

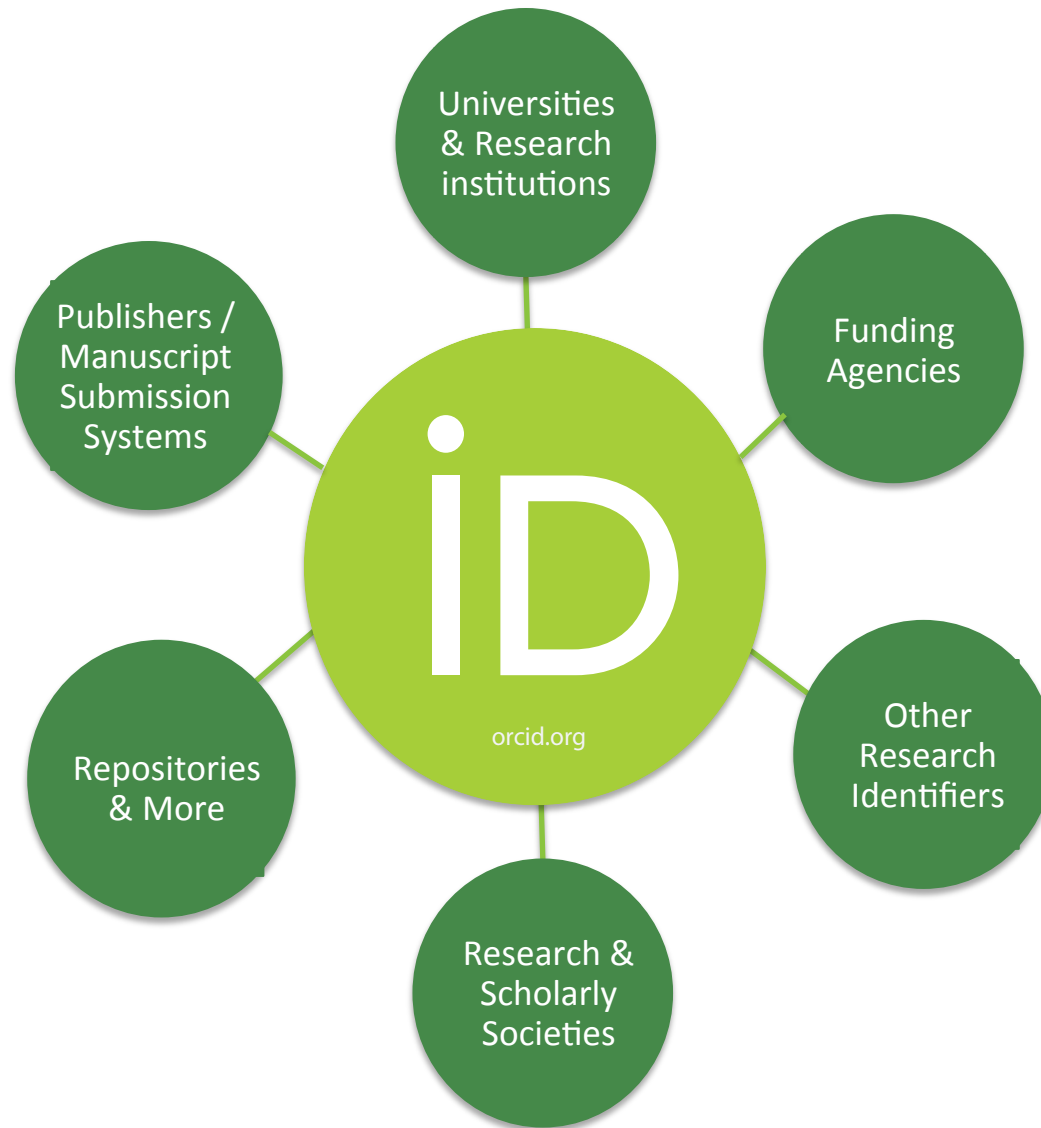
What is ORCID?

- ❖ ORCID is an **international, interdisciplinary, open, not-for-profit, community-driven** organization. We collaborate with researchers and organizations across the research community.
- ❖ Our core mission is to provide an **open registry of persistent unique identifiers for researchers and scholars** AND to automate **linkages to research works by embedding identifiers in research workflows.**


The Problem

- The research community has lacked the ability to link researchers with their professional activities.
- As a researcher, you want to
 - ✓ **ensure your work is discoverable** and **connected to you** throughout your career;
 - ✓ **minimize the time** you spend entering repetitive data online; and
 - ✓ **eliminate name ambiguity**, distinguishing you from other researchers and ensuring proper attribution.

ORCID is a hub connecting the research landscape



What does an ORCID record look like?




Connecting Research and Researchers

FOR RESEARCHERS**FOR ORGANIZATIONS****ABOUT****HELP****SIGN IN**

[SIGN IN](#)[REGISTER FOR AN ORCID ID](#)

739,455 ORCID IDs and counting. [See more.](#)

Todd J Vision

 <http://orcid.org/0000-0002-6133-2581>

Country: United States

Keywords: plant biology, genome evolution, bioinformatics, scholarly communication

Websites:
[Research group website](#)

Other IDs:
ISNI: 0000000042272312
ResearcherID: B-4867-2010
Scopus Author ID: 6603368605

Education

Princeton University (1993 to 1998) MS/PhD

University of Chicago (1989 to 1992) BA

Employment

University of North Carolina at Chapel Hill (2007 to present) Associate Professor

