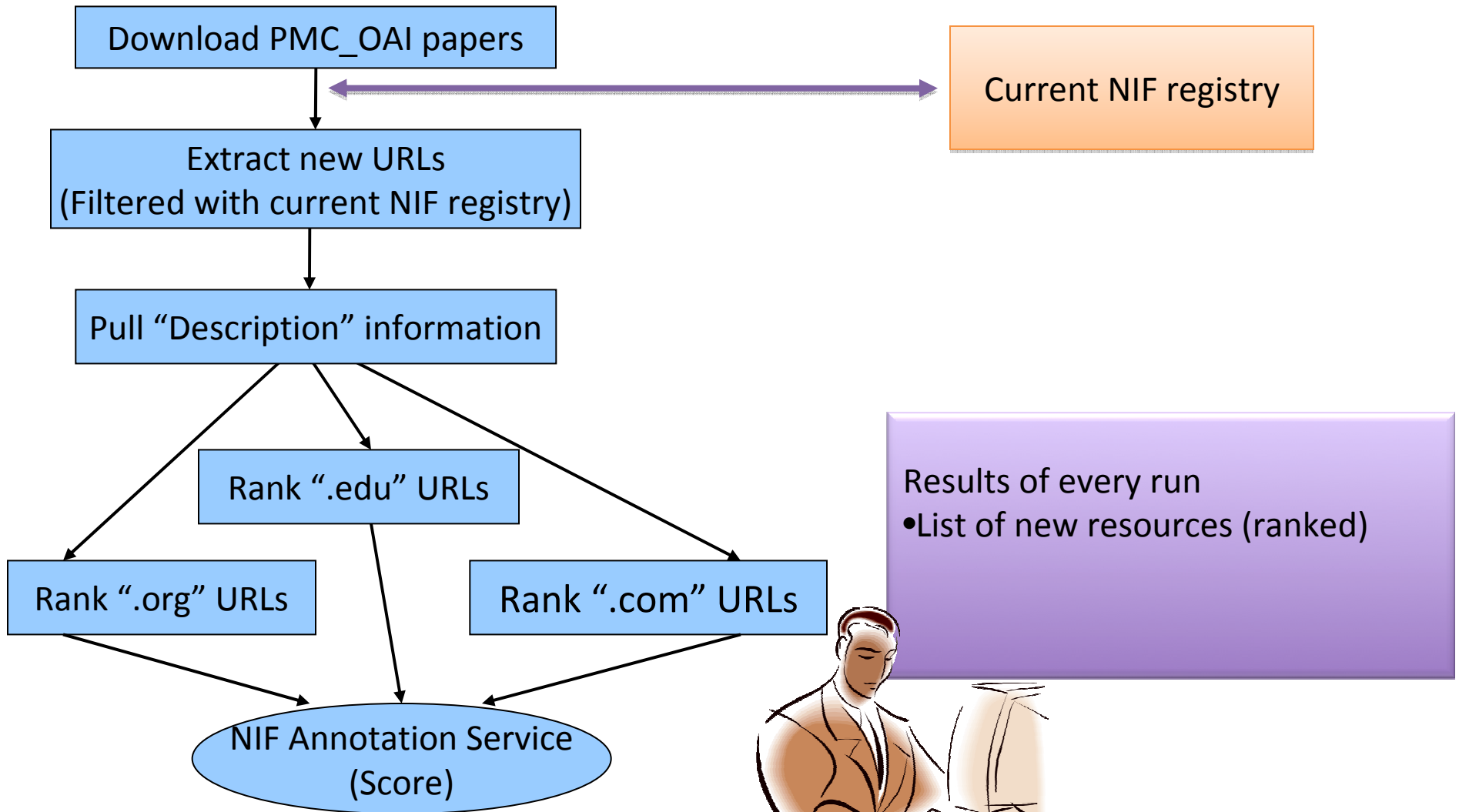
Properties are standard ontology properties

