



Dimensions

HRA Analyzer (members only) User Guide

Version 1.3



Part of **DIGITAL**science

Table of Contents

Introduction	3
<i>Introduction to HRA Analyzer (members only) (HRA.uberresearch.com)</i>	3
<i>Introduction to this guide.....</i>	3
Getting Started	4
<i>Get Access</i>	4
<i>Logging In</i>	4
<i>Training & Support</i>	4
About HRA Analyzer (members only) Data.....	5
<i>Projects Data Funder Groups.....</i>	5
<i>HRA Member Data.....</i>	5
Quick Start to Exploring	6
<i>Filters</i>	7
Common HRA Uses	8
<i>Common Starting Points.....</i>	8
<i>Explore funding on a specific topic</i>	8
<i>Viewing the data in different ways.....</i>	9
<i>Viewing data over time</i>	10
<i>At an institution, what are the well-funded research topics?.....</i>	12
<i>Emerging Trends.....</i>	13
<i>Discover: Viewing results by Categories</i>	15
<i>My Categories</i>	16
Data Fields for HRA Analyzer (members only).....	18
<i>Required or Recommended fields</i>	18
Altmetric	24
HRA Analyzer (members only) Confidentiality Guidelines	25
Dimensions for Funders full User Guide	26

Introduction

Introduction to HRA Analyzer (members only) (HRA.uberresearch.com)

HRA's new grant database (formerly known as gHRAsp) is now **HRA Analyzer (members only)**.

What has changed?

Some of the highlights of the new HRA Analyzer (members only) are listed below.

- **New name** - HRA Analyzer (members only) reflects HRA's leadership in developing the first grant database for nonprofits, as well as the functional similarity to NIH Reporter.
- **New partner** - ÜberResearch, who serves funders globally from NIH to the smallest foundations with data, software and services for peer review and portfolio support, provides a customized version (HRA Analyzer (members only)) of their flagship offering Dimensions.
- **More data** - NIH awards and PubMed publications with metrics like citations are also accessible via HRA Analyzer (members only) alongside HRA member grants. *As a bonus, Altmetric badges are available free through March 2016.* Altmetric provides information about attention from news, social media, and policy documents.
- **More uses and features** - a more robust search tool, cleaner data (e.g. one Johns Hopkins University not 20), data visualizations, and more, enable core HRA Analyzer (members only) uses such as searching for existing support and analyzing the funding landscape.
- **More user support** - ÜberResearch will provide training and helpdesk support to your team, including customized training and ongoing support. (support@uberresearch.com)
- **Less burden** - the HRA Analyzer (members only) Oversight Committee has optimized the data model, and ÜberResearch will take on the task of transforming your data export into the HRA data model - all for less burden for HRA members.
- **More users** - any full time employee of your organization can request a login for HRA Analyzer (members only).

As a reminder, like gHRAsp, this database is for internal use only, and the gHRAsp confidentiality agreement applies to HRA Analyzer (members only) as well. The relevant portions of the confidentiality agreement are referenced later in this guide.

Introduction to this guide

The intent of this guide is to quickly get you started using HRA Analyzer (members only).

This guide does not include every feature and use, but supports many of the common uses. For specific situations, please contact us, support@uberresearch.com. We are here to help.

This user guide is organized by three themes:

- HRA Analyzer (members only) - getting started
- HRA common uses
- *Dimensions for Funders* full User Guide for more information on analysis tools, etc.
 - **NOTE: Some items in *Dimension for Funders* User Guide may not apply to HRA Analyzer (members only).**



Getting Started

Get Access

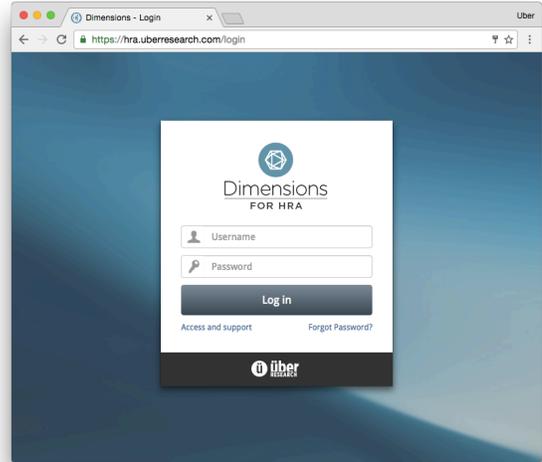
To get a username for anyone in your organization, please email us an “HRA Analyzer (members only) new user request” including the new user’s name, email address and your organization’s name to: supporthra@dimensions.ai.

Logging In

Users are generally provided login credentials directly from ÜberResearch, and the username will be your email address. A link to the login page will be provided with the login credentials.

URL: HRA.UberResearch.com

Forgotten password / change password feature is provided from the login page.



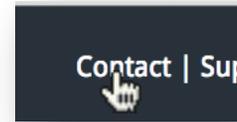
Training & Support

ÜberResearch provides all users with introductory training sessions, typically in groups via web conferencing. Follow-on group and individual trainings are provided as necessary, especially just prior to expected heavy usage; for example, just after an award cycle. Support is also available to users on an individual question basis.

To ask a question: Click “Contact” in the upper right corner of HRA Analyzer (members only), or email us at supporthra@dimensions.ai.

Some examples of support requests include:

- Custom HRA Analyzer (members only) training for your organization.
- Help with login troubles.
- Help with how to search or use the other tools via the ‘contact’ button.



About HRA Analyzer (members only) Data

Projects (awarded grants) and Publications are the two standard data sources. Most features can be used with each set of data. You can choose which data set is being used at the top of the “Filters” menu on the left side of the screen.

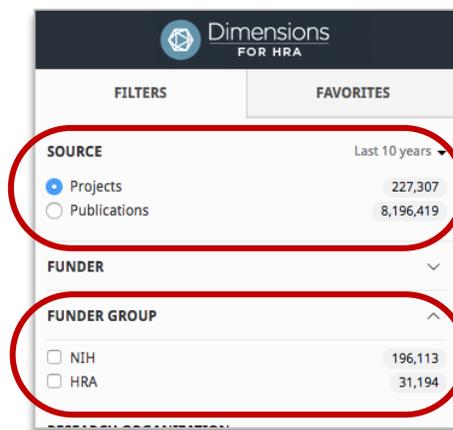
You may also choose to view either the last 10 years (default), or all data.

We use the term “Projects” as a generic label for research funding from funders. Publications are currently PubMed MEDLINE.

Projects Data Funder Groups

HRA Analyzer (members only) contains grants provided by:

- HRA member organizations
- NIH



You can limit your searches to these groups by using the ‘Funder Group’ filter

HRA Member Data

In order to support the most uses and flexibility, there are two versions of the HRA database:

- An ‘online version’ provided in the HRA Analyzer (members only) platform. This data contains basic grant data like title, abstract, amount, start & end dates, etc.
- An ‘offline version’ which is maintained with more data points (for example gender and race/ethnicity) that are used for further analysis such as the HRA infographic.

How do we contribute our data into HRA Analyzer (members only)?

The intention of HRA and ÜberResearch is to reduce the burden on members, while providing an even more useful data analysis tool from HRA Analyzer (members only). Enabling this are two major changes: first, the data model has been revised to reduce the data elements needed, while not reducing the analytical potential of the shared database, and second, the task of transforming your data into the HRA data model can be performed by ÜberResearch for you.

Options to submit data:

1. Instead of uploading data to gHRAsp, just email an export from your grants management system (or other database) to ÜberResearch at supporthra@dimensions.ai. They will review your data for completeness, and will do the necessary work to fit the data into the HRA Analyzer (members only) data model. You will still need to include fields such as title, abstract, PI name, etc., but many of the other data requirements have been eliminated. For instance, no categorization is required for HRA Analyzer (members only), nor are any undergraduate degrees required. *A list of the required/recommended fields to include in your upload is on page 17.*
2. Work with ÜberResearch directly to determine your method of importing data into HRA Analyzer (members only). Email supporthra@dimensions.ai to setup a call.

Quick Start to Exploring

Basic exploration with keywords is easy within “Discover” - the initial screen that appears after login. First, choose the data that you want to explore from the top of the filters on the left side of the screen; Projects (grants) or Publications are available. You may also choose to view either the last 10 years (default), or all data.

Note: Throughout HRA Analyzer (members only) (which is in the Dimensions platform), searches usually default to ‘active in at least one of the last 10 years,’ the user may select ‘all results’ in the upper left corner.

You may enter a Boolean keyword search in the search bar and see your results listed by different groupings -- results by Funder, or results by Organization, etc. Each of the groupings can be viewed as a list, and each item within the list can be further explored, or added as a filter to see which records are resulting within that item. Each grouping may also be viewed graphically by clicking the “Visualization” button within the grouping.

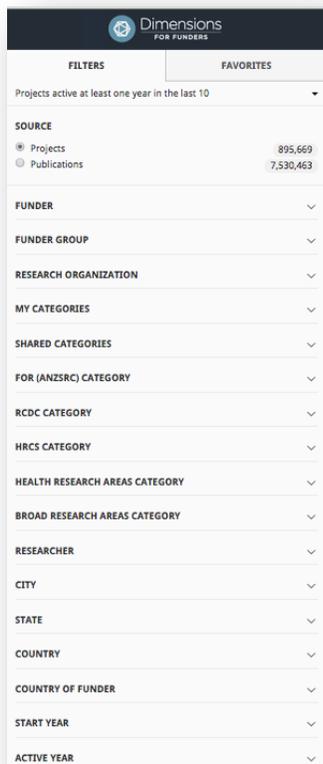
The screenshot shows the 'Discover' page of the HRA Analyzer. The search bar contains the keyword 'food water energy'. The left sidebar shows filters for 'Projects' (1,541) and 'Publications' (1,690). The main content area displays summary statistics: 1,541 Projects, \$ 824.6 M Aggregated funding amount, and \$ 535 K Average funding amount. Below the statistics is a table of results sorted by Relevance.

Project title	Funder, Principal Investigator	Funding Amount	From - Through
IMPROVING SUSTAINABILITY OF FOOD PROCESSING	National Institute of Food and Agriculture to D. R. HELDMAN		2013 - 2018
Newton Fund-Integrating water cooled concentrated photovoltaics with waste heat reuse	EP SRC to Stavroula Balabani, Manish K. Tiwari	GBP 50,371	2015 - 2015
ECONOMIC AND POLICY IMPLICATIONS OF WATER CONSERVATION AND RENEWABLE ENERGY ISSUES	National Institute of Food and Agriculture to RO. LACEWELL		2012 - 2017
FEW: Workshop: Developing Intelligent Food, Energy, and Water Systems (DIFEWS)	National Science Foundation - Directorate for Engineering to Matthew Potts, Meredith Fowle, Duncan Callaway, David Sedlak, Ishia Ray	USD 49,863	2015 - 2016

You can then layer on filters from the left menu to further limit the search parameters.

Filters

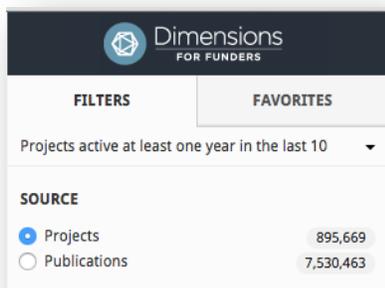
The filter bar appears throughout HRA Analyzer (members only) on the left side of the screen - as a way to search and filter information. Users can filter by Funder, Research Organization, and Active Year to name a few. Filters can be selected individually as a way to search, or layered in combination to narrow the results.