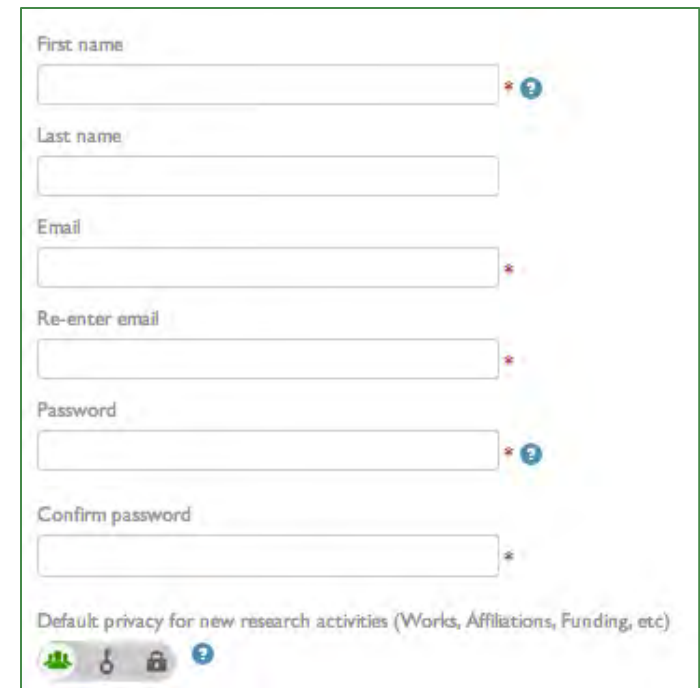
National Evolutionary Synthesis Center (2006 to present) Associate Director for Informatics

University of North Carolina at Chapel Hill (2001 to 2007) Assistant Professor

Registration is free and fast

- Registration is easy.
- Signing up for an ORCID iD only takes seconds.
- Enhance your ORCID record with your professional activities and begin to use your ORCID iD as you submit publications, apply for grants, and in any research workflow to ensure you get credit for your work.

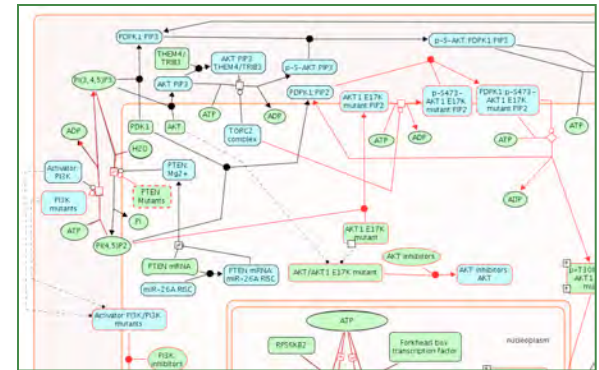
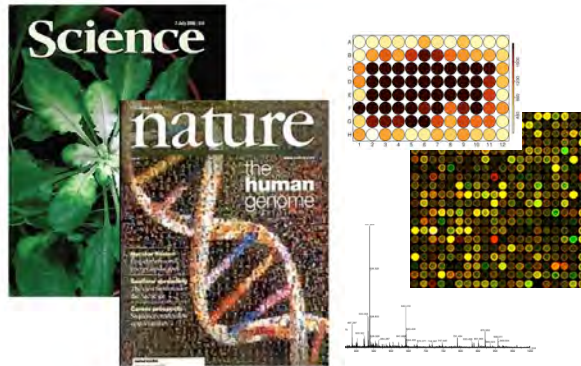
Register for an ORCID iD



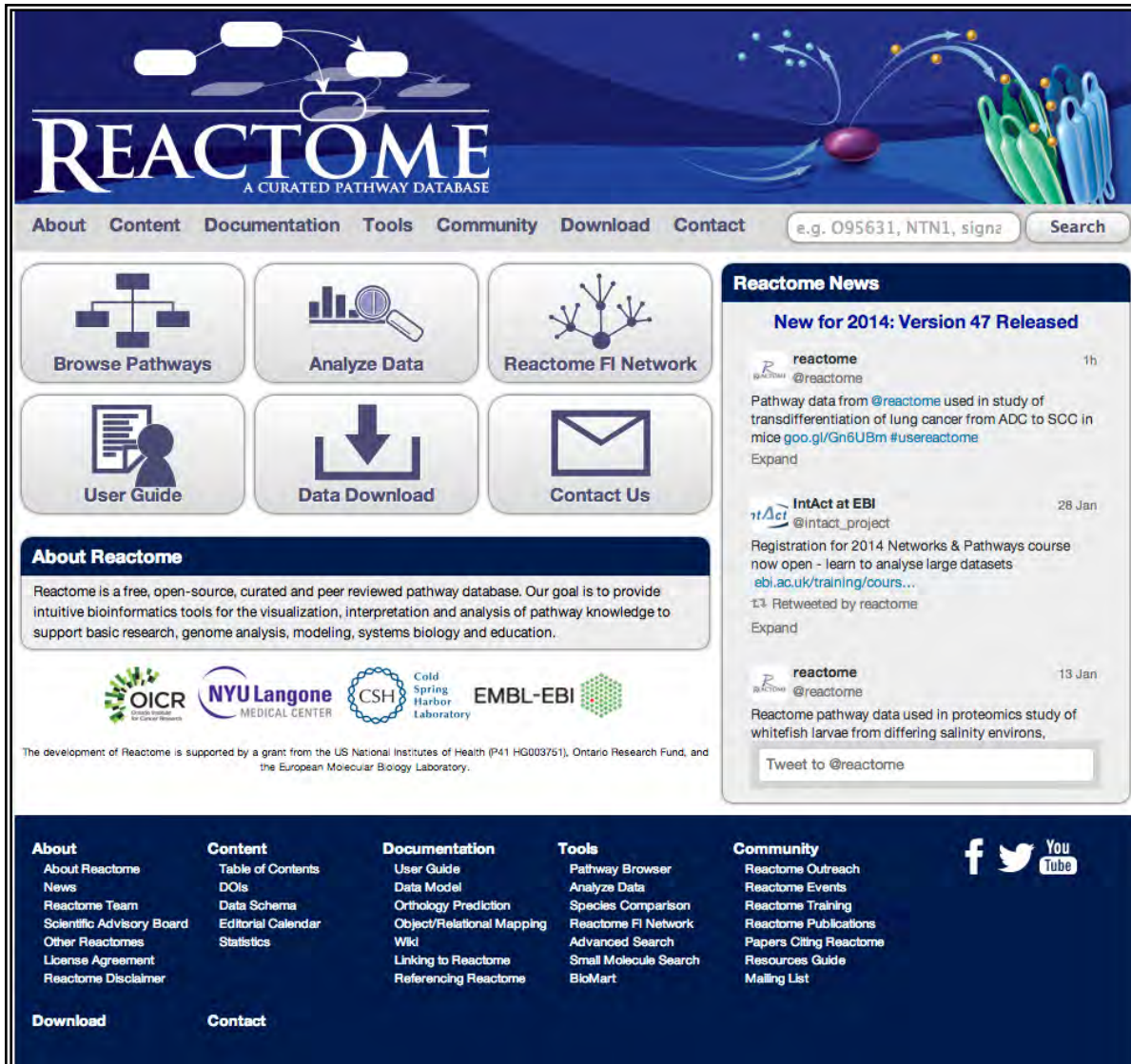
A screenshot of the ORCID registration form. The form is titled "Register for an ORCID iD" and contains the following fields: "First name", "Last name", "Email", "Re-enter email", "Password", and "Confirm password". Each field has a red asterisk indicating it is required. There are also blue question mark icons next to the "First name", "Last name", "Password", and "Confirm password" fields. At the bottom of the form, there is a section for "Default privacy for new research activities (Works, Affiliations, Funding, etc)" with three radio buttons: "Public", "Limited", and "Private". The "Public" button is selected. The form is enclosed in a green border.