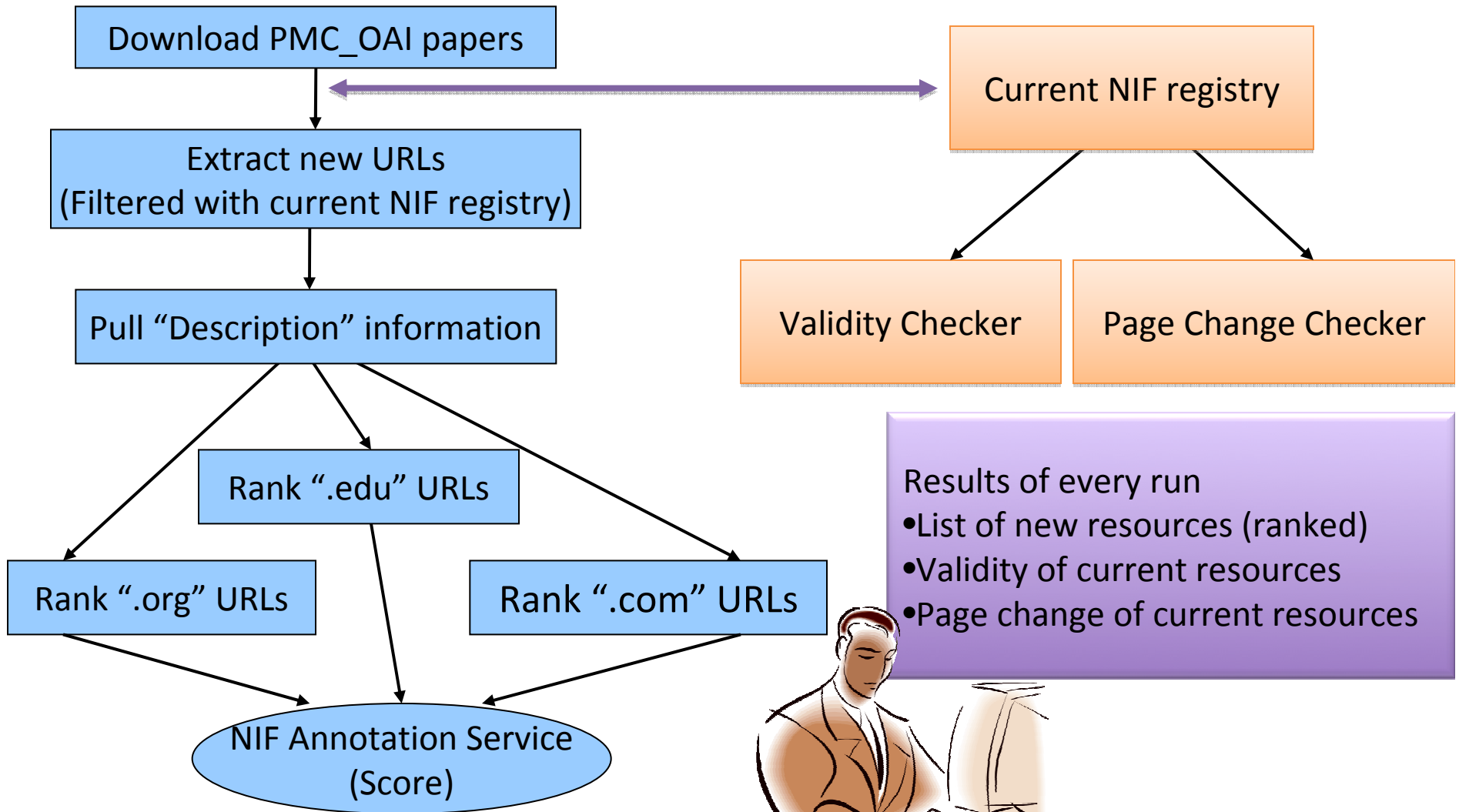
BASIC		REFERENCES	ADVANCED
NIF Standard			
<b>Description:</b>	<p>&lt;BR /&gt;            NeuronDB provides a dynamically searchable database of properties: voltage gated conductances, neurotransmitter substances. It contains tools that pr these properties in a given type of neuron and compart of properties across different types of neurons and co</p>		
	Description PubMed Id:	<input type="text"/>	
<b>Other Name(s):</b>	NeuronDB		
	Other Names PubMed Id:	<input type="text"/>	
<b>Parent Organization:</b>	<input type="text"/>		
<b>Supporting Agency:</b>	<input type="text"/>		
<b>Grant:</b>	<input type="text"/>		
<b>Resource Type(s):</b>	database, NIF Data Federation		
<b>Abbreviation:</b>	<input type="text"/>		
	Abbreviation PubMed Id:	<input type="text"/>	
<b>Resource:</b>	Resource		
	Super category PubMed Id:	<input type="text"/>	
<b>URL:</b>	<a href="http://senselab.med.yale.edu/neurondb">http://senselab.med.yale.edu/neurondb</a>		
<b>Id:</b>	nif-0000-00054		
<b>PMID:</b>	<input type="text"/>		
<b>Publication Link:</b>	<input type="text"/>		
<b>Keywords:</b>	brain, cellular, cerebellum, cortex, dendrites, human, molecular, mouse, neuroinformatics, neuron, neuronal p receptors, neurotransmitter substances, olfactory, phy receptors, retina, voltage gated conductances		

