



Portfolio Analysis in OPASI at NIH

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Office of Portfolio Analysis & Strategic Initiatives (OPASI)

Office of the Director

National Institutes of Health

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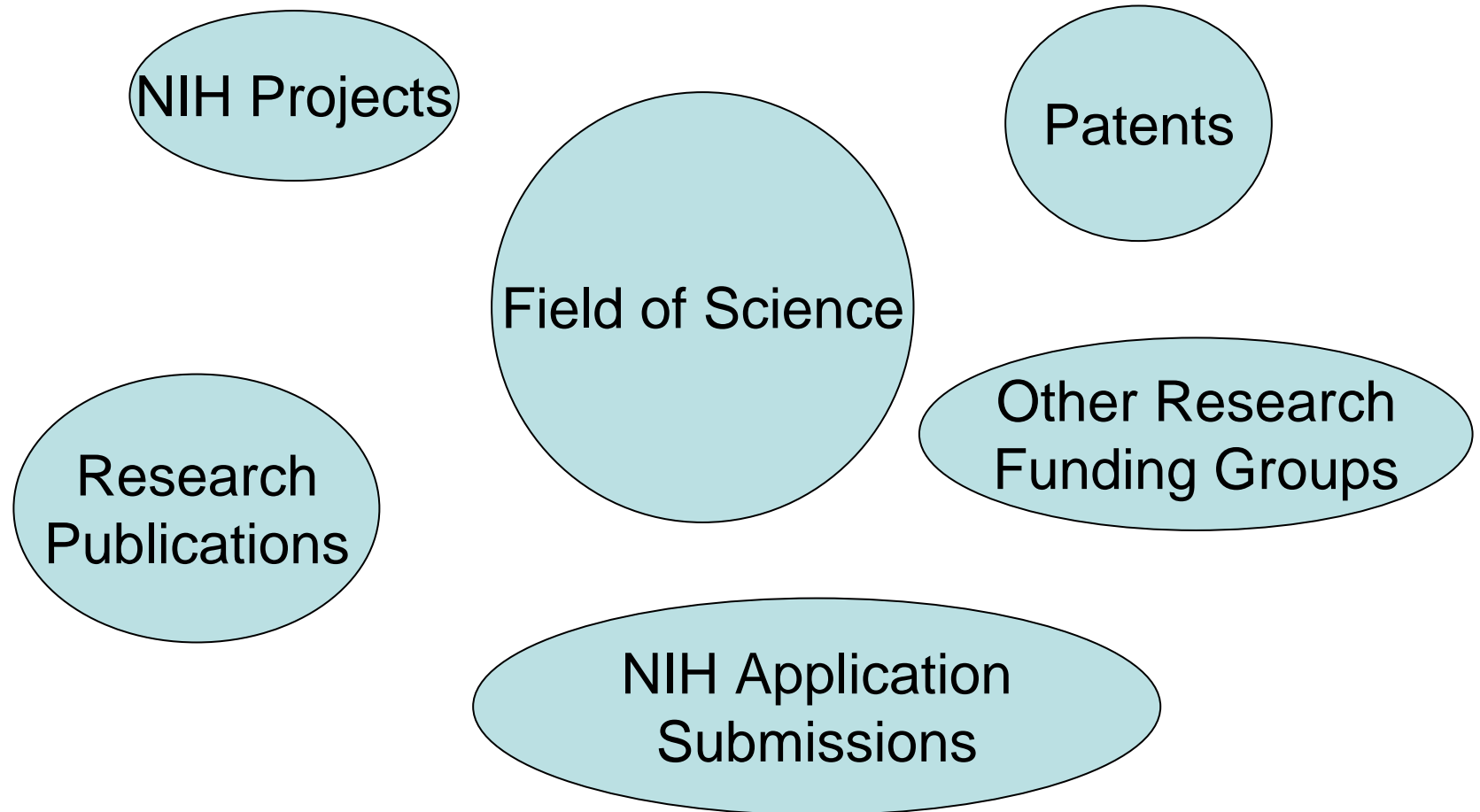


OPASI

- **Analyses of the NIH research portfolio (Intramural and Extramural) in all its dimensions**

- **Enhance the evaluation and management of the large and complex NIH scientific portfolio**
 - Facilitate trans-NIH scientific planning and priority-setting initiatives
 - Support the ICs in their own planning processes
 - Gap and overlap analyses of research (within and outside of NIH)
 - Identify opportunities to invest in new areas of research
 - Explore return on scientific investment

Connecting the “dots” to evaluate a field



Enhancing evaluation through portfolio analysis –

First: What is the question we are trying to answer?

Second: Choose the tool(s) and data set (s) best able to answer the question.

Questions:

- What is the state of the science?
- Are there gaps in our research portfolio?
 - How do the gaps compare to research carried out in other agencies?
- How much do we spend on mitochondrial research?
- What is the average number of scientific papers generated per \$100K spent per grant?

Enhancing evaluation through portfolio analysis –

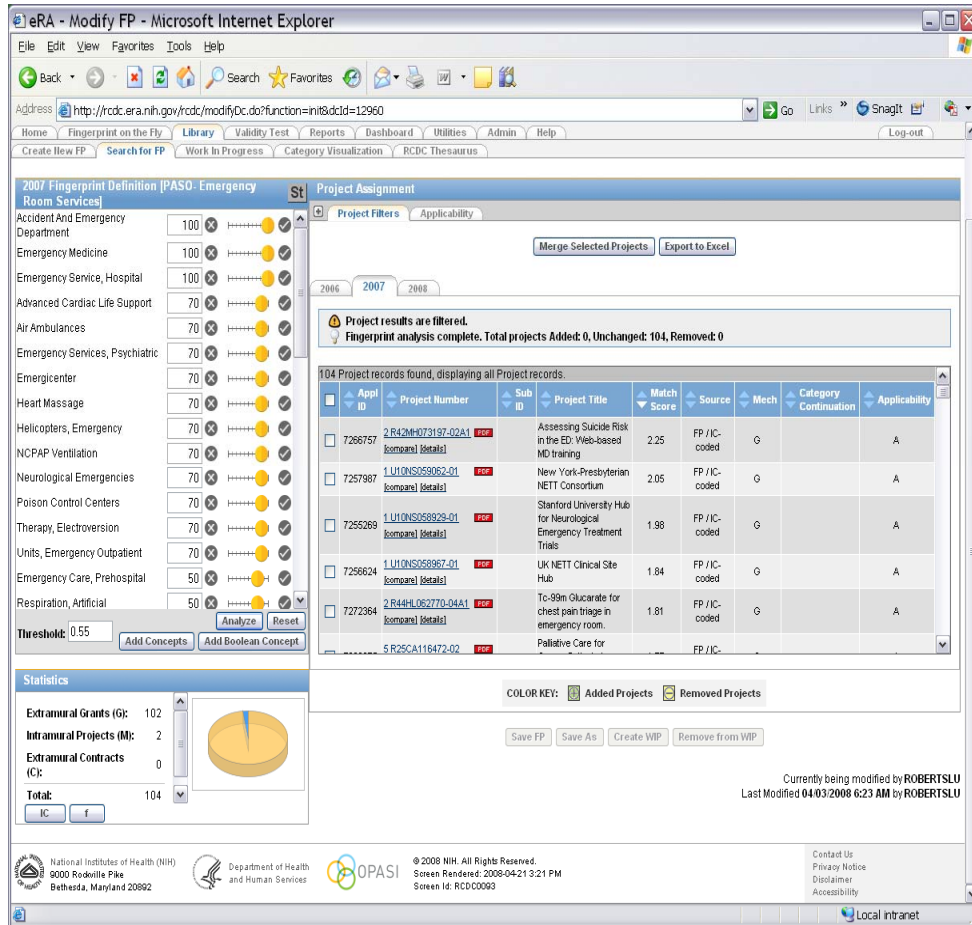
- **Exploring funded NIH projects**
 - Funding rates among ICs
 - Analysis of scientific content of projects

- **Understanding unfunded NIH grant submissions**
 - Are emerging theories or innovation left unfunded?