For example, “Johns Hopkins University” from the Research Organization filter can be combined together with the “NCI” filter from the Funder section to give only those results which apply to both categories.

Categories are also provided in the filters bar. For more information, please see the HRA Analyzer (members only) User Guide section “About Categories”

Note: Filters and results are on the documents (Projects, Publications), which may contain more than one attribute, in the case of co-authors and the like. For example, when adding a filter of Country to publications, results will likely contain other countries in the case of co-authors from different countries.



- Choose your data source with radio buttons: Projects (grants) or Publications.
- Filters side navigation bar allows for you to narrow results by different facets.
- See data by active in the last 10 years (default) or “All Results”.

Common HRA Uses

In this Section:

- Common Starting Points
- Explore funding on a specific topic
- View the data in different ways
 - By Funder
 - By Organization
- View Data Over Time
- View what are the well-funded research topics at an institution
- Emerging Trends
- Discover: View results by Categories
- My Categories

Common Starting Points

Common starting points for using HRA Analyzer (members only) in the Dimensions platform include:

- Keyword search
 - What have we and others (including NIH) funded in X?
- Abstract search
 - What funding and projects and people are similar to this abstract?
- Use existing Categories
- Summary views
- Trends over time

The following are descriptions of just a few ways in which you can use HRA Analyzer (members only). As well as being an instructive guide, these examples may also be useful for getting to know the software.

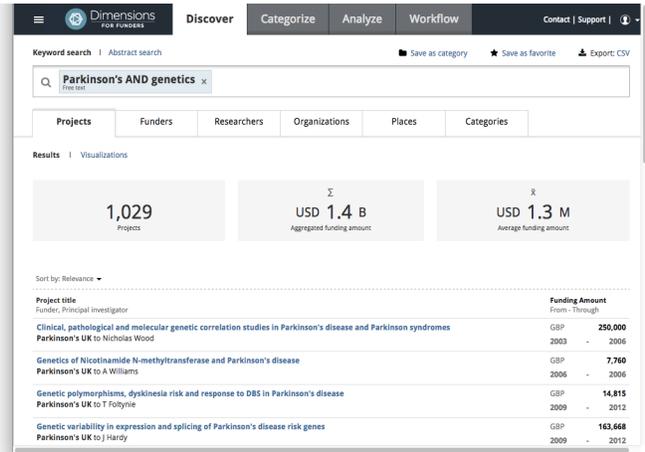
Explore funding on a specific topic

To explore funding for a specific research topic, first ensure on the left sidebar under **SOURCE** that 'Projects' is selected. Above this, also choose whether you wish to search through 'All results', or just those in the last 10 years (the default setting).



In the search box in the main window, under the ‘Discover’ tab, type the topic of interest and then press enter. (Ensure that you are searching using the **Keyword search** and not Abstract search.)

Boolean terms are usable in this search (see the ‘Boolean Usage’ section below). For example if we were interested in the genetics of Parkinson’s Disease, we would search for ‘Parkinson’s AND genetics’. The results are then displayed below with the total number of projects, and statistics on the amount of funding this represents.



The results can then be exported for use outside of the software. To do this, click the ‘Export’ in the top right corner, to download an export of the search results.

Depending upon the search terms, the number of projects found could be very large, and from here it is useful to view the data in different ways.

Viewing the data in different ways

Viewing by Funder Group

HRA and NIH data can be filtered using the ‘Funder Group’ filter within the filter panel on the left side of the page.



As one example, the landscape of a particular topic area can be examined by all HRA funding and then compared to the NIH funding using the same search criteria for consistent comparison.

Viewing by Funder

Viewing results by funder is a good way to easily identify the main funders of a certain research topic.



With the initial list of results, select the 'Funders' Tab. This then displays the results grouped by the Institutions funding the projects, giving the number of projects and the total funding amount this represents on the right side.

Passing the mouse down the list of funders, an 'add as filter' button appears in the row of the selected funder. Clicking this button adds that Funder as another filter in the search. So, in the example of 'Parkinson's AND genetics' adding NINDS (National Institute of Neurological Disorders and Stroke) as a filter will return you to a list of results of only those projects which were both in the original 'Parkinson's AND genetics' search and that are funded by NINDS.

The same can be done by selecting NINDS from the 'Funder' option on the left side panel – it has the same effect as clicking the 'add as filter' button.

The screenshot displays the HRA Analyzer interface. At the top, there are navigation tabs: Discover, Categorize, Analyze, and Workflow. A search bar contains the query 'Parkinson's AND genetics'. Below the search bar, there are tabs for 'Projects', 'Funders', 'Researchers', 'Organizations', 'Places', and 'Categories'. The 'Funders' tab is selected, showing a list of funders on the left and a summary of results on the right. The summary shows 317 Projects and USD 473.8 M Aggregated funding amount. A project detail view is also shown, listing project titles and funders.

Viewing by Organization

The same principle can be applied to viewing the results of a search by Organization as with viewing by a Funder. Selecting the 'Organizations' Tab near the top of the page organizes results by Organization, starting with those with the largest amount of aggregated funding (this is the default setting – to change to listing by the number of projects, click the 'Sort by' at the top of the results list on the left).

Again, to add an Organization as a filter in the search and only return projects at that Organization, you can either select the Organization in the 'Research Organization' tab on the left, or click 'Add as filter' in the Organizations Tab results list.

Viewing data over time

Viewing results from a search in relation to the time at which the funding was awarded is also possible in HRA Analyzer (members only). With the results list from a search, click the 'Visualizations' link at the top left of the Projects tab.

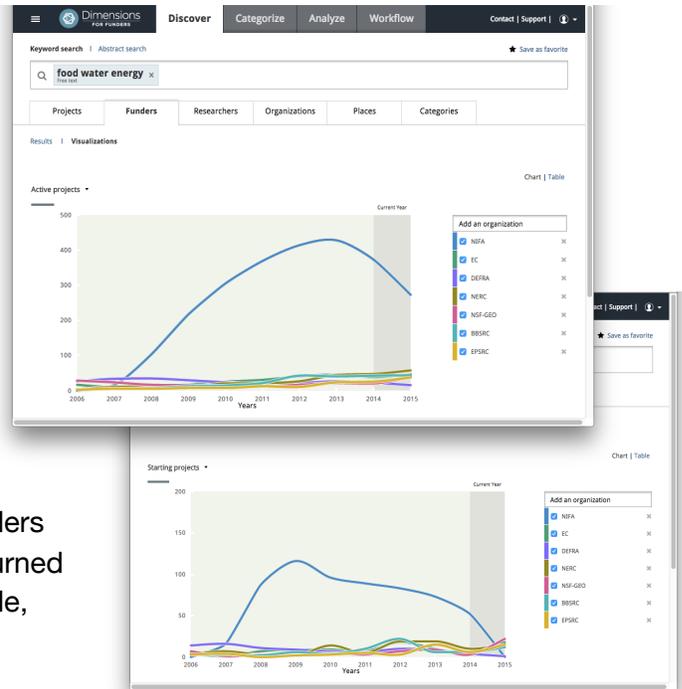
This displays a graph of both the number of active projects in any given year, and the number of projects starting in each year. For example, a project that is listed as 2012-2015 will be present in active projects in 2012, 2013, 2014 and 2015, but will only be present in 2012 results for the starting projects.





This can be very useful when comparing other aspects such as funders or organizations. For example, to compare funded projects from several funders over time, in the 'Funders' tab click the empty box to the left of each funder you wish to compare (up to a maximum of seven). Then click the grey graph button at the top of that column to display the comparison over time.

It is important to note that this visualization does not affect the overall search, but only displays projects which are relevant to the Funders selected. The original search results can be returned to by clicking the 'Results' link at the top left side, and different Funders can then be selected if required.

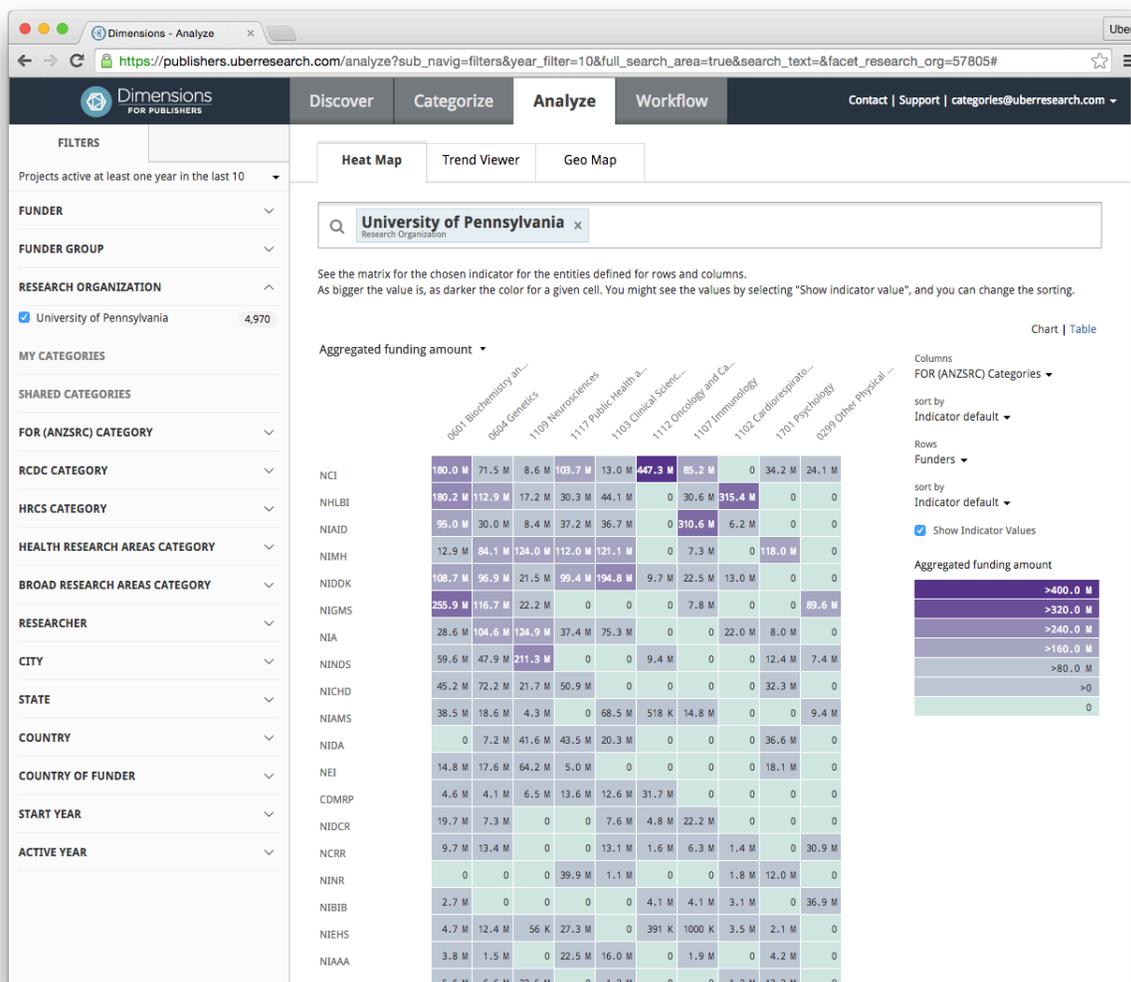


Data can also be filtered by year. Again, this can be done either by start year or active year (see above). For example, to display only those projects active in 2015, go to the 'Active Year' section at the bottom of the left side menu bar. By clicking on this, the options are given for a year to select. If the year required is not displayed, click 'more' at the bottom.