What is Reactome?

- Open source and open access pathway knowledgebase
 - 1500 human pathways encompassing metabolism, signaling, and other biological processes.
 - Biological pathways that describe normal and disease-related events in the human cell.
 - Every pathway is traceable to primary literature.
- Pathway databases like Reactome satisfy common “use cases” in biological and clinical research:
 - Intuitive display of biological information.
 - Visualize multiple experimental data types on a pathway.
 - Computational methods available to automate analysis.
- Collaboration between CSHL, OICR, NYUMC, EBI (not a single institution!)



Reactome Homepage



The screenshot shows the Reactome homepage with a dark blue header featuring the Reactome logo and a search bar. Below the header is a navigation menu with links to About, Content, Documentation, Tools, Community, Download, and Contact. The main content area is divided into two columns. The left column contains six large buttons: Browse Pathways, Analyze Data, Reactome FI Network, User Guide, Data Download, and Contact Us. The right column features a Reactome News section with two tweets. The first tweet is from @reactome, dated 1h, about a study on lung cancer. The second tweet is from @intact_project, dated 28 Jan, about a course on large datasets. Below the news section is a footer with a grid of links for About, Content, Documentation, Tools, Community, Download, and Contact. The footer also includes logos for OICR, NYU Langone, CSH, Cold Spring Harbor Laboratory, and EMBL-EBI.

REACTOME
A CURATED PATHWAY DATABASE

About Content Documentation Tools Community Download Contact

e.g. O95631, NTN1, signa Search

Browse Pathways

Analyze Data

Reactome FI Network

User Guide

Data Download

Contact Us

About Reactome

Reactome is a free, open-source, curated and peer reviewed pathway database. Our goal is to provide intuitive bioinformatics tools for the visualization, interpretation and analysis of pathway knowledge to support basic research, genome analysis, modeling, systems biology and education.

Reactome News

New for 2014: Version 47 Released

reactome @reactome 1h
Pathway data from @reactome used in study of transdifferentiation of lung cancer from ADC to SCC in mice goo.gl/Gn6UBm #usereactome
Expand

IntAct at EBI @intact_project 28 Jan
Registration for 2014 Networks & Pathways course now open - learn to analyse large datasets ebi.ac.uk/training/cours...
Retweeted by reactome
Expand

reactome @reactome 13 Jan
Reactome pathway data used in proteomics study of whitefish larvae from differing salinity environs,
Tweet to @reactome

Footer:


About About Reactome News Reactome Team Scientific Advisory Board Other Reactomes License Agreement Reactome Disclaimer	Content Table of Contents DOIs Data Schema Editorial Calendar Statistics	Documentation User Guide Data Model Orthology Prediction Object/Relational Mapping Wiki Linking to Reactome Referencing Reactome	Tools Pathway Browser Analyze Data Species Comparison Reactome FI Network Advanced Search Small Molecule Search BioMart	Community Reactome Outreach Reactome Events Reactome Training Reactome Publications Papers Citing Reactome Resources Guide Mailing List
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Download **Contact**