- **Evaluation of progress and/or future directions**
 - Return on investment
 - Identify most promising avenues for future investment

Tools for Identifying and Evaluating NIH Projects - examples

- **Research, Condition, and Disease Categorization (OD/NIH)**
 - Mining projects for scientific content
 - Extramural, intramural, contracts
- **e-SPA – Electronic Scientific Portfolio Assistant (NIAID/NIH)**
 - Linking projects and portfolios to research outcome indicators
- **QVR – Query, View and Report (CIT/NIH)**
- **Spirex (NIEHS/NIH)**
 - Publications listings associated with NIH funded projects and also RCDC categories



The screenshot shows the 'eRA - Modify FP' interface in Microsoft Internet Explorer. The browser address bar shows the URL: <http://rcdc.era.nih.gov/rcdc/modifyDc.do?function=init&dcId=12960>. The interface is divided into several sections:

- Room Services:** A list of services with checkboxes and progress indicators. Services include Accident And Emergency Department, Emergency Medicine, Emergency Service, Hospital, Advanced Cardiac Life Support, Air Ambulances, Emergency Services, Psychiatric, Emergicenter, Heart Massage, Helicopters, Emergency, NCPAP Ventilation, Neurological Emergencies, Poison Control Centers, Therapy, Electroversion, Units, Emergency Outpatient, Emergency Care, Prehospital, and Respiration, Artificial. A threshold of 0.55 is set.
- Project Assignment:** A section for filtering and analyzing projects. It shows 'Project results are filtered. Fingerprint analysis complete. Total projects Added: 0, Unchanged: 104, Removed: 0'. Below this is a table of 104 project records.
- Statistics:** A section showing a pie chart and counts for Extramural Grants (G): 102, Intramural Projects (M): 2, Extramural Contracts (C): 0, and a Total of 104.

The table of project records is as follows:

Appt ID	Project Number	Sub ID	Project Title	Match Score	Source	Mech	Category Continuation	Applicability
7266757	2.R4C2M073197-02A1		Assessing Suicide Risk in the ED: Web-based MD training	2.25	FP / IC-coded	G		A
7257987	1.U10NS093062-01		New York-Presbyterian NETT Consortium	2.05	FP / IC-coded	G		A
7255269	1.U10NS058929-01		Stanford University Hub for Neurological Emergency Treatment Trials	1.98	FP / IC-coded	G		A
7256624	1.U10NS058967-01		UK NETT Clinical Site Hub	1.84	FP / IC-coded	G		A
7272364	2.R44HL062770-04A1		Tc-99m Glucurate for chest pain triage in emergency room.	1.81	FP / IC-coded	G		A
5.R25CA118472-02			Palliative Care for		FP / IC-			