The same process can be used for searching for only projects starting in a selected year by using the 'Start year' section.

At an institution, what are the well-funded research topics?

One example approach is to view funding activity at a specific institution. For example, we can see which topics are being funded and by which funders at University of Pennsylvania. Within the 'Analyze' tab at the top, select 'Heat Map'. Then choose University of Pennsylvania on the left filter bar under 'Research Organization'. The rows and columns of the Heat Map can be configured to show topics, for example, the FOR (Fields of Research) classification system was chosen in this scenario on the columns and funders in the rows.



Emerging Trends

Is global funding of a topic increasing or decreasing?

Is our funding of a topic increasing or decreasing?

How does our funding over time compare to another funder?

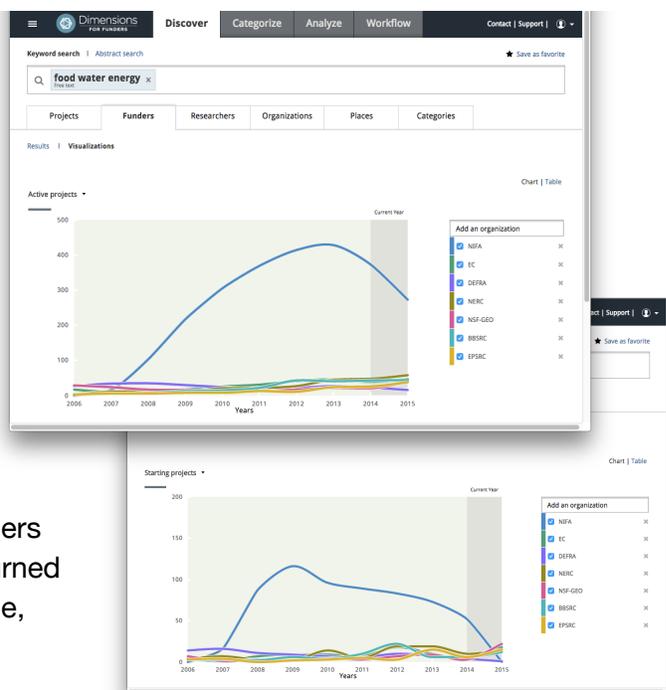
Is our funding organization filling a gap in funding?

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The same process can be used for searching for only projects starting in a selected year by using the 'Start year' section.



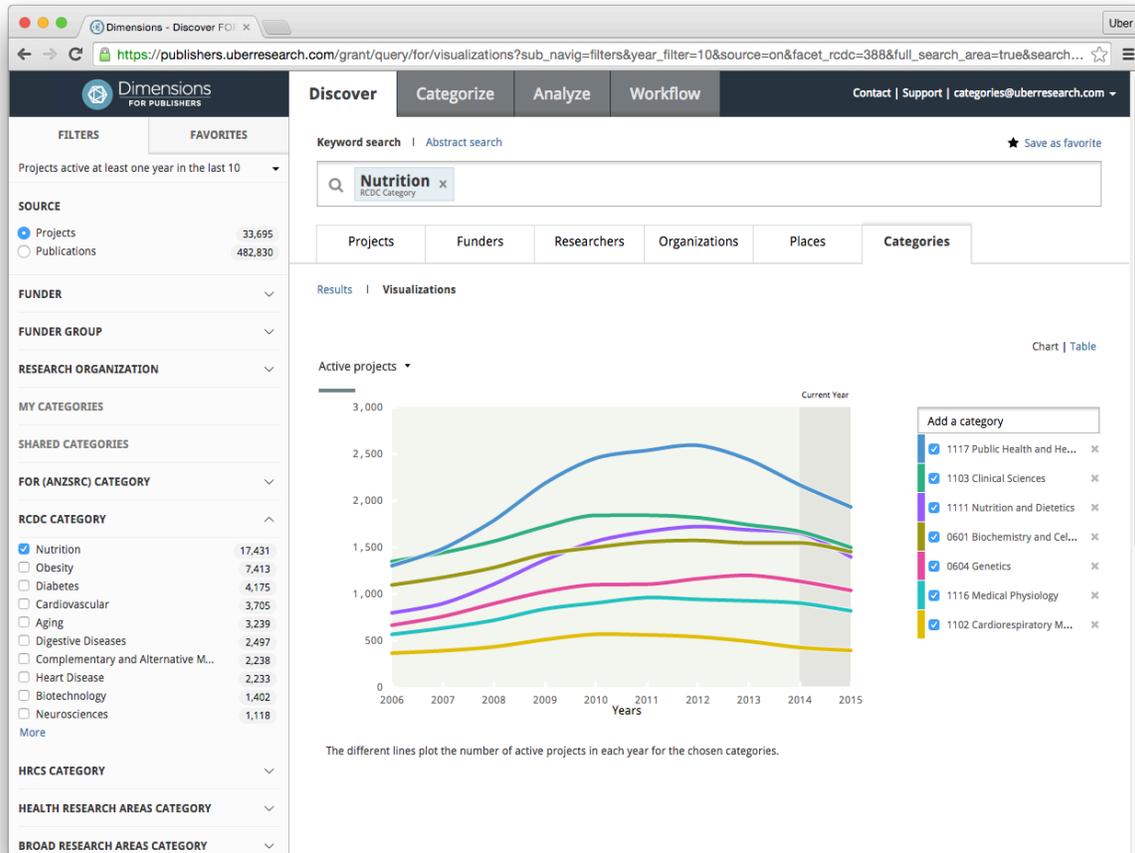
Discover: View trends by topic

What topics or subtopics are getting increased funding?

What topics/subtopics are getting less funding?

We need to provide data-supported responses to - why didn't we fund more of X?

One example use is to quickly view topical trends with visualizations – in the Discover tab add a Category topic from the left filters panel, for example, 'Nutrition' from RCDC Category. Then we can view subtopics within nutrition in the Categories results tab. These Categories can be displayed with a visualization of the topics funded



Discover: Viewing results by Categories

How can we visualize a funder portfolio by topic?

How can we view our portfolio classified by topic?

How can we compare our portfolio against other funders' portfolios?

How can we report automatically and consistently on our funding?

After entering a keyword search, or a search using categories, or other filters:

In this example we start by applying the funder filter to view the funder's full portfolio classified by topic.

With the initial list of results, selecting the 'Categories' Tab organizes results by classification, starting with FOR (Fields of Research). You can change this to any other classification system found in Dimensions, including 'My Categories.'

At this point you may further refine to see the results that are contained within one of the

The image displays two screenshots of the Dimensions web application interface. The left screenshot shows the 'Discover' page with a search for 'JDRF' and a list of categories under 'FOR (ANZSRC)'. The right screenshot shows the 'My Categories' view with a table of categories and their funding amounts.

My Category	Projects	Funding Amount Aggregated
Diabetes	1,672	USD 847.5 M
Type 1 Diabetes	1,278	USD 645.2 M
Beta Cell	806	USD 382.7 M
Prevention	577	USD 273.0 M
Diabetic Kidney and Eye Complications Therapies	296	USD 136.6 M
Beta Cell Autoantigen-Specific Immune Therapies	119	USD 101.4 M
Beta Cell Regeneration and Survival	141	USD 76.1 M
Type 2 Diabetes	96	USD 55.9 M
artificial pancreas	67	USD 41.2 M
Glucose Modulating Agents	65	USD 29.7 M
Beta Cell Replacement	31	USD 20.4 M

categories by clicking "add as filter" for one of the resulting categories.

My Categories

Is this topic an emerging research topic that should be a new priority?

We want to report by this topic to stakeholders.

We want to consistently analyze by topic over time, and compare to other funders.

We need to evaluate our funding priorities.

Search by topic to view funding trends and global activity by topic.

One way to explore growing topics is to use “My Categories.” The My Categories allow users to create their own Categories (topics), using *Dimensions*’ category creation tool available in HRA Analyzer (members only). To create a “My Category”, click Categorize tab, My Categories, and then create a category.

My Category definitions are created by users (or by ÜberResearch for you) with simple or advanced keyword searches using Boolean operators, boosted terms and minimum thresholds of relevancy. ÜberResearch can help users create draft My Categories or support users to create their own.

For this example, the topic of epigenetics is modeled and explored. First, within the Categorize tab, select “My Categories” in the upper left corner. Then create a new category using the category creation tool.

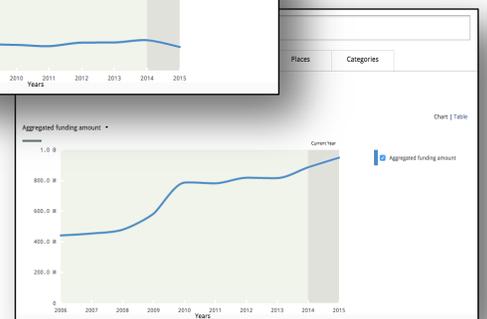
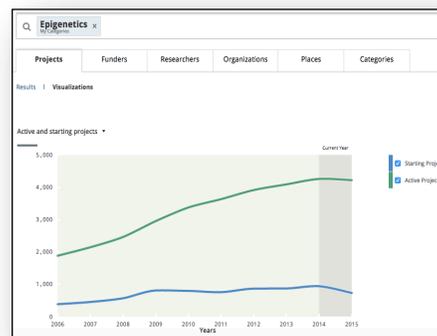
Then, once the category is saved, select it to view the results in Discover. Select the Funders tab to see who is funding this topic.

Within the Results tab, visualizations are available to display number of active and starting projects over time as well as funding amounts over time: Is funding for this topic increasing or decreasing?

The 'Edit category' form shows the title 'Epigenetics' and a detailed description. The 'Defined by' field contains a complex Boolean search string including terms like 'epigenetic*', 'DNA methylation', 'epigenome', 'epigenomic', 'epigenetic', 'Epigenomics', 'epigenetic mechanism', 'epigenetic change', 'epigenetic regulation', 'epigenetic modification', 'Genetic Epigenesis', 'epigenesis', 'epigenetic information', 'epigenetic silencing', 'epigenetic effect', 'epigenetic state', 'Genetic Epigenesis', 'epigenetic event', 'Histone modification', 'Histone acetylation', 'Histone methylation', 'Histone variant', 'Chromatin remodelling', 'Chromatin modification', 'X-inactivation', 'Imprinting', 'ChIP', 'Bisulfite', and 'Bisulphite'. A threshold of 6 is set. Below the form, a table shows 8926 results, with the top two entries: 'Interplay of Epigenetic Mechanisms in Gene Silencing' by NCI and 'Epigenetics of fetal alcohol syndrome' by NIAAA.

The 'Funders' tab displays a table of funding organizations. The table has columns for Organization, Country, Projects, and Funding Amount Aggregated.