Data can be uploaded in bulk

ID auto-generated







# NIF REGISTRY DATA IS AVAILABLE: AS SITEMAPS, RDF (SPARQL), AND REST

## Curation status: Curated

### For Resource Owners:

A sitemap will keep your NIF Registry description up-to-date and inform search engines ab

[Click here to generate sitemap](#)

[Learn more about what NIF can do for your resource.](#)

Proudly proclaim your inclusion in NIF by displaying the "Registered with NIF" button on y

```

<rdf:RDF>
  <!-- Ontology header -->
  - <owl:Ontology rdf:about="http://neuroinformatics.org/ontology/neurondb"
    <swivt:creationDate rdf:resource="http://www.w3.org/2006-01-19T00:00:00Z"
    <owl:imports rdf:resource="http://semantic-mediawiki.org/swivt/1.0"/>
  </owl:Ontology>
  <!-- exported page data -->
  - <owl:Class rdf:about="http://neuroinformatics.org/ontology/neurondb#NeuronDB"
    <rdfs:label>Resource:NeuronDB
    <swivt:page rdf:resource="http://neuroinformatics.org/ontology/neurondb#NeuronDB"
    <rdfs:isDefinedBy rdf:resource="http://neuroinformatics.org/ontology/neurondb"
    <property:CurationStatus rdf:resource="http://neuroinformatics.org/ontology/neurondb#Curated"
    <property:DefiningCitation rdf:resource="http://neuroinformatics.org/ontology/neurondb#NeuronDB"
  - <property:Definition rdf:datatype="http://www.w3.org/2001/XMLSchema#text"
    <br /> NeuronDB provides a dynamically searchable database of the
    provide for integration of these properties in a given type of neuron a
    searching for Neuron Properties
  
```

```

<registryResultSummary>
  - <registryResult url="http://senselab.med.yale.edu/neurondb" type="http://neuroinformatics.org/ontology/neurondb#NeuronDB"
    dateAdded="2011-05-26T00:00:00-07:00">
    - <content>
      NeuronDB provides a dynamically searchable database of the
      for integration of these properties in a given type of neuron a
      Neuron Properties in NeuronDB This resource is intended to:
      models *Identify receptors across neuron types to aid in drug
      Comprehensive Inventory: Channels, Receptors, Neurotransmitters
      (see explanation) *Bibliographic citations
    </content>
  </registryResult>
  
```

- NIF serves as the INCF – US node (International Neuroinformatics Coordinating Facility)
- Recent commitment from the INCF head: Sean Hill to mirror the NIF in Europe, especially the NeuroLex (this will take a bit of development)
- Can certain communities or individuals ‘own’ pages in the NeuroLex? Yes!
- Is there a data model registry?

- NeuroLex Wiki  
<http://neurolex.org>

- **Neuroscience Information Framework  
(NIF)**  
<http://neuinfo.org>

- NIF Web-services  
<http://neuinfo.org/developers/>