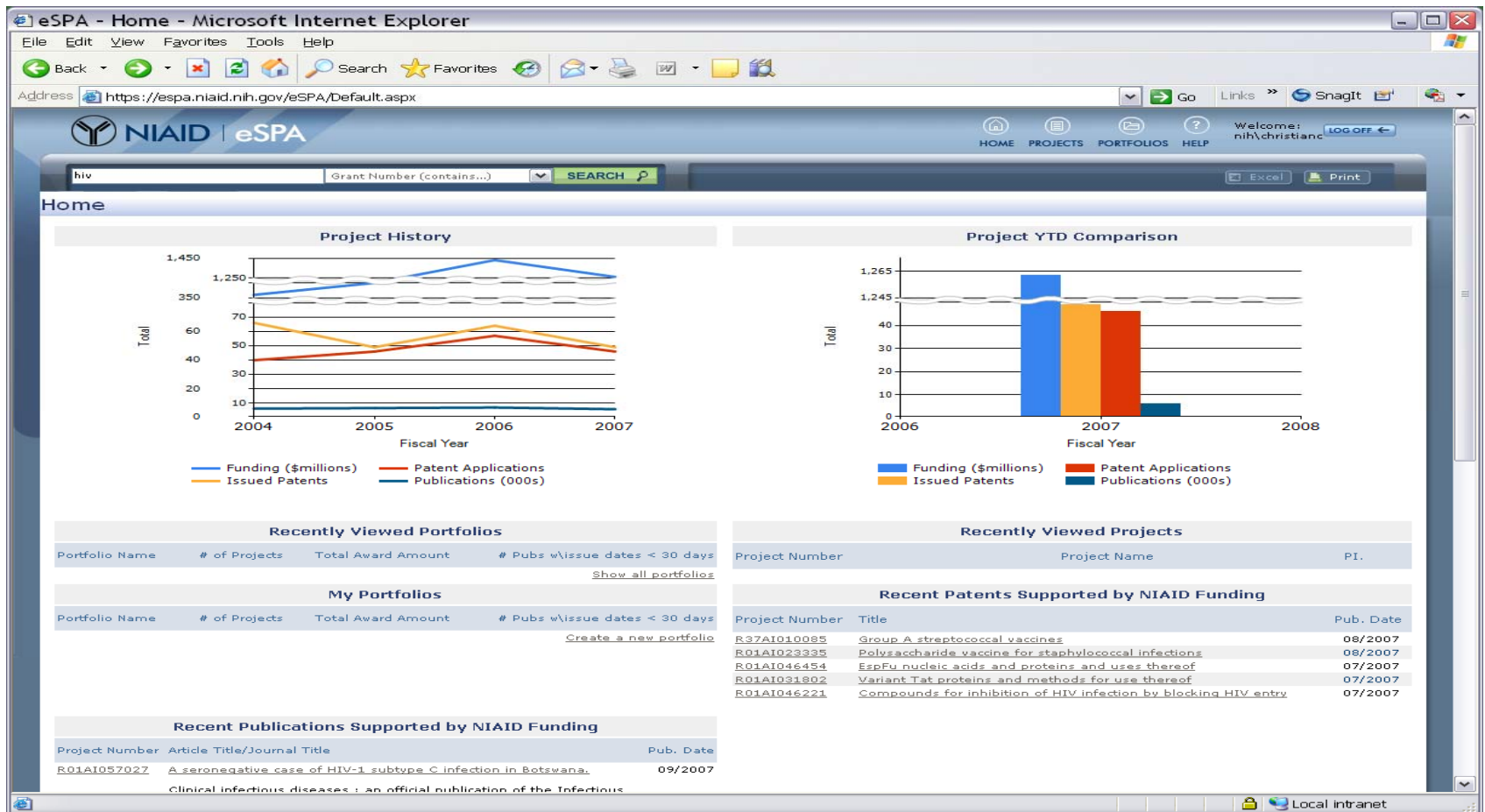
At the bottom of the interface, there is a footer with the following information:

- National Institutes of Health (NIH) 9000 Rockville Pike Bethesda, Maryland 20892
- Department of Health and Human Services
- OPASI
- © 2008 NIH. All Rights Reserved. Screen Rendered: 2008-04-21 3:21 PM Screen Id: RCDC0093
- Contact Us Privacy Notice Disclaimer Accessibility
- Local Intranet

RCDC – understanding NIH funded research projects using the scientific content

- Fingerprint – scientific concepts from the thesaurus
- Research Project Fingerprint (weighted list of concepts)
- Category Definition Fingerprint (weighted list of concepts)
- Matching process to see what projects match the categories

NIAID's Electronic Scientific Portfolio Assistant (e-SPA) – connecting the entire NIAID portfolio



QVR/SPIRES – links publications to NIH Grants database

QVR Info (Help, FAQ's, etc.) | Email QVR Support | QD Info | Last Refresh Thursday 2008/05/08 at 08:53 p.m.

RCDC Search Section

Disease Categories

Depression

and

Cancer

Include Coding by: RCDC IC

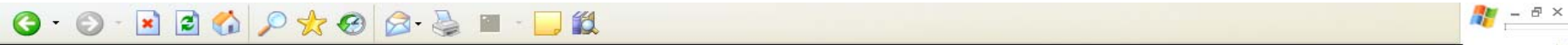
Special Selects Section

<u>Human Subject Concerns</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Animal Subject Concerns</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>Foreign Grants</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Phase 3 Clinical Trials</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>Gender Concerns</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Minority Concerns</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>AIDS</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Children Concerns</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No