Organization	Country	Projects	Funding Amount Aggregated
NCI National Cancer Institute	United States	1,172	EUR 1.7 B
NIHMS National Institute of General Medical Sciences	United States	690	EUR 972.0 M
NIHGR1 National Human Genome Research Institute	United States	107	EUR 928.7 M
NIDDK National Institute of Diabetes and Digestive and Kidney Diseases	United States	384	EUR 566.3 M
NHLBI National Heart, Lung, and Blood Institute	United States	339	EUR 551.1 M
NIEHS National Institute of Environmental Health Sciences	United States	333	EUR 472.9 M
EC European Commission		326	EUR 450.4 M





Categorize: How to use the Category building tool

To quickly create an ad hoc category from scratch:

- Start with one or more definite keywords.
- Use sources where someone has already thought of related concepts (Wikipedia).
- Use suggestions within similar projects and on the Concept Panel (to the right).
- Iterate.
- Set threshold.

ÜberResearch will provide guidance for creating more precise, robust categories. If needed, a web meeting with one of our categorization specialists is an option.

Using the Dimensions Category building tool

Tip: Filter on specific funders to change the concepts in the Concept Panel.

Defined By: Enter the Boolean keyword search to define your Category.

Threshold: Set a minimum to cut out long tail of results with low rank.

The **Concept Panel** suggests terms.

Add suggested terms or Boost terms to give them higher ranking points.

Dimensions FOR FUNDERS

Discover | **Categorize** | Analyze | Workflow

Contact | Support | categories@uberresearch.com

Filters: Projects active at least one year in the last 10

FUNDERS:

<input type="checkbox"/>	NCI	3,541
<input type="checkbox"/>	NHLBI	2,327
<input type="checkbox"/>	CIHR	2,129
<input type="checkbox"/>	NIDDK	1,742
<input type="checkbox"/>	NSERC	1,721
<input type="checkbox"/>	CDMRP	1,694
		1,410
		1,404
		1,146
		952

Edit category

Title: Surgery

Save | Cancel

Required

35554 Results | Export: CSV

Sort by: Relevance Descending

Rank	Title	Organization, Principal Investigator
39	Minimally Invasive Vaginal Prolapse Repair	EUNICE KENNEDY SHRIVER NATIONAL INSTITUTE OF CHILD HEALTH & HUMAN DEVELOPMENT to KEITH WILLIAM LIPFORD, WALTER VON PECHMANN
39	Natural Orifice Transluminal Endoscopic Surgery in an Experimental Minipig Model. Assessment of the Methodology, Operation Stress and Risk of Complications	Ministry of Health to Jan Martínek, Jan Motlík
30	Regulating Lung Transplant Tolerance	NATIONAL KREISEL
27	SURGIC FREQUE EXPERI Ministry	Funding Amount: CZK 6,971,000 Funding Time: 1 Jan 2009 - 31 Dec 2011

Concept Panel:

Concept	Set weighting	
	Not	Boost
endoscopic surgery	not	boost
cholecystectomy	not	boost
complication rate	not	boost
Laparoscopy	not	boost



Data Fields for HRA Analyzer (members only)

The intention of HRA and ÜberResearch is to reduce the burden on members, while providing an even more useful data analysis tool.

Providing ALL awards with EACH update will allow for the submitting organization several advantages, including a clear picture of which awards and how they will appear in the database, and the ability to easily edit or remove awards (in the case of extension or cancellation, for example).

Email your data to supporthra@dimensions.ai a template is also available. Note: The column header names do not need to match exactly (i.e. Description vs Abstract).

Required or Recommended fields

General Award Fields:

- Funder Unique Project ID (Each listed award must have its own distinct project identifier, unique within the Funder's awards. Some funders use year and last name if a grant id is not used.)
 - Title
 - Abstract (Providing at least 200 characters required for classification)
 - Start Date (can also be award date)
 - End Date OR Duration ('End Date' preferred, both are not needed)
 - Funding Amount
 - Funder Name (the organization that pays the grantee)
 - Partner Organization (can be whatever is needed, e.g. the funder administering the award)
 - Award Program Name
 - Support Mechanism* (controlled list, updated August 2017, see below.)
 - Support Recipient* (controlled list, updated August 2017, see below.)
 - Support Purpose* (controlled list, updated August 2017, see below.)
 - Career Stage* (controlled list, updated August 2017, see below.)
 - Eligibility* (controlled list, updated August 2017, see below.)
- *Can be collected retroactively per program and mapped forward and backward to all support from that program (unless HRA member organization notifies ÜberResearch or HRA of a program change.)

Award Recipient Fields:

NOTE: Multiple researchers per award is supported. If you would like to provide multiple recipients for ANY award, please list ALL recipients & columns on a separate tab (or file) with a Project ID column to tie each row back to main project sheet.

- Recipient First Name
- Recipient Last Name
- Recipient Organization Name
- Recipient Organization Country (helpful for disambiguation)
- Recipient Organization City (helpful for disambiguation)
- Recipient Organization State (helpful for disambiguation)
- Recipient Organization Zip (helpful for disambiguation)
- Recipient Middle Name (if collected)
- Recipient Maiden Name (if collected)
- Recipient Gender (if collected)
- Recipient Professional Degrees
- Recipient Race/Ethnicity fields (if collected)
- Recipient ORCID (encouraged)
- Recipient Role: "Lead" or "Collaborating" (if choosing to provide ANY multiple recipients, for EACH investigator)

SUPPORT MECHANISM (new)	Definition or examples
Grant	Funds granted to a person or organization to pay for specific work. <i>Most HRA Analyzer (members only) entries will be grants.</i>
Endowment	Funds that are given to an organization to be invested to create a source of income for the organization.
Prize	Prize given to a person or organization to recognize achievements, including incentive prizes that are awarded after achieving a set of pre-specified goals.
Contract	A legally binding and enforceable agreement that protects the interests of each organization represented in the contract. In the terms of the contract each organization's specific obligations will be noted. The contract may be modified or canceled if either party does not meet the specific terms of the arrangement.
Cooperative Agreement	Similar to a grant with the distinction that it provides for substantial involvement between the funder and the recipient in carrying out the proposed activity.
Direct Research Support	Support for "intramural" research programs (including HHMI investigators).
Impact investment	Funds invested that aim to serve both a charitable purpose and achieve financial return.
Other	Place to fill in if none of the categories fit

Tables continue on next page...

SUPPORT RECIPIENT (new title and values but similar to Award Type in gHRAsp)	Definitions
Individual	Support for a project conducted by a single principal investigator (or co-PIs) or trainee. Note that the grant itself may be awarded to an institution on behalf of the principal investigator.
Team (within the same institution)	Support for a project conducted by a team of individuals. Note that the grant itself may be awarded to an institution on behalf of the investigative team.
Institution	Support made to an institution to support implementation of a research, educational, or training program.
Center	Support for multiple investigator-led projects and/or core activities within an institution
Consortium (more than one institution)	Agreements in which a grantee collaborates with one or more other organizations.
Industry	Research support to for-profit industry.
Other	Place to fill in if none of the categories fit.

Tables continue on next page...

SUPPORT PURPOSE (award purpose in gHRAsp)	Definitions (Acknowledging that training or career development support also aims to fund high caliber research)
Training	Support to prepare future investigators for careers in biomedical sciences. Training awards can be institutional training grants or individual fellowships. Trainees are typically still in school or in training positions immediately following receipt of an advanced degree. These positions include medical student and predoctoral fellowships, postdoctoral fellowships, residencies, and subspecialty fellowships.
Career Development	Support to develop the careers of researchers who have already earned their advanced degree (e.g., PhD or MD) and completed training (often but not always junior faculty.)
Research	Support for undertaking biomedical research (i.e. regardless of career stage or training environment).
Curriculum Development	Grants that support efforts to create, implement, evaluate, and disseminate new courses, curricula and educational approaches to train biomedical scientists and enhance advances in biomedical disciplines.
Acquisition or update of Equipment/Infrastructure /Resources	Grants or other research investments that provide for the acquisition or updating of research instrumentation, infrastructure, or other resources.
Other	Place to fill in if none of the categories fit.

Tables continue on next page...

CAREER STAGE (at time of commitment of research support)	Definition or examples
Not targeted	Support is not limited to a particular career stage
Predoctoral	Graduate student, medical student (possibly also high school or college)
Postdoctoral	<p>An individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his/her chosen career path.</p> <p>(From NIH: https://researchtraining.nih.gov/sites/default/files/pdf/Reed_Letter.pdf#)</p>
Junior Faculty	An individual who has just recently completed post-doctoral training (or equivalent) and is in the first stages of his/her permanent research career track.
Established Investigator	Someone who conducts independent research.
Other	Place to fill in if none of the categories fit.

Tables continue on next page...

ELIGIBILITY (degree requirements)	Examples (including of equivalent degrees)
Not applicable	
Candidate for Bachelor's degree or earlier	BS, BA
Candidate for Masters	MS, MSc, MA, MBA, etc
Candidate for PhD or equivalent	ScD, DPhil, EdD, etc
Candidate for MD or equivalent	DVM, DMSc, DO, FRACP, etc
Candidate for MD/PhD or equivalent dual clinical degree	DVM/PhD, MD;DrPH, etc
Candidate for any advanced degree	
PhD or equivalent	ScD, DPhil, EdD, etc
MD or equivalent	DVM, DMSc, DO, FRACP, etc
PhD or MD or equivalent	ScD, DPhil, EdD, DVM, DMSc, DO, FRACP, etc
MD/PhD or equivalent dual clinical degree	DVM/PhD, MD/DrPH, etc
Any research or health-professional advanced degree	
Other	PharmD, RN, JD, or if none of the categories fit

End of award type tables.

Altmetric

Altmetric badges are available free through April 2017 for HRA members, and via subscription thereafter. Altmetric provides information about attention from news, social media, policy docs, etc.

The Donut and Score Explained

The Altmetric donut visualization and score have been developed to help give an at-a-glance summary of the online attention an article has received. A higher score indicates a larger amount of attention, and the different colors of the donut represent the different sources in which the article has been mentioned.

How the Altmetric score is calculated

The Altmetric score is our quantitative measure of the attention that a scholarly article has received. It is derived from 3 main factors:

Volume	Sources	Authors
The score for an article rises as more people mention it. We only count 1 mention from each person per source, so if you tweet about the same paper more than once, Altmetric will ignore everything but the first.	Each category of mention contributes a different base amount to the final score. For example, a newspaper article contributes more than a blog post which contributes more than a tweet.	We look at how often the author of each mention talks about scholarly articles, at whether or not there's any bias towards a particular journal or publisher and at who the audience is. For example, a doctor sharing a link with other doctors counts for far more than a journal account pushing the same link out automatically.

The score has an important limitation: if the article was published before July 2011, we'll have missed any transient mentions of it, tweets in particular. As such, its score won't be accurate, and will represent a lower bound of the attention received.

From time to time you might notice that the score for your paper fluctuates, or goes down. This can happen when the original author of the mentions deletes their post when we remove posts which have been flagged as spam, or occasionally when we add new sources so need to re-weight our scoring algorithm.

The Colours of the Donut

- Policy documents
- Google+
- News
- LinkedIn
- Blogs
- Reddit
- Twitter
- Faculty1000
- Post-publication peer-reviews
- Q&A (stack overflow)
- Facebook
- Youtube
- Sina Weibo
- Pinterest



For Mendeley and Citeulike we show counts of readers but they do not contribute to the donut or score

Data from most sources is updated on an hourly, or at least daily, basis. We text mine news sources for mentions of the journal title and author names, and cross-reference this with an external database to determine which article the news story is about. For all other sources for us to be able to pick up the mention automatically there needs to be an HTML link to the article page (the one with a DOI or other unique identifier on) in the main body of the text.