www.reactome.org

Pathway Browser

- Google-map style pathway diagrams



REACTOME

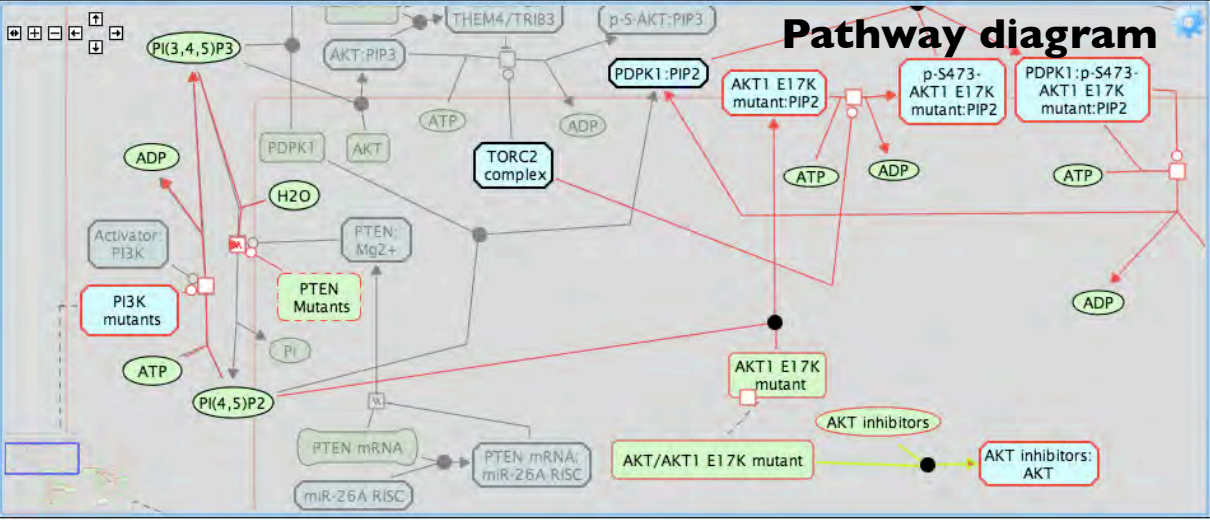
Events Hierarchy:

- PI3K/AKT Signaling in Cancer
 - Constitutive PI3K/AKT Signaling in Cancer
 - PI3K gain of function mutants phosphorylate PIP2 to PIP3
 - PTEN cancer mutants do not dephosphorylate PIP3
 - AKT1 E17K mutant binds PIP2
 - AKT1 E17K mutant is phosphorylated by TORC2 complex
 - PIP2-bound p-S473-AKT1 mutant binds PIP2-bound PDPK1
 - PDPK1 phosphorylates AKT1 E17K mutant
 - AKT1 E17K mutant phosphorylates GSK3
 - AKT1 E17K mutant phosphorylates p21Cip1 and p27Kip1
 - AKT1 E17K mutant phosphorylates BAD
 - AKT1 E17K mutant phosphorylates AKT1S1 (PRAS40)
 - AKT1 E17K mutant phosphorylates MDM2
 - AKT1 E17K mutant phosphorylates TSC2, inhibiting it
 - AKT1 E17K mutant phosphorylates CHUK (IKKalpha)
 - AKT1 E17K mutant phosphorylates caspase-9
 - AKT1 E17K mutant translocates to the nucleus
 - AKT1 E17K mutant phosphorylates CREB1
 - AKT1 E17K mutant phosphorylates RSK
 - AKT1 E17K mutant phosphorylates NR4A1 (NUR77)
 - PI3K inhibitors block PI3K catalytic activity
 - AKT inhibitors block AKT membrane recruitment
 - PIP3 activates AKT signaling
 - Signaling by NOTCH1 in Cancer

Pathways for: Homo sapiens

Protein ☐ Small molecule ☐ Complex ☐

Pathway diagram



Overview | Molecules (241) | Structures | Expression | Processes | Downloads

PI3K/AKT Signaling in Cancer | Species: Homo sapiens

Details panel

DOI
10.3180/REACT_147723.1

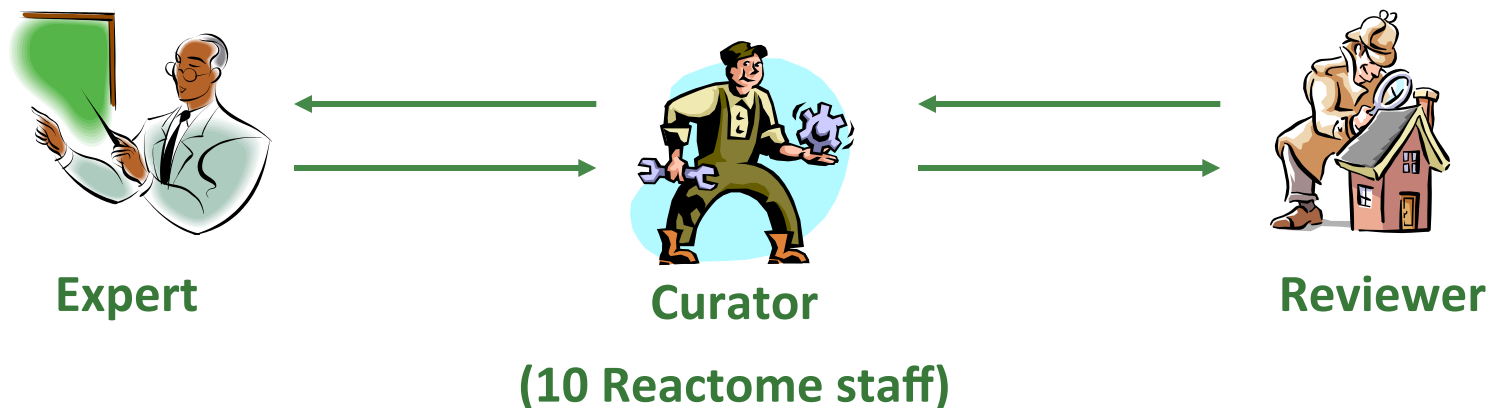
Stable Identifier
[REACT_147723.2](#)

Summation

This pathway describes how normal signaling by PI3K/AKT, presented in the contained module 'PIP3 Activates AKT Signaling' and recently reviewed by Manning and Cantley in 2007, is perturbed in cancer, as described in the contained module 'Constitutive Signaling by PI3K/AKT'. Please refer to Liu et al. 2009 and Hollander et al. 2011 for recent reviews.

Pathway hierarchy

Data Curation Process



- Pathway modules are expert authored, manually curated and peer-reviewed.
 - Recruit bench scientists to write pathway modules.
 - Curators work with authors to ensure consistency and completeness.
 - Module checked by peer review and software before publications.
 - Public Release of Curated data every 3 months.
 - Regular Pathway updates.

Reactome-ORCID Project Goals

- Stage I: Expand the Reactome data model and database to support ORCID iDs.
- Stage II: Integrate ORCID iD into Reactome software tools and website.
- Stage III: Import and deploy ORCID iD data within Reactome.
- Stage IV: Create documentation, training and outreach.

Stage I: Expand the Reactome data model and database to support ORCID iDs

- Updated “Person” class in Reactome database to include cross-reference to ORCID

Class:Id	Person:1169275
_displayName	Haw, Robin
_timestamp	2014-02-26 10:55:32
affiliation	[Affiliation:1169271] Ontario Institute for Cancer Research
created	[InstanceEdit:1169274] Haw, R, 2011-01-18
crossReference	[DatabaseIdentifier:5334735] ORCID:0000-0002-2013-7835
eMailAddress	robin.haw@oicr.on.ca
firstname	Robin
initial	R
modified	[InstanceEdit:5334736] Matthews, Lisa, 2014-02-26
surname	Haw
(author)	[InstanceEdit:1169274] Haw, R, 2011-01-18 [InstanceEdit:1990850] Haw, R, 2011-11-07 [InstanceEdit:2121207] Haw, R, 2012-02-06 [InstanceEdit:2252619] Haw, R, 2012-05-17 [InstanceEdit:2272800] Haw, R, 2012-05-25 [InstanceEdit:3110296] Haw, R, 2013-02-10 [InstanceEdit:3150202] Haw, R, 2013-01-14

Class:Id	InstanceEdit:3110296
_displayName	Haw, R, 2013-02-10
_timestamp	2013-02-11 09:05:20
author	[Person:1169275] Haw, Robin
created	▪ [InstanceEdit:3110295] Orlic-Milacic, M, 2013-02-11
dateTime	2013-02-10 00:00:00
(reviewed)	[Reaction:2220944] ADAM10/17 cleaves ligand-bound NOTCH1 PEST domain mutants to produce NEXT1 PEST domain mutants [Homo sapiens] [Reaction:2220957] NOTCH1 PEST domain mutants coactivator complex binds CDK8:CCNC [Homo sapiens] [Reaction:2220964] NICD1 PEST domain mutants in complex with RBPJ (CSL) bind MAML [Homo sapiens] [BlackBoxEvent:2220966] NOTCH1 PEST domain mutants stimulate HES5 transcription [Homo sapiens] [BlackBoxEvent:2220967] p-NICD1 PEST domain mutants do not bind FBXW7 [Homo sapiens] [Reaction:2220971] CDK8 phosphorylates NICD1 PEST domain mutants [Homo sapiens] [Reaction:2220976] NOTCH1 HD+PEST domain mutants are cleaved by ADAM10/17 irrespective of ligand binding [Homo sapiens] [BlackBoxEvent:2220978] FBXW7 WD mutants do not bind NICD1 [Homo sapiens] [BlackBoxEvent:2220979] NOTCH1 PEST domain mutants stimulate HES1 transcription [Homo sapiens] [BlackBoxEvent:2220981] NOTCH1 PEST domain mutants stimulate HEY transcription [Homo sapiens] List all 50 referring instances

All Reactome Curators have ORCID iDs

instancebrowser | sectioned | sidebarwithdynamiclierarchy

ORCID:0000-0002-2013-7835

Details

Identifier	ORCID:0000-0002-2013-7835
Database	ORCID
Used as a crossreference in	Haw, R

Pathways

ORCID:0000-0002-5039-5405

Details

Identifier	ORCID:0000-0002-5039-5405
Database	ORCID
Used as a crossreference in	Jassal, B

Pathways

ORCID:0000-0002-5494-626X

Details

Identifier	ORCID:0000-0002-5494-626X
Database	ORCID
Used as a crossreference in	D'Eustachio, P D'Eustachio, P D'Eustachio, P

List...

ORCID:0000-0002-0705-7048

Details

Identifier	ORCID:0000-0002-0705-7048
Database	ORCID
Used as a crossreference in	Rothfels, K

Stage II: Integrate ORCID iD into Reactome software tools and website.

