

## Abstract

- Evaluators of scientific research programs have several tools to document and analyze products of scientific research, but few tools exist for exploring and capturing the impacts of such research.
- Understanding impacts is beneficial because it fosters a greater sense of accountability and stewardship for federal research dollars.
- HITS is a new approach to documenting research impacts that is in development at the National Institute of Environmental Health Sciences (NIEHS).
- HITS is designed to help identify scientific advances in the NIEHS research portfolio as they emerge, and provide a robust data structure to capture those advances.

## Coding Process

- Program Officers identify impacts in sign-off notes for annual "Type 5" progress report reviews, using keywords.
- Analysts search the Program Notes from within HITS to identify and code the keywords using defined codes for different types of products and impacts.
- Analysts can also search for and code impacts identified by grantees in their Progress Reports from within HITS.
- This process flow minimizes the reporting and coding burden on program staff and grantees.

## Outputs and Impacts Coded in HITS

- Animal models
- Awards
- Biological outputs (biomarkers, assays)
- Clinical impacts
- Collaborations
- Community partnerships
- Databases/software/statistical models
- Expertise sought by others
- Economic findings
- Improved environmental remediation
- Measurement instruments
- Methodology
- Patent
- Policy/regulation
- Public health intervention
- Scientific findings

## Tips for Program Officers

- Identify Key Findings in annual progress report reviews
- Email impacts of interest to the Program Analysis Branch as you identify them

## Tips for Grantees

- Communicate key impacts in progress reports or directly to program officers via email
- Describe specific outputs and impacts

## Ability to Search Specific Grant Data

## Easy Access to Information for Program Staff

▼ Sub-Projects

PROJECT NUMBER	SUBPROJECT ID	TITLE	TAGS
<a href="#">P01ES009600</a>	9003	CORE--Community Outreach, Translation, and Application	0
<a href="#">P01ES009600</a>	9004	CORE--Data Management, Statistics, and Modeling	0
<a href="#">P01ES009600</a>	9002	CORE--Exposure and Biomarker	0
<a href="#">P01ES009600</a>	4	Longitudinal Effects of Urban Pollutants on Child Neurobehavioral	0
<a href="#">P01ES009600</a>	5	Prenatal & Postnatal Urban Pollutants & Childhood Asthma	0
<a href="#">P01ES009600</a>	6	Reduction of Exposures & Risk from Pesticides, Allergens, & Other Health Related	0

▼ View Progress Reports

Progress Report 2013 : P01ES009600-15 | Progress Report 2012 : P01ES009600-14 | Progress Report 2011 : P01ES009600-13 | Progress Report 2010 : P01ES009600-12 | Progress Report 2008 : P01ES009600-10 | Progress Report 2007 : P01ES009600-09

## Automated Searching and Retrieval of Grantee Progress Reports and Program Officer Notes

The system enables us to search grantee progress reports, program officer notes and other previously unsearchable data from the central NIH grants database, and apply a robust coding schema to track research products and impacts.

### Document Search

Text to Find:

Search In:  Abstracts  Specific Aims  GM Notes  Progress Reports (from PI)  Progress Reports (from PO)

Exact Phrase  All the Words  Any of the Words

Buttons: Back to Search, Save Search, Batch Tag, Export Grants

Project Number	PI Name	Project Title	Institute	PR	FPR	PN	Sub	Tags
<a href="#">R01ES007171</a>	Brenda Eskenazi	In Utero Dioxin Exposure in ...	UNIVERSITY OF CALIFORNIA ...	5	0	8		5
<a href="#">R01ES008977</a>	Frederica Perera	Health Effects of Early-Life E...	COLUMBIA UNIVERSITY HEAL...	4	0	4		10
<a href="#">R01ES010178</a>	Kirk Smith	Chronic respiratory effects o...	UNIVERSITY OF CALIFORNIA ...	3	0	3		2
<a href="#">R01ES011170</a>	Grace Lemasters	Diesel, Allergens and Gene In...	UNIVERSITY OF CINCINNATI	2	0	3		3
<a href="#">R01ES012014</a>	Michèle Marue	Branched Chain Amino Acid	EMORY UNIVERSITY	5	0	5		4

▼ Program Notes

FY 2015: R01ES011170

**Signoff Notes**

Good progress on all three aims. Under Aim 1, IRB continuation approvals were obtained and all needed training of staff on human subjects protection was completed. Study recruitment, enrollment and data collection are proceeding well, with 115 participants seen since the last Progress report. Under Aim 2, GIS-based GRAPES methods have been expanded to greatly reduce missing exposure data and include more chemicals used throughout California. Finally, under Aim 3 analysis is proceeding on gxe interactions.

## Examples of Tags and Tag Details

▼ Grant Outputs or Impacts >> Measurement Instruments

Added	Updated	Project Number-Sub	Title	Description	What is measured	Description of dissemination plans	Check if appropriate for patent development
02/26/2014 by Collinson, Joel D.	02/26/2014 by Collinson, Joel D.	P01ES009600-5667	Project 1: Endocrine Disruptors & Obesity Among Inner-City Children	Personal air monitors to characterize PAH exposure	PAHs		No

▼ Grant Outputs or Impacts >> Scientific Findings

Added	Updated	Project Number-Sub	Title	Published	Publication Title	Publication PMID or PMCID	Title	Description
02/26/2014 by Collinson, Joel D.	02/26/2014 by Collinson, Joel D.	P01ES009600-5667	Project 1: Endocrine Disruptors & Obesity Among Inner-City Children				How Prenatal Exposure to Air Pollutants and Phthalates May Affect a Child's Body Size	Prenatal PAH exposure was associated with higher BMI at age 5 and 7. Factor analysis may provide a viable method for assessing health effects of complex mixtures. Childre...

## Using HITS for Program Analysis

- HITS uses in Program Analysis include:
- Tracking and informing reporting on strategic plan goals
  - Assessing our papers of the month system,
  - Identifying projects to highlight in Congressional Justifications
  - Tracking which projects are mentioned in reports by the Director
  - Identifying success stories to promote on the NIEHS website

## Looking Forward

- Planned enhancements to HITS include the ability to:
- Group and analyze coded projects by portfolios, including Strategic Plan goals
  - Import coded datasets from Excel files
  - Attach supplemental documents, such as press releases or other materials