HRA Analyzer (members only) Confidentiality Guidelines

Guidelines for HRA Member Organizations: Sharing *HRA Analyzer (members only)* Data Beyond the HRA Membership

The Health Research Alliance brings together not-for-profit, non-governmental funders of health research and training to foster open communication and collaboration among member organizations, to provide comprehensive data and analysis about the funding of biomedical research and training by HRA members, to identify gaps in funding and facilitate innovative grantmaking, and to address issues key to accelerating research discovery and its translation. Among the five core organizational values the HRA Board adopted in late 2010 is collaboration, defined as open communication; sharing of information, experience and knowledge; and working together as partners to achieve shared goals.

Sharing information and knowledge is central to the mission of the Alliance, and is certainly one of the key reasons organizations join HRA – to benefit from the sharing of information that occurs at Members' Meetings, in other HRA-organized meetings, on the HRA website, through the HRA listserv, and via other modes of communication. Although it is expected that participants from member organizations will naturally want to share general learnings from participating in HRA events and activities beyond the HRA membership, there are certain types of information that should not be shared outside HRA.

With respect to sharing HRA member data in the ***HRA Analyzer (members only)*** (formerly collected in the gHRAsp database) this includes but is not necessarily limited to the following:

- Login credentials used to access *HRA Analyzer (members only)* may not be shared outside your organization
- Data and reports obtained with the use of login credentials for *HRA Analyzer (members only)*: Member organizations may view/run/download data/reports made available to member organizations on the *HRA Analyzer (members only)* site. Members may use data and reports for their own internal purposes only. Members may publish data/reports only upon approval by the *HRA Analyzer (members only)* Oversight Committee, which will request permission from any other member organization whose data is specifically identified in the proposed publication.

Those employed by, consultant to, or who are volunteers of HRA member organizations are expected to follow these guidelines.

Member organizations are encouraged to contact HRA (maryrose@healthra.org or annette@healthra.org) with questions or concerns about sharing HRA information beyond the membership of the HRA.

The HRA Board of Directors originally reviewed and approved the confidentiality guidelines from which this wording was taken in December, 2011. In November 2016, the gHRAsp database was replaced by *HRA Analyzer (members only)* resulting in minor modifications to these guidelines. The Board may revise these guidelines from time to time, as necessary. The guidelines were distributed to the membership when adopted and will be distributed again whenever there are significant revisions. The guidelines are shared with all new member organizations at the time they are accepted for membership. The complete guidelines are referenced on the HRA website as well as the former gHRAsp site. Only the relevant portions of the guidelines are referenced in this *HRA Analyzer (members only)* User Guide.



Dimensions for Funders full User Guide

The Dimensions for Funders full User Guide is provided below. This guide is provided to provide more information about analysis and search tools available within HRA Analyzer (members only).

NOTE: Some items in *Dimension for Funders User Guide* may not apply to *HRA Analyzer (members only)*.



NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.



Dimensions

User Guide

Version 1.2 rev b



Dimension for Funders User Guide

Some items may not apply to HRA Reporter



NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Table of Contents

- Introduction..... 3**
 - Introduction to ÜberResearch.....3*
 - Introduction to Dimensions.....3*
 - Introduction to this guide.....4*
- Brief Overview: Features of Dimensions 5**
 - Summary of the solution.....5*
 - About the Data5*
 - Overview of each major section – Discover, Categorize, Analyze, Workflow5*
- Getting Started 7**
 - Logging In7*
 - Training & Support7*
 - Quick Start to Exploring7*
 - Quick Guide to the Data8*
- Basic Organization 9**
 - Major Sections.....9*
 - Filters.....10*
- Common Uses..... 11**
 - Common Starting Points.....11*
 - Explore funding on a specific topic11*
 - Viewing the data in different ways.....12*
 - Finding a person with expertise in a specific area13*
- About the data..... 15**
 - What data is included?.....15*
 - Sources and Updates.....15*
 - Enrichment16*
- About Categories 17**
 - What are categories?17*
 - Where do Categories come from?.....17*
 - Using Categories.....18*
 - Provided Categories.....18*
 - Create your own “My Category”, re-use for consistent definitions, and share it with others.20*
 - FAQs - Categories22*
- About Identifying & Matching Reviewers/Experts..... 23**
 - Workflow23*
 - Discover.....23*
 - Preparing for a review cycle24*
 - FAQs – Finding Experts.....25*
- Boolean Usage 26**
- FAQs 27**
- Beyond standard Dimensions: What else is available from ÜberResearch 28**





NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Introduction

In this Section:

- Introduction to ÜberResearch
- Introduction to *Dimensions*
- Introduction to this guide

Introduction to ÜberResearch

ÜberResearch is an information solutions company focused on helping research funders, publishers, and institutions. The ÜberResearch team has worked for over 15 years producing solutions that apply analytical technology like Natural Language Processing (“NLP”) to academic and scientific content. These solutions include manuscript submission handling and reviewer identification for the world’s largest publishers, portfolio analysis and categorization for the world’s largest research funders, and expertise systems for the top global research institutions.

For more information, please visit www.UberResearch.com

Introduction to Dimensions

Dimensions is the first ever web-based database of global research funding, and a research tool designed to support research and science organizations. It includes a shared grants database of global awards representing hundreds of billions of dollars in funding and millions of researcher expertise profiles and associated publication data. As well as a stand-alone tool, *Dimensions* and its underlying components (e.g. data and data enrichment) are the basis for a suite of custom services that ÜberResearch provides to our partners and clients. Additional features and customizations are available within *Dimensions*, or as on a separate service basis as a standalone or plugin tool.

For funders, *Dimensions* serves the merit review and peer review processes, as well as reporting, planning, and portfolio management.

Some of *Dimensions* uses include:

- Exploring global research funding
- Identifying and matching reviewers, building committees/panels, screening for conflicts of interest
- Finding gaps and overlaps in funding
- Categorizing your awarded grants, and compare vs. others

Dimensions is a cloud-based solution from ÜberResearch, and our team works closely with clients to support their environments, their workflows, and their end-user solutions with our data and services.

The design and functions of *Dimensions* have been driven by considerable input and feedback from the research community, and we hope to continue to develop it in this way. We are





NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

continuously improving *Dimensions*, adding data and features, and if you have suggestions and comments we would love to hear from you.

Introduction to this guide

The intent of this guide is to get you started and share common questions and uses.

This guide does not include every feature and use, but is designed to support many of the common uses. For specific situations, please contact us. We are here to help.

This user guide is organized by three themes:

- Quick start
- Common uses
- In-depth on use and features

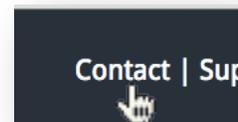
Additional information

Access the Support section of *Dimensions* located in the upper right corner of every page, also from this link: [Dimensions FAQ](#).

Contact us

Please contact us for support, training, and additional information:

1. Use the “Contact” link in the top right of every *Dimensions* page
2. Contact your ÜberResearch contact by email or phone
3. Email info@UberResearch.com





NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Brief Overview: Features of Dimensions

In This Section:

- Summary of the solution
- About the Data
- Overview of each major section
- Support

An overview of major features of *Dimensions*.

Summary of the solution

Dimensions allows users to explore the scientific research landscape by specific topics that can be defined by a search query or a category. Additionally *Dimensions* supports finding experts and checking abstracts for scientific similarity against global data.

About the Data

The same major data sources are available throughout *Dimensions* – Projects (awarded grants) and Publications. And your new proposals can be added under Workflow. Other data is available with configurations and customizations. Please contact us for more information.

We use the term “Projects” as a generic label for research funding from funders to provide a database of global funding. Publications are currently PubMed MEDLINE. The projects and publications data are always growing with new sources added on a regular basis, and existing funder sources updated regularly.

- An up-to-date list of data sources is provided in *Dimensions* – click ‘About the Data’ in the footer of any *Dimensions* page.
- For more information about sources and enrichment see the chapter in the user guide “About the Data.”

Overview of each major section – Discover, Categorize, Analyze, Workflow

The following are the major tabs used to navigate *Dimensions*.

Discover

Search and filters

- Example ways to search:
 - Keyword – keywords with Boolean operators
 - Abstract – paste in an abstract or similar piece of text as the search criteria.
 - Filters – use filters to limit results to selected criteria.
- Document types - toggle between Projects (also known as awards or grants) as the primary document source and Publications (PubMed MEDLINE).
- Searches can be added to My Categories or saved as Favorites.
- Export - Search results can be exported as a .CSV file from the Projects tab. A limit is placed on the amount of records.
 - Default filter is Last 10 Years of data.





NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Results

Results can be viewed as a variety of entities, presented in different tabs:

- **Projects:** this presents the funded projects relevant to the user's query. The area above the result list shows the number of relevant projects, total funding amount, and mean average funding amount.
- **Funders:** list of the funders of the Projects.
- **Researchers:** list of investigators, and co-investigators when available.
- **Organizations:** list of the research organizations of the investigators from the Projects.
- **Places:** list of the countries, states and cities of the organizations of the Projects.
- **Categories:** lists the topics of the Projects (where a Project meets a minimum threshold of a category definition) using a growing number of pre-loaded classification schemes modeled by ÜberResearch, and user-created categories, or My Categories.

The user can toggle between document result lists and timeline visualizations (charts or tables) in each tab.

When selecting the radio button for Publications, the Publications results follow a similar approach.

Categorize

Dimensions provides pre-loaded categories modeled by ÜberResearch, and tools to create My Categories, which can represent any topic. Classification schemes like RCDC, HRCS and FOR allow the user to pick relevant categories for a query. In addition, My Categories can be created and refined with the category creation tool.

Analyze

- **Heat Map:** funding amounts can be viewed as a color-coded matrix, with rows and columns that can be: funders, research organizations, researchers, or categories. Filters and a search query can be applied.
- **Trend Viewer:** allows exploring and comparing trends in projects and publications.
- **Geo Map:** allows exploring by selected geographies.

Workflow

Documents intended for peer review can be added manually by the user or via a bulk import by ÜberResearch. The user can identify relevant experts and check for similar projects and publications. Additional features are available to enhance features, settings, and/or integrate with grants management systems.

Support

Support features include:

- **FAQ Knowledgebase** – search existing questions and answers.
- **Support requests** – send a support request to the ÜberResearch team.
- **Training** – contact your ÜberResearch representative or submit a request.



NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Getting Started

In this Section:

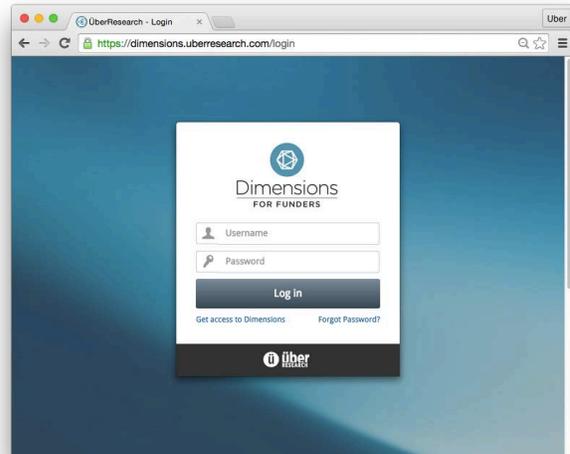
- Logging In
- Training & Support
- Quick Start to Exploring
- Quick Guide to the Data

Logging In

Users are generally provided login credentials directly from ÜberResearch, the username will be your email address. A link to the login page will be provided with the login credentials.

URL: Dimensions.UberResearch.com

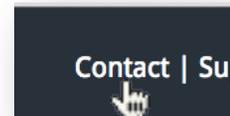
Forgotten password / change password feature is provided from the login page.



Training & Support

ÜberResearch provides all users with introductory training sessions, typically in groups via web conferencing. Follow-on group and individual trainings are provided as necessary, especially just prior to expected heavy usage; for example, just before a funding review cycle. Support is also available to users on an individual question basis.

To ask a question: Click “Contact” in the upper right corner of *Dimensions*, or contact your ÜberResearch representative.



Quick Start to Exploring

Basic exploration with keywords is easy within Discover - the initial screen that appears after login. First, choose the data that you want to explore from the top of the filters on the left side of the screen; Projects (grants) or Publications are available. You may also choose to view either the last 10 years (default), or all data.

Note: Throughout Dimensions, searches usually default to ‘active in at least one of the last 10 years,’ the user may select ‘all results’ in the upper left corner.

You may enter a Boolean keyword search in the search bar and see your results listed by different groupings -- results by Funder, or results by Organization, etc. Each of the groupings can be viewed as a list, and each item within the list can be further explored, or added as a filter to see which records are resulting within that item. Each grouping may also be viewed graphically by clicking the “Visualization” button within the grouping.



NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Project title	Funder, Principal Investigator	Funding Amount
IMPROVING SUSTAINABILITY OF FOOD PROCESSING	National Institute of Food and Agriculture to D. R. HELDMAN	2013 - 2018
Newton Fund-Integrating water cooled concentrated photovoltaics with waste heat reuse	EP SRC to Stavroula Balabani, Manish K. Tiwari	GBP 50,371 2015 - 2015
ECONOMIC AND POLICY IMPLICATIONS OF WATER CONSERVATION AND RENEWABLE ENERGY ISSUES	National Institute of Food and Agriculture to RO. LACEWELL	2012 - 2017
FEW: Workshop: Developing Intelligent Food, Energy, and Water Systems (DIFEWS)	National Science Foundation - Directorate for Engineering to Matthew Potts, Meredith Fowlie, Duncan Callaway, David Sedlak, Isha Ray	USD 49,863 2015 - 2016

You can then layer on filters from the left menu to further limit the search parameters.

More detailed explorations and options are provided in the *Dimensions* User Manual, section “How *Dimensions* is Organized.”

Quick Guide to the Data

Projects (awarded grants) and Publications are the two standard data sources. Other data are available with configurations and customizations. Most features can be used with each set of data. You can choose which data set is being used at the top of the filters menu on the left side of the screen. You may also choose to view either the last 10 years (default), or all data.

Note: Filters and results are on the documents (Projects & Publications), which may contain more than one attribute, in the case of co-authors and the like. For example, when adding a filter of Country to publications, results will likely contain other countries in the case of co-authors from different countries.

We use the term “Projects” as a generic label for research funding from funders to provide a database of global funding. Publications are currently PubMed MEDLINE. The projects and publications data are always growing. New sources are added on a regular basis, and existing funder sources are updated regularly.

- An up-to-date list of data sources is provided in *Dimensions* – click ‘About the Data’ in the footer of any *Dimensions* page.
- For more information about sources and enrichment see the chapter in the user guide “About the Data.”





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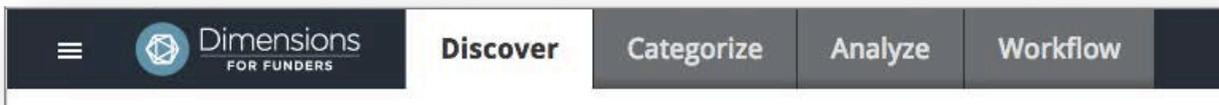
Basic Organization

In this section:

Major Sections - Discover, Categorize, Analyze, Workflow
Filters

Major Sections

There are 4 main sections of *Dimensions*, shown as tabs across the top of any page. They are Discover, Categorize, Analyze, and Workflow. The first 3, Discover, Categorize, and Analyze are different ways to view, sort, search, and browse the Projects & Publications. Workflow is a section dedicated to finding reviewers and contains millions of expertise profiles.



- **Discover:** Search and filter Projects or Publications. Results can be viewed as a variety of entities, presented in different tabs. The user can toggle between document result lists and timeline visualizations (charts or tables) in each tab.
- **Categorize:** Browse and learn about pre-loaded categories modeled by ÜberResearch, and tools to create and refine My Categories, which can represent any topic.
- **Analyze:** Unique visualizations with customizable settings where filters and search queries can be applied. Additional features are available for more complex visualizations or to provide direct outputs into other systems if this is desired.
- **Workflow:** Documents intended for peer review can be added manually by the user or via a bulk import. The user can identify relevant experts and check for similar projects and publications. Additional features are available to enhance features, settings, and/or integrate with grants management systems.

There are several common elements available throughout *Dimensions*:



- Choose your data source with radio buttons: Projects (grants) or Publications.
- Filters side navigation bar allows for you to narrow results by different facets.
- See data by active in the last 10 years (default) or “All Results”.

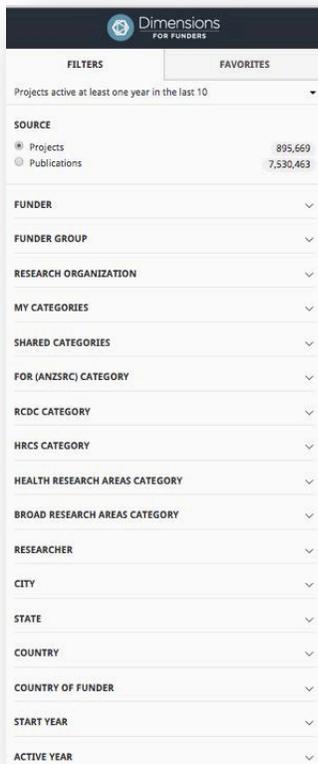




NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Filters

The filter bar appears throughout *Dimensions* on the left side of the screen - as a way to search and filter information. Users can filter by Funder, Research Organization, and Active Year to name a few. Filters can be selected individually as a way to search, or layered in combination to narrow the results.



For example, “Johns Hopkins University” from the Research Organization filter can be combined together with the “NCI” filter from the Funder section to give only those results which apply to both categories.

Categories are also provided in the filters bar. For more information, please see the *Dimensions* User Guide section “About Categories”

Note: Filters and results are on the documents (Projects, Publications), which may contain more than one attribute, in the case of co-authors and the like. For example, when adding a filter of Country to publications, results will likely contain other countries in the case of co-authors from different countries.





NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

Common Uses

In this Section:

- Common Starting Points
- Explore funding on a specific topic
- Viewing the data in different ways
 - By Funder
 - By Organization
 - Over Time
- Finding a person with expertise in a specific area

Common Starting Points

Common starting points for using *Dimensions* include:

- Keyword search
 - What have we and others funded in X?
- Abstract search
 - What funding and projects and people are similar to this abstract?
- Use existing Categories
- Summary views
- Trends over time
- Find a person meeting your criteria - reviewer / expert / collaborator

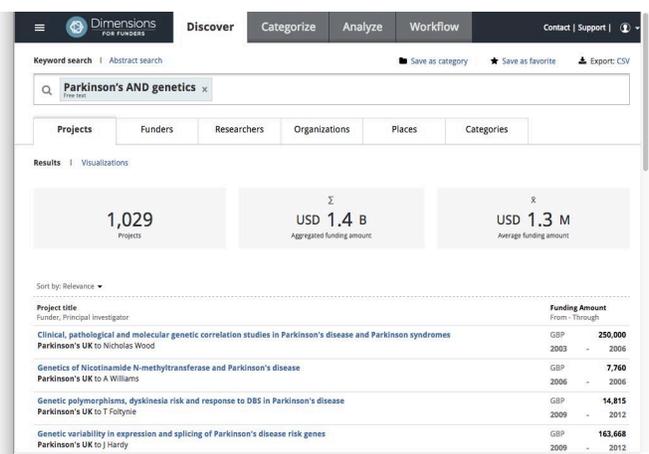
The following are descriptions of just a few ways in which you can use *Dimensions*. As well as being an instructive guide, they may also be useful with getting to know the software.

Explore funding on a specific topic

To explore funding for a specific research topic, first ensure on the left sidebar under **SOURCE** that 'Projects' is selected. Above this, also choose whether you wish to search through 'All results', or just those in the last 10 years (the default setting).

In the search box in the main window, under the 'Discover' tab, type the topic of interest and then press enter. (Ensure that you are searching using the **Keyword search** and not Abstract search.)

Boolean terms are usable in this search (see the 'Boolean Usage' section below). For example if we were interested in the genetics of Parkinson's Disease, we would search for 'Parkinson's AND genetics'. The results are then displayed below with the total number of projects, and statistics on the amount of funding this represents.





NOTE: Some items in Dimension for Funders User Guide may not apply to HRA Reporter.

The results can then be exported for use outside of the software. To do this, click the link that says ‘Export: CSV’ in the top right corner, to download a .CSV file of the results.

Depending upon the search terms, the number of projects found could be very large, and from here it is useful to view the data in different ways.

Viewing the data in different ways

Viewing by Funder

Viewing results by funder is a good way to easily identify the main funders of a certain research topic.

With the initial list of results, select the ‘Funders’ Tab. This then displays the results grouped by the Institutions funding the projects, giving the number of projects and the total funding amount this represents on the right side.

Passing the mouse down the list of funders, an ‘add as filter’ button appears in the row of the selected funder. Clicking this button adds that Funder as another filter in the search. So, in the example of ‘Parkinson’s AND genetics’ adding NINDS (National Institute of Neurological Disorders and Stroke) as a filter will return you to a list of results of only those projects which were both in the original ‘Parkinson’s AND genetics’ search and that are funded by NINDS.

The same can be done by selecting NINDS from the ‘Funder’ option on the left side panel – it has the same effect as clicking the ‘add as filter’ button.

Viewing by Organization

The same principle can be applied to viewing the results of a search by Organization as with viewing by a Funder. Selecting the ‘Organizations’ Tab near the top of the page organizes results by Organization, starting with those with the largest amount of aggregated funding (this is the default setting – to change to listing by the number of projects, click the ‘Sort by’ at the top of the results list on the left).

Again, to add an Organization as a filter in the search and only return projects at that Organization, you can either select the Organization in the ‘Research Organization’ tab on the left, or click ‘Add as filter’ in the Organizations Tab results list.





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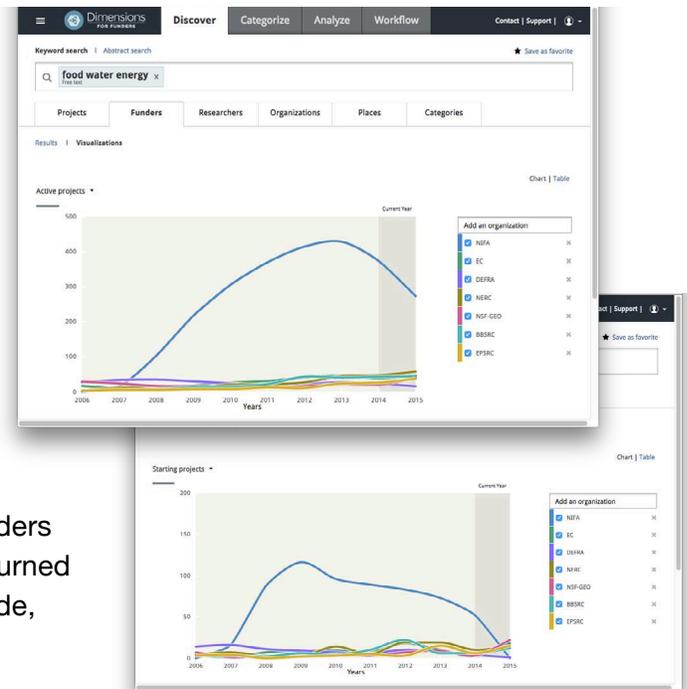
Viewing data over time

Viewing results from a search in relation to the time at which the funding was awarded is also possible in *Dimensions*. With the results list from a search, click the ‘Visualizations’ link at the top left of the Projects tab.

This displays a graph of both the number of active projects in any given year, and the number of projects starting in each year. For example, a project that is listed as 2012-2015 will be present in active projects in 2012, 2013, 2014 and 2015, but will only be present in 2012 results for the starting projects.

This can be very useful when comparing other aspects such as funders or organizations. For example, to compare funded projects from several funders over time, in the ‘Funders’ tab click the empty box to the left of each funder you wish to compare (up to a maximum of seven). Then click the grey graph button at the top of that column to display the comparison over time.

It is important to note that this visualization does not affect the overall search, but only displays projects which are relevant to the Funders selected. The original search results can be returned to by clicking the ‘Results’ link at the top left side, and different Funders can then be selected if required.



Data can also be filtered by year. Again, this can be done either by start year or active year (see above). For example, to display only those projects active in 2015, go to the ‘Active Year’ section at the bottom of the left side menu bar. By clicking on this, the options are given for a year to select. If the year required is not displayed, click ‘more’ at the bottom.

The same process can be used for searching for only projects starting in a selected year by using the ‘Start year’ section.

Finding a person with expertise in a specific area

One of the advantages of *Dimensions* is that all of the different filters, such as Funder, Organization and year, can be used in combination to quickly and easily identify researchers who fit a certain set of criteria.

For example, to identify an expert on the genetics of Parkinson’s disease in the United Kingdom who has current funding in this area, first a search for ‘Parkinson’s AND genetics’ will





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return a basic list, which can then have the filter 'United Kingdom' added in the 'Places' tab (in the same way as Funder or Organization was used above), and the year 2015 added as a filter in the 'Active Year' section.

With these results, selecting the 'Researchers' Tab will then return a list of matching researchers in this field, only in the United Kingdom and with funding in 2015 on this topic, and these results can be sorted by funding amount or by number of projects, as before.

Clicking on one of these researchers then leads to a page displaying their overall number of projects in the database, the details of the projects which match the search, and research categories applying to the research carried out by this person.





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About the data

In this Section:

- What data is included?
- Sources and updates
- Enrichment
 - Topics aka Categories
 - Disambiguation
- What data can and will be added

What data is included?

There is lots of data in standard *Dimensions*, more is always being added, and more can be added by request. This section describes the data in standard *Dimensions*.

Projects and Publications are the two standard data sources. The projects and publications data are always growing. New sources are added on a regular basis, and existing funder sources are updated.

An up-to-date list of data sources is provided in *Dimensions* – click ‘About the Data’ in the footer of any *Dimensions* page.

Sources and Updates

The same major data sources are available throughout *Dimensions* – Projects (awarded grants) and Publications (currently PubMed MEDLINE). And your new proposals can be added under Workflow.

Data is provided directly by the funder or from public sources. Funding data most often comes directly from funders, and often are connected to the systems as our funder partners.

We target at least five years of data for each funder - for some there is over 20 years of data. Monthly to quarterly updates are targeted, which is in line with the types of uses *Dimensions* serves. For some smaller funders, data is only added after award periods.

Publication data is always growing, towards all disciplines.

New grant data sources are added regularly.

“Projects” - a database of global funding

We use the term “Projects” as a generic label for research funding from funders. We target the complete funding portfolio for every funder in the system, which will include funding of all types - from travel grants to major center funding.





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Enrichment

Summary of enrichment - cleansing, disambiguation, topics, more

Dimensions includes data from many sources which are converted to a common data model, cleaned, and then enriched so it is ready for use.

The enrichment steps include disambiguation of people (“Researchers”) and Organizations, and categorizing the data into topics (“Categories”).

Categories aka Topics

Existing categories - provided by ÜberResearch and your My Categories - are applied to the data and accessible as filters and search parameters.

For more, see the Categories section below.

Disambiguation - Researcher and Organization

Disambiguation of people and organization is a prerequisite to many questions. For example, it is necessary to identify reviewers (to generate expertise profiles for matching to proposals), to generate conflicts of interest (disambiguation is a prerequisite for co-author networks which lead to co-author conflicts), and to look at outputs by investigator.

Organization disambiguation is provided across all data sources using an Institutional Database of Canonical organization names, where new names are mapped manually into the system.

What data can and will be added

Internal data can be added, as an additional feature, privately available within *Dimensions*, and is both searchable and categorizable. Your historical unfunded proposals can be added, as well as progress reports, and other data.

More data is always being added. *Dimensions* is a platform for all research inputs and outputs, from proposals to awards, reports to publications and patents.





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About Categories

In this Section

- What are Categories
- Where do they come from?
- Using Categories
- Provided Categories
- My Categories
- How to create a Category

What are categories?

A Category in *Dimensions* represents a topic and is similar to a saved search. A Category can represent any topic, and be as broad as “cancer” or “engineering” or “basic research”, to populations (indigenous people, teens), to new yet-to-be defined topics like “implementation research”, and difficult to define topics (advanced manufacturing). Categories can represent existing programs, topics for annual reporting, ideas for new programs, areas of new investment, and more. For example: What did we fund in X? Who is researching X today?

Categorization, classification, topic modeling, clustering, ontologies, thesauri, coding - all are about looking at the data by topic to support almost all uses. The system provides for all approaches throughout the tool because data by topic applies to most uses. The ability to search, filter, group/cluster by topic is pervasive throughout the *Dimensions*. Categories are available with both pre-loaded categorization systems (e.g. ANZSRC FOR, HRCS, RCDC), and user-created categories with the category building tool.

Groups of previously defined and commonly used categories make up classification systems such as FOR or RCDC or HRCS classifications (see below).

Where do Categories come from?

Categories are pre-loaded in *Dimensions*, we are always adding new ones, and you can create your own (and we will help you create them).

Many of the classification systems (sets of categories) are internationally recognized systems which we have integrated into *Dimensions*. These include the FOR, RCDC and HRCS classifications (see below), and more are being added constantly.

We provide all methods to create categories. Ranging from keyword-based semantic approaches to machine learning and more. We often hear categories, coding, classification, ontologies, thesaurus/thesauri used interchangeably.

Behind a category is some definition which can be very complex, or very simple. The ÜberResearch team has over 10 years of experience in modeling classification systems for the largest funders and uses all methods to create categories; machine learning, topic modeling, clustering, and semantic to name a few.





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Using Categories

Categories appear throughout *Dimensions* - as ways to search and filter information.

All data records in *Dimensions* are labeled with all classification systems simultaneously, and this means that different categories can be selected at the same time in order to give combined filters on information. For example, the “Economics” category from the FOR classification system can be combined together with the “Mental Health” category from the RCDC system to give only those results which apply to both categories.

As Filters

In many views within the *Dimensions* system, there is a filter section on the left hand side of the page. Categories are one of the many filters that the user can apply to the listed data search results. For example, you can see all Projects that fall into the RCDC definition of cardiovascular research by simply clicking the “Cardiovascular” filter within the RCDC category menu.

Additionally, the filters can be applied together in order to provide a more detailed view of the Projects or Publications. Using the cardiovascular filter above, we can add a funder, “CIHR,” and an institution, “University of Toronto.” This will allow us to see all cardiovascular projects being funded by CIHR at The University of Toronto.

As Classification

A user may also view a categorized summary of the current search results. For example, we can see a summary view of projects by RCDC Category funded by NSERC – click the “NSERC” filter on the left filter bar and then click the “Categories” tab within the search results, then specify RCDC. The resulting view will be NSERC funded projects summarized by RCDC Category.

Things to keep in mind

In many cases there is not one right answer for whether a certain title and abstract should belong or not belong to a certain category. The ÜberResearch modeled categories are a good match to the sample set provided but may not be exactly matched to another organization’s coding.

Data without abstracts will not work as well; particularly where a machine learning approach was used.

Provided Categories

In some cases categories are created with keyword searches. In other cases, such as widely used classification systems, ÜberResearch uses a machine learning approach to derive categories from a large pre-coded data set. In these cases, ÜberResearch is provided large





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sets of titles and abstracts that are coded to the classification system to be modeled. Definitions are then created and tested against the sample set.

In addition to the stock definitions below, ÜberResearch provides additional services to create categories to model classification systems. Categories can be generated from any approach – ÜberResearch supports all methods, both within *Dimensions* and as a separate service. Some examples within *Dimensions* -- machine learning, thesaurus/taxonomy, manually created, keyword driven, and build your own categories.

ÜberResearch provides some stock categories within *Dimensions* that are derived from different classification systems within certain scientific communities; we continuously add categorization systems available to all subscribers at no extra cost. Presently, these stock categories are -

FOR - The Fields of Research (FOR) classification is a component of the Australian and New Zealand Standard Research Classification (ANZSRC) system and it allows all R&D activity to be categorized using a single system. The system is hierarchical, with major fields subdivided into minor fields. We have emulated the second level of the system only. The Fields of Research cover all areas of academic research at a high level, so it works well for non-granular investigations into funding by broad subject areas.

RCDC - The Research, Condition, and Disease Categorization System is a classification scheme used by the US National Institutes of Health (NIH) for the public reporting required by the US Congress. A RCDC Category can be a research area such as neuroscience, a disease such as diabetes, or a condition such as chronic pain. Despite being a purely biomedical system, not all areas of biomedicine are covered, and some medical projects may not fall into any of the RCDC categories.

HRCS - The Health Research Classification System is a classification system used by nearly all UK biomedical funders to classify their portfolio of health and biomedical projects. In addition to widespread use in the UK, HRCS is being considered for adoption in other European countries. As a high level system it provides a useful overview of major health topics, but is clearly not appropriate as an overall research classification.

BRA - Broad Research Areas category. We have implemented the Broad Research Areas developed by the Australian Bureau of Statistics (ABS) and published as part of the Australian and New Zealand Standard Research Classification (ANZSRC) 2008 edition.

HRA - Health Research Areas category. We often get requests to help distinguish between research on the basic to applied spectrum, and research that is about translating discoveries into patient care. And of increasing interest is to identify research that is of public and global health concern. Using machine learning of public data in combination with our experience building and modeling many categorization systems, we have modeled four categories related to biomedical and health research: "Health Research Areas". The four categories are a beginning - please make suggestions as we refine and expand.





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Create your own “My Category”, re-use for consistent definitions, and share it with others.

The “My Categories” allow users to create their own categories, using *Dimensions*’ category creation tool. My Category definitions are created by users with simple or advanced keyword searches using Boolean operators, boosted terms and minimum thresholds. ÜberResearch can help users create draft My Categories or work with users to help with learned best practices as required.

Sharing level:

- **Private (default)** - My Categories are only seen within the login they were created unless the user selects a different sharing level for that category.
- **Organization** - everyone in your organization with a login will be able to see and apply the category.
- **Public** – all users of *Dimensions* world wide will be able to see and apply the category.

Categories that have been shared to you will appear in “Shared Categories”. This can be particularly useful for users who want their colleagues to be able to use exactly the same definitions in reports or searches.

How to create a Category: Using the Dimensions Category building tool

Factors:

- No one right method to creating categories, no one definition for anything.
 - What is X? What is the definition of cancer? Well, it depends. What is the use? Who is the audience? What is the data? How much time do you have? Etc.
 - Depends on your organization, situation, and perspective.
- The Category building feature in *Dimensions* is only one way, and is intended for creating categories of any precision - ad hoc to very refined. Other methods for Category creation are available as an additional service from ÜberResearch.
- The guide below is specifically for using the *Dimensions* category building tool.

General approach:

- Bubbling up most relevant with lots of relevant “OR” keywords.
- Think about it – Where do you draw the lines of “in” or “out;” what perspective are you looking for?
- Is there opportunity for creating more than one category, or re-using another that exists?
 - Example: if the goal is ‘Community resiliency and health in rural populations’ - use RCDC Rural Health, and then only one new category - community resiliency.

ÜberResearch will provide guidance for creating more precise, robust categories – a web meeting with one of our categorization specialists is usually available to all clients and it is highly recommended.





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Quick ad hoc category from scratch, the mechanics:

- Start with one or more definite keywords.
- Use sources where someone has already thought of related concepts (Wikipedia).
- Use suggestions within similar projects and on the Concept Panel (to the right).
- Iterate.
- Set threshold.

Note: When saving a My Category, the system will need to finish processing (a few minutes) prior to being able to use the category.

ÜberResearch will provide guidance for creating more precise, robust categories or web meeting with one of our categorization specialists is usually available to all clients and it is highly recommended.

Using the Dimensions Category building tool

Tip: Filter on specific funders to change the concepts in the Concept Panel.

Defined By: Enter the Boolean keyword search to define your Category.

Threshold: Set a minimum to cut out long tail of results with low rank.

The Concept Panel suggests terms.

Add suggested terms or Boost terms to give them higher ranking points.

Concept	Set weighting	
	Not	Boost
General Surgery	<input type="radio"/>	<input type="radio"/>
implant	<input type="radio"/>	<input type="radio"/>
surgeon	<input type="radio"/>	<input type="radio"/>
biopsy	<input type="radio"/>	<input type="radio"/>
implantation	<input type="radio"/>	<input type="radio"/>
surgical procedure	<input type="radio"/>	<input type="radio"/>
surgical intervention	<input type="radio"/>	<input type="radio"/>
resection	<input type="radio"/>	<input type="radio"/>
liver parenchyma	<input type="radio"/>	<input type="radio"/>
endoscopic surgery	<input type="radio"/>	<input type="radio"/>
cholecystectomy	<input type="radio"/>	<input type="radio"/>
complication rate	<input type="radio"/>	<input type="radio"/>
Laparoscopy	<input type="radio"/>	<input type="radio"/>



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FAQs - Categories

1. Can I share categories?
 - a. Yes. Categories can be created for private use and shared with colleagues. It is possible to share categories across organizations as well.
2. Can previously coded data be used to create a new Category?
 - a. Yes. This is how the Fields of Research (FOR) Categories were implemented, using a machine learning approach with training sets.
3. Do you provide adaptive learning approach?
 - a. Yes.
4. Why are projects without abstracts not being coded by some classification systems?
 - a. The coding approach for FOR, BRA, and HRA use machine learning. The approach requires abstracts as input to compute codes.





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About Identifying & Matching Reviewers/Experts

In this Section:

- Where to start
- Suggestions for search approaches
- FAQs
- Preparing for a review cycle

Within Dimensions there are specialized features for finding experts. The main finding and matching reviewer features are in the Workflow section; but researchers can be searched for throughout Dimensions.

Workflow

Each row is a Grant Application/Proposal, which can be added manually by the user with the “Add Grant Application” button on the top right of the main Workflow page. ÜberResearch may be able to add Grant Applications/Proposals for you - please contact us.

Reviewer Identification

Reviewer Identification automatically extracts concepts from the text and suggests researchers based on the context of the Title and Abstract. Experts are identified based on their Publications (default) or Projects – you can toggle between them in the upper left corner. You may restrict search results by location and how recent the Publication or Project. Filters are available on the left to change the requirements of the search further.

The results panel shows useful additional information on which to make decisions, such as the publications/projects that were found to be related, as well as conflicts of interests based on co-publication (co-author conflicts) and working at the same institutions (organizational conflicts).

Overlap Check

Overlap check uses the abstract to search for related Projects and Publications. You can use these results to find researchers, determine if the research may be duplicative, and identify co-funding opportunities.

Discover

One of the advantages of Dimensions is that all of the different filters, such as Funder, Organization and Year, can be used in combination to quickly and easily identify researchers who fit a certain set of criteria.

For example, to identify an expert on the genetics of Parkinson’s disease in the United Kingdom who has current funding in this area, first a search for ‘Parkinson’s AND genetics’ will return a basic list, which can then have the filter ‘United Kingdom’ added in the ‘Places’ tab, and the year 2015 added as a filter in the ‘Active Year’ section.





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With these results, selecting the ‘Researchers’ Tab will then return a list of matching researchers in this field, only in the United Kingdom and with funding in 2015 on this topic, and these results can be sorted by funding amount or by number of projects.

Clicking on one of these researchers then leads to a page displaying information about the researcher’s activities.

Suggestions for search approaches

There are many different ways to identify reviewers and experts. Below are some ideas.

Typical Methods:

A typical starting point is to use the default results in Workflow using the actual title and abstract of the application/proposal. Each row in workflow represents an application/proposal. Click on “Reviewer Identification” and see the experts that are being matched based on the concepts extracted in the concept panel. Then edit to your requirements by adjusting parameters in the Filters and Concept Panel.

Alternative Methods:

- Start broad.
 - Workflow: Use a single concept by creating a new (fake) Grant Application/Proposal with the Title and Abstract as keyword/statements.
 - Discover: Explore a single concept by searching with a Category or keywords.
- Follow threads
 - Workflow: Use Reviewer Identification to find co-authors of returned reviewers.
 - Workflow: Use Overlap Check by starting with a known Project and view similar Projects.
 - Discover: Start with a known Publication, Person, Category/topic - and view Similar Projects or Publications.
- If starting before receiving LOIs or applications/proposals
 - Use LOIs ahead of applications/proposals.
 - Use previous LOIs/applications/proposals, or any publication or grants that are representative of expected LOIs/applications/proposals.

Preparing for a review cycle

Contact us in advance of your review cycle so that we can help with preparations. We recommend scheduling a refresher training session specific to finding reviewers.

We can also help determine the best way to add your Grant Applications/Proposals, as several options exist:

- Added manually by user (“Add Grant Application” button).
- Send to ÜberResearch and have them added for you (contact us to discuss options).
- Dimensions is integrated with your system and automatically appear (optional feature).

If you need help during the review, please feel free to contact us and we can help.





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FAQs – Finding Experts

1. How can I find people with specific roles, like methodologists or statisticians?
 - a. User a combination of Concepts and Filters.
 - b. Example: statistician who knows clinical trials. Add in “clinical trial” as a Concept, and filter on a big leading journal about statistics + biomedical, like “Statistics in Medicine”. Or use concepts like “clinical trial” + “biostatistics” without a journal filter (as this may be too limiting to the results).
2. How can I cluster proposals based on the topics?
 - a. Contact us early as possible to increase lead time. We may be able to help.
3. How can I increase the chance of acceptance by the reviewer?
 - a. Our customers have found that they increase the average range of acceptance, and in shorter time, because of the better matches of reviewers to applications/proposals.
 - b. Some funders will reference a reviewer’s publications and grants in the request citing evidence as to why it is a good fit.
 - c. Identify reviewers currently interested in the topic. The use of Data Source = Grants in Workflow will find reviewers who are actively researching the topic, and controlling for Published since X helps identify those reviewers who have published more recently.





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Boolean Usage

Boolean operators - OR, AND, NOT

OR

'green OR blue' will return any project with either 'green' or 'blue'.

AND

'green AND blue' will only return projects where both terms are found within a single project.

NOT

'green NOT blue' means all projects with 'green' in them will be returned unless they also have 'blue' as well.

Term modifiers - (), "", *

Parentheses

'green AND (blue OR purple)' will return any project that has both 'green' and 'blue' or 'green' and 'purple'.

Double Quotes

"green blue" will return an exact match only. An Asterisk (below) within Double Quotes will be ignored.

Asterisk

'green*' returns everything starting with 'green'. like 'greenery', 'greener', 'Greensmith' etc. An Asterisk within Double Quotes (see above) will be ignored.

Spelling

Both American and English spelling exist. If you are looking for 'ageing' remember to search for 'ageing OR aging'. Boolean operators need to be capitalized, for the rest capitals make no difference.

Threshold

The minimum threshold allows users to cut out the least relevant results of the Boolean search on a sliding scale.





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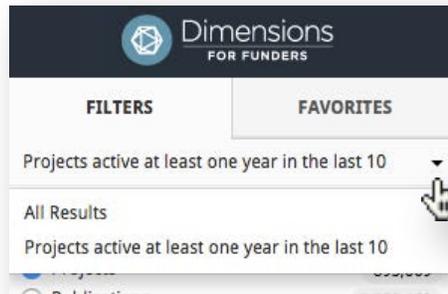
FAQs

FAQs are also available in the Support section, accessed from the upper right of every *Dimensions* page.



1. Can we include our internal data, like unfunded, historical proposals?
 - a. Yes, this is available as an additional feature. Contact UberResearch for more details.

2. The sum of funding amounts in a search is not what I expected?
 - a. You may be looking at only funding from the last 10 years, select “All Results” from the dropdown in the filters section (upper left corner of screen).



3. Where did the filter bar on the left go?
 - a. When the browser window is too narrow, the site adapts and collapses the filter bar into the menu bar at the top. You can either: 1) widen your browser window or 2) access the browser by clicking on the 3 lines at the top left.





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Beyond standard Dimensions: What else is available from ÜberResearch

ÜberResearch provides data, data services (e.g. enrichment), tools (*Dimensions*), and services.

Dimensions represents the combination of many of our capabilities at entry level from portfolio analysis to visualizations to reviewer finding - these capabilities are available also as components, stand-alone, with more advanced and customized features.

ÜberResearch is able to provide tailor-made solutions to problems according to your requests. Many of these may be related to *Dimensions* itself.

Examples of *Dimensions* configurations and customizations:

- Locally hosted, country-specific hosting, and more.
- Adding your internal data, e.g. historical unfunded applications/proposals.
- Adding more data, e.g. more publications, patents, or clinical trials.
- More references/linkages.
- More categorizations/classifications.
- Customizing and enhancing reviewer identification tools.
- Integrating Workflow with GMS.

Outside of *Dimensions* we are also able to help with problems such as data disambiguation and management, as well as developing new tools for specific needs such as public facing searchable databases for your data or modeling new classification systems. If you have a problem that you think we would be able to help with then please get in touch.