Curators can easily add ORCID iDs to Reactome records as they curate pathway annotations.

gk_central@reactomecurator.oicr.on.ca - Schema View

File QA Check

Classes

- EvidenceType [3]
- ExternalOntology [358]
 - CellType [6]
 - Disease [176]
 - PsiMod [146]
 - SequenceOntology [30]
- Figure [1895]
- FrontPage [1]
- FunctionalStatus [20]
- FunctionalStatusType [7]
- GO_BiologicalProcess [26370]
- GO_CellularComponent [3593]
 - Compartment [145]
 - EntityCompartment [136]
- GO_MolecularFunction [9791]
- InstanceEdit [59733]
- PathwayCoordinates [0]
- PathwayDiagramItem [848120]
 - Edge [41487]
 - PathwayDiagram [655]
- Vertex [39118]
 - EntityVertex [28511]
 - PathwayVertex [801]
 - ReactionVertex [9806]
- VertexSearchableTerm [766860]
- Person [79962]
- PhysicalEntity [70036]
 - Complex [12734]
- EntitySet [7094]
 - CandidateSet [991]
 - DefinedSet [6088]
 - OpenSet [11]
- GenomeEncodedEntity [42012]
 - EntityWithAccessionedSequence [41504]
- OtherEntity [435]
- Polymer [250]
- SimpleEntity [7511]
- Publication [22821]
 - Book [70]
 - LiteratureReference [227281]

Search Instances

Choose Class: Person

Choose Attribute: DB_ID

Attribute Value: Equals

Search Search More...

Person: 79962

Haverkamp, J

Haverkamp, Margje H

Haverkamp, T

[Person:1169275] Haw, Robin

Person Properties

Property Name	Value
firstname	Robin
initial	R
project	
surname	Haw
DB_ID	1169275
displayName	Haw, Robin
affiliation	Ontario Institute for Cancer Research
created	Haw, R, 2011-01-18
crossReference	ORCID:0000-0002-2013-7835
eMailAddress	robin.haw@oicr.on.ca
figure	
modified	Matthews, Lisa, 2014-02-26
stableIdentifier	
url	

@Database Repository

Hay, Everett B

Hay, N

ORCID - Author Attribution

Users can see the ORCID iD to track author contributions and link out to ORCID registry.

The screenshot displays the Reactome pathway browser interface. On the left, the 'Event Hierarchy' shows the pathway structure, with 'NOTCH2 Activation and Transmission of Signal to the Nucleus' expanded. The main panel shows the 'NOTCH2/Fringe-modified NOTCH2' pathway, with 'DLL1 binds NOTCH2' highlighted. The bottom panel shows the 'Author' information for the reaction 'DLL1 binds NOTCH2' in Homo sapiens, attributed to Orlic-Milacic, M. (2013-01-11), with ORCID: 0000-0002-3218-5631. A red box highlights the author information.

Reactome Pathway Browser interface showing the NOTCH2 signaling pathway. The left sidebar lists the event hierarchy, including 'Signaling by NOTCH2' and 'NOTCH2 Activation and Transmission of Signal to the Nucleus'. The main panel displays the pathway diagram, showing the interaction of DLL1, NOTCH2/Fringe-modified NOTCH2, and other components. The bottom panel shows the reaction 'DLL1 binds NOTCH2' with the author information: Orlic-Milacic, M., 2013-01-11, ORCID: 0000-0002-3218-5631. A red box highlights the author information.

ORCID - Reviewer Attribution

Users can see their ORCID iD to track reviewer contributions and link out to ORCID registry.

The screenshot displays the Reactome pathway browser interface. On the left, the 'Event Hierarchy' sidebar lists various biological processes, with 'Signaling by WNT in cancer' selected. The main panel shows a detailed diagram of the Wnt signaling pathway, including components like APC, AXIN, GSK3B, and CTNNB1. Below the diagram, a list of publications is displayed, with two entries highlighted by a red box:

- Salahshor, S, 2014-05-12**
 - Salahshor, Sima
 - Author Publication(s) in Reactome database:
 - The links between axin and carcinogenesis
- Woodgett, Jim, 2014-05-21**
 - Woodgett, Jim
 - ORCID: 0000-0003-3731-5797
 - Author Publication(s) in Reactome database:
 - R-spondin1 is a high affinity ligand for LRP6 and induces LRP6 phosphorylation and beta-catenin signaling

Stage II: Integrate ORCID iD into Reactome software tools and website.



Reactome is a curated pathway database. The header includes navigation links: About, Content, Documentation, Tools, Community, Download, Contact. A search bar contains the text "e.g. O95631, NTN1, signalin".


Query your pathway contributions in Reactome

Reactome depends on collaboration between our curation team and outside experts to assemble and peer-review its pathway modules. The integration of [ORCID](#) within Reactome enables us to meet a key challenge with authoring, curating and reviewing biological information by incentivizing and crediting the external experts that contribute their expertise and time to the Reactome curation process. More information is available at [ORCID](#) and [Reactome](#).

If you have an ORCID ID that is not listed on this page, please [forward this information to us](#) and we will update your Reactome pathway records.

Name Email address

Choose a person

DB_ID	Name	Project	Other_IDS	ORCID
4641074	Woodgett, Jim		ORCID:0000-0003-3731-5797	 Sign on to ORCID

Pathways reviewed by Woodgett, Jim (4641074)

DB_ID	Name
5545619	XAV939 inhibits tankyrase, stabilizing AXIN
5358747	S33 mutants of beta-catenin aren't phosphorylated
5358751	S45 mutants of beta-catenin aren't phosphorylated
5358749	S37 mutants of beta-catenin aren't phosphorylated
5358752	T41 mutants of beta-catenin aren't phosphorylated
5339700	TCF7L2 mutants don't bind CTBP
5339717	misspliced LRP5 mutants have enhanced beta-catenin-depende
5339716	misspliced GSK3beta mutants stabilize beta-catenin
5340588	RNF mutants show enhanced WNT signaling and proliferation
5340573	WNT ligand secretion is abrogated by the PORCN inhibitor LGK
4791275	Signaling by WNT in cancer

Authors/Reviewers can query their Reactome contributions using their name.

Authors/Reviewers can export their Reactome contributions in bibtex format.

Reviewed:

```
<bibtex>
  @MISC{ REACT_228223.1,
    author      = {Woodgett, Jim},
    title       = {TCF7L2 mutants don't bind CTBP},
    crossref    = {Reactome:REACT_228223.1},
    howpublished = {\url{http://www.reactome.org/PathwayBrowser/#REACT_228223.1}},
    note        = {Reactome Pathway Knowledgebase, http://www.reactome.org/},
    month       = {May},
    year        = {2014},
  }
</bibtex>
```

Stage II: Integrate ORCID iD into Reactome software tools and website cont'd.

Authors/Reviewers can query their Reactome contributions using their email address.



The screenshot shows the Reactome website with the 'Query your pathway contributions in Reactome' section. It includes a search bar with the example 'e.g. O95631, NTN1, signalin'. Below the search bar, there is a form to enter a name and email address, and a 'Submit' button. The page also displays a table of pathways reviewed by the user Mattaj, Iain W (2993933).

Reactome
A CURATED PATHWAY DATABASE

About Content Documentation Tools Community Download Contact

Query your pathway contributions in Reactome

Reactome depends on collaboration between our curation team and outside experts to assemble and peer-review its pathway modules. The integration of ORCID within enables us to meet a key challenge with authoring, curating and reviewing biological information by incentivizing and crediting the external experts that contribute their time to the Reactome curation process. More information is available at [ORCID](#) and [Reactome](#).

If you have an ORCID ID that is not listed on this page, please [forward this information to us](#) and we will update your Reactome pathway records.

Name Email address

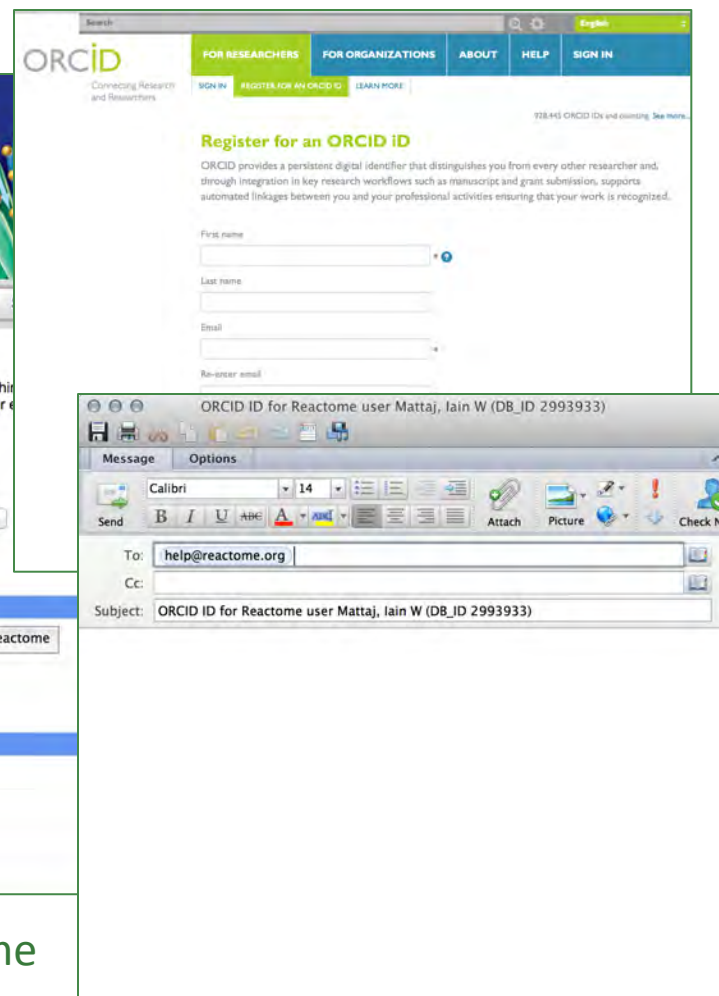
Choose a person

DB_ID	Name	Project	Other_IDS	ORCID
2993933	Mattaj, Iain W	Nuclear Envelope Clearance from Chromatin and Reassembly		<input type="button" value="Create an ORCID ID"/> <input type="button" value="Report ORCID ID to Reactome"/>

Pathways reviewed by Mattaj, Iain W (2993933)

DB_ID	Name
2993913	Clearance of Nuclear Envelope Membranes from Chromatin
2995410	Nuclear Envelope Reassembly
2995383	Initiation of Nuclear Envelope Reformation
2980766	Nuclear Envelope Breakdown

Authors/Reviewers can sign up for ORCID iD.



The top screenshot shows the ORCID iD registration page. It includes a 'Register for an ORCID iD' section with a form to enter first name, last name, email, and re-enter email. The bottom screenshot shows an email confirmation window titled 'ORCID ID for Reactome user Mattaj, Iain W (DB_ID 2993933)'. The email is from help@reactome.org and the subject is 'ORCID ID for Reactome user Mattaj, Iain W (DB_ID 2993933)'.

ORCID iD
Connecting Research and Researchers

FOR RESEARCHERS FOR ORGANIZATIONS ABOUT HELP SIGN IN

SIGN IN REGISTER FOR AN ORCID ID LEARN MORE

928,445 ORCID iDs and counting. [See more.](#)

Register for an ORCID iD

ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.

First name

Last name

Email

Re-enter email


ORCID ID for Reactome user Mattaj, Iain W (DB_ID 2993933)

Message Options

Calibri 14

Send

Authors's Reactome Contributions in ORCID




Connecting Research and Researchers

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[SIGN IN](#)[REGISTER FOR AN ORCID ID](#)[LEARN MORE](#)

928,445 ORCID iDs and counting. [See more...](#)

AP Bevan

 <http://orcid.org/0000-0002-0656-9164>

Also known as:
Andrew Paul Bevan

Country: United Kingdom

Keywords: insulin signal transduction, diabetes genomics, informatics, endosomes

Websites:
[Sanger Institute](#)
[Decipher Consortium](#)

Works

Insulin receptor recycling 2008-03

Insulin Receptor signalling cascade 2008-03


Title
Insulin Receptor signalling cascade

Work type
journal-article

Citation
Bevan, A, 2008, 'Insulin Receptor signalling cascade', *Reactome - a curated knowledgebase of biological pathways*, vol. 24.

Citation type
formatted-unspecified

Reviewer's Reactome Contributions in ORCID




Connecting Research and Researchers

[FOR RESEARCHERS](#)[FOR ORGANIZATIONS](#)[ABOUT](#)[HELP](#)[SIGN OUT](#)

[MY ORCID RECORD](#)[ACCOUNT SETTINGS](#)

706,788 ORCID IDs and counting. [See more...](#)

Robin Haw

 <http://orcid.org/0000-0002-2013-7835>

Also known as:
R. Haw
R.A. Haw
Robin A. Haw

Country: Canada

Keywords: bioinformatics
curation cancer genetics genomics
proteomics yeast

Websites:
[Ontario Institute for Cancer Research](#)
[Reactome, a curated pathway database](#)

Other IDs:
ResearcherID: D-1393-2009

Personal information

Biography

My research career began in cancer genetics, attempting to identify the BRCA1 gene as part of a Wellcome Trust Summer Studentship. After completing a B.Sc. (Hons) in Microbiology and receiving my Ph.D. in Genetics, I continued my work on yeast genetics and molecular biology, studying the regulation of glycolysis and fungal pathogenicity at the NIBH, Japan. At the University of Toronto, I participated in the development of novel methodologies for high-throughput genetic screens and protein complex purifications. I received extensive bioinformatics training at The Blum Institute and was responsible for managing the curation of the Reactome Database of Cell Signaling. More recently, I have been involved in a cancer stem cell project. Since 2009, I have been a Reactome project.

Works

Gramene 2013: comparative plant genomics 2013-11

The Reactome pathway knowledgebase 2013-10

t4 Workshop Report: Pathways of Toxicity. 2013-10

Signaling by NOTCH1 in Cancer 2013-02

Pre-NOTCH Expression and Processing 2012-02

Title
Signaling by NOTCH1 in Cancer

Work type
other

Citation
Reactome project. "Reactome" <http://www.reactome.org>
Unavailable in HTML

Citation type
formatted-unspecified

Stage IV: Stage IV: Create documentation, training and outreach.



- Presented Reactome-ORCID Integration at Biological Conferences and Workshops.
- Created ORCID Integration content, use cases and presentations for Reactome website.
- Encouraging researchers to register for ORCID iD.
- In effect become a part of ORCID outreach.

Summary of Reactome-ORCID Project Status

- Stage I: Expand the Reactome data model and database to support ORCID iDs.
 - *Updated the Reactome data model.*
- Stage II: Integrate ORCID iD into Reactome software tools and website.
 - *Introduced ORCID annotations into the Reactome curator tools and website content.*
- Stage III: Import and deploy ORCID iD data within Reactome.
 - *Queried the ORCID registry with the Public API to identify Reactome contributors with ORCID iDs.*
 - *Contacted all previous Reactome contributors.*
 - *Author and Review letters now include ORCID recruitment information.*
 - *Encouraging those with ORCID iDs to add Reactome pathways to profile information using BibTeX format exchange.*
- Stage IV: Create documentation, training and outreach.
 - *Presented Reactome-ORCID Integration at Biological Conferences and Workshops.*
 - *Created ORCID Integration content, use cases and PPT slides for Reactome website.*

Thoughts on ORCID-Reactome Integration

- We can't create ORCID iDs on behalf of individuals.
 - Reactome is not an institution!
- ORCID iD Recruitment
 - Researchers are reluctant to register or return email.
 - Many ORCID records contain no Institutional information to help distinguish between people with the same name.
 - Contributors have changed careers and no longer doing research.
 - <25% of contributors have ORCID iDs in Reactome, with more expected.
- How to allow Reactome authors and reviewers to append their ORCID Record with metadata associated with their Reactome records?
 - Reactome is not using the Member API.
 - Manual updating of ORCID by contributor.
 - Plan to support batch ORCID-BibTeX importer.

Summary

- Our open access and open source policies make this an attractive open data linkage between the scientist and pathway knowledge via the ORCID iD.
- ORCID iDs as a key mechanism for credit attribution for Reactome.
- A valuable route to increase visibility of the contributions of our external domain experts (authors and reviewers) and curators.
- We are keen to resolve the systemic naming ambiguity by implementing the ORCID.
- A great potential for other bioinformatics resources to adopt ORCID since they are also reliant on expert contributions and/or curators.

Acknowledgements



- Michael Caudy
- David Croft
- Eric Dawson
- Adrian Duong
- Phani Garapati
- Marc Gillespie
- Bijay Jassal
- Steve Jupe
- Irina Kalatskaya
- Maulik Kamdar
- Bruce May
- Sheldon MacKay
- Lisa Matthews

- Antonio Fabregat Mundo
- Marija Orlic-Milacic
- Karen Rothfels
- Veronica Shamovsky
- Heeyeon Song
- Joel Weiser
- Mark Williams
- Guanming Wu
- Christina Yung
- **Henning Hermjakob**
- **Peter D'Eustachio**
- **Lincoln Stein**