Combine Special Select Criteria Satisfy All Criteria Satisfy Any Criteria

Study Codes Section

<u>Stem Cells Used</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Stem Cell Lines</u>	<input type="text" value=""/> WA01,UC01,NULL
<u>Human Subjects Used</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Human Subject Codes</u>	<input type="text" value=""/> 20,30
<u>Animal Subjects Used</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Animal Subject Codes</u>	<input type="text" value=""/> 20,30
<u>Foreign Involvement</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>Foreign Appl Codes</u>	<input type="text" value=""/> 1,2,NULL
<u>Gender Codes</u>	<input type="text" value=""/> 1A,3A	<u>Minority Codes</u>	<input type="text" value=""/> 1A,3A
<u>Child Study Codes</u>	<input type="text" value=""/>	<u>Training Exception Codes</u>	<input type="text" value=""/>



Fy's = 2007... Disease Categories Include Depression and Cancer (RCDC Coding) ...Sorted By Principal Investigator

OVR MAIN		1 1 - 78 of 78 Record(s)		Search	New Search	Help
Project	Links	PI Name	Project Title			
<input type="checkbox"/> 5-R01-CA112035-03	Snap Abs NGA CAS Hist Img Pub DCat	ANCOLISRAEL, SONIA	Contributions of sleep/rhythms/fatigue to "chemobrain"			
<input type="checkbox"/> 5-R21-CA113409-02	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	BADGER, TERRY A	Telephone Counseling: Men w/Prostate CA & Partners			
<input type="checkbox"/> 1-R01-CA120562-01A2	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	BOUDREAU, DENISE M	Commonly Used Medications and Breast Cancer Recurrence			
<input type="checkbox"/> 1-R01-CA128187-01A2	Snap Abs Rev SS NGA CAS Hist Img JIT Docs Pub DCat	BREITBART, WILLIAM	Meaning-Centered Group Psychotherapy in Advanced Cancer			
<input type="checkbox"/> 5-R01-MH044801-18	Snap Abs NGA CAS Hist Img Pub DCat	BROMET, EVELYN J	The Epidemiology of Newly Diagnosed Psychotic Disorders			
<input type="checkbox"/> 5-R01-MH051947-07	Snap Abs NGA CAS Hist Img Pub DCat	BROMET, EVELYN J	Long-Term Mental Health Consequences of Chernobyl			
<input type="checkbox"/> 1-R01-MH079420-01A1	Snap Abs Rev SS NGA CAS Hist Img JIT Docs Pub DCat	BURKE, WILLIAM J.	Prevention of Depression in Patients Being Treated for Head and Neck Cancer			
<input type="checkbox"/> 1-R01-CA122704-01A1	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	CAMPBELL, LISA C	Prostate Cancer Recovery Enhancement (PROCARE) for African American Men			
<input type="checkbox"/> 1-R01-MH079201-01	Snap Abs Rev SS NGA CAS Hist Img JIT Docs Pub DCat	CARON, MARC G.	Functional Variants of the Human TPH2 Gene			
<input type="checkbox"/> 5-T32-AT001161-04	Snap Abs NGA CAS Hist Img Pub DCat	CHARLSON, MARY E	Complementary and Integrative Medicine Training Program			
<input type="checkbox"/> 1-R01-CA120933-01A2	Snap Abs Rev SS NGA CAS Hist Img JIT Docs Pub DCat	CHERRIER, MONIQUE	Assessment of Cognitive & Mood Effects from ADT in Men with Prostate Cancer			
<input type="checkbox"/> 5-R01-CA105183-04	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	COLLINS, BRADLEY N	SHS Treatment for Postpartum African American Smokers			
<input type="checkbox"/> 1-K24-AG029812-01A1	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	COVINSKY, KENNETH E.	Midcareer Mentoring Award for Patient-Oriented Research in Aging			
<input type="checkbox"/> 5-R01-MH071349-04	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	DANTZER, ROBERT	Neuroimmunology of Behavioral and Mood Disorders			
<input type="checkbox"/> 5-R01-MH079829-02	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	DANTZER, ROBERT	AIDS, Immune Activation and Mental Health			
<input type="checkbox"/> 5-DP1-OD000616-03	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	DEISSEROTH, KARL ALEXANDER	NIH Director's Pioneer Award			
<input type="checkbox"/> 5-R01-CA106919-04	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	DEMARK-WAHNEFRIED, WENDY	RENEW Research-out to ENhance Wellness Older Survivors			
<input type="checkbox"/> 3-R01-CA105269-04S1	Snap NGA CAS Hist Docs Pub DCat	ELL, KATHLEEN R	Multifaceted Oncology Depression Program for Latinos			
<input type="checkbox"/> 5-R01-CA105269-04	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	ELL, KATHLEEN R	Multifaceted Oncology Depression Program for Latinos			
<input type="checkbox"/> 5-R03-TW007164-03	Snap Abs NGA CAS Hist Img Pub DCat	ENGSTROM, PAUL	Biobehavioral Model of Smoking By Russians with Cancer			
<input type="checkbox"/> 3-K07-CA093948-03S2	Snap NGA CAS Hist Docs Pub DCat	FARACE, ELANA	Neurocognitive prognosis in survivors of brain tumors			
<input type="checkbox"/> 1-T32-AT003997-01	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	FOLKMAN, SUSAN	Training Researchers in Clinical Integrative Medicine (TRIM)			
<input type="checkbox"/> 1-R01-DA023570-01	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	FRIEDMANN, PETER D.	Stabilize Addiction/Affect, Begin Inmates' Interferon for HCV of Liver (STAABIHL)			
<input type="checkbox"/> 5-K07-CA104119-03	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	FU, QIANG JOHN	The Genetics of Smoking; The Transtheoretical Model			
<input type="checkbox"/> 5-R01-CA109650-02	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	GANZ, PATRICIA A.	Cognitive Functioning After Breast Cancer Treatment			
<input type="checkbox"/> 2-T32-MH020065-06	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	GERSHON, ELLIOT S	Multidisciplinary Psychiatry Genetics Training Program			
<input type="checkbox"/> 3-R01-CA100243-03S1	Snap NGA CAS Hist Docs Pub DCat	GLASER, RONALD	Stress, the Immune System and Basal Cell Carcinoma			
<input type="checkbox"/> 5-R01-CA100243-03	Snap Abs NGA CAS Hist eIMG Docs Pub DCat	GLASER, RONALD	Stress, the Immune System and Basal Cell Carcinoma			
<input type="checkbox"/> 1-T32-DC008768-01	Snap Abs Rev SS NGA CAS Hist Img Pub DCat	GONZALEZ-ROTHI, LESLIE J	Training in Treatment of Communication Disorders and Translational Neuroscience			
<input type="checkbox"/> 1-R03-CA128478-01	Snap Abs Rev SS NGA CAS Hist eIMG Docs Pub DCat	GREER, JOSEPH ANDREW	Brief CBT for Anxiety and Advanced NSCLC			
<input type="checkbox"/> 5-P50-AA011998-09	Snap Abs NGA CAS Hist Sub Img Pub DCat	HEATH, ANDREW C.	MARC: Genetic Epidemiology of Alcoholism & Comorbidity			

Publications linked to NIH Grant: R01 MH051947

Publications Related to Grant Cycle R01 MH051947. This list may not be complete. [Disclaimer Details](#)

Items 1 - 11 of 11

1: [Psychol Med.](#) 2008 Apr;38(4):489-97. Epub 2008 Jan 4.

CAMBRIDGE Journals Online Links

The Chernobyl accident and cognitive functioning: a follow-up study of infant evacuees at age 19 years.

[Taormina DP](#), [Rozenblatt S](#), [Guey LT](#), [Gluzman SF](#), [Carlson GA](#), [Havenaar JM](#), [Zakhozha V](#), [Kotov R](#), [Bromet EJ](#).

Department of Psychiatry, State University of New York at Stony Brook, Stony Brook, NY, USA.

BACKGROUND: The cognitive and academic outcomes of infants exposed to radiation after the meltdown at Chernobyl have been intensely debated. Western-based investigations indicate that no adverse effects occurred, but local studies reported increased cognitive impairments in exposed compared with non-exposed children. Our initial study found that at age 11 years, school grades and neuropsychological performance were similar in 300 children evacuated to Kiev as infants or in utero compared with 300 classmate controls, yet more evacuee mothers believed that their children had memory problems. This study re-examined the children's performance and academic achievement at age 19 years. **METHOD:** In 2005-2006, we conducted an 8-year follow-up of the evacuees (n=265) and classmate controls (n=261) assessed in Kiev in 1997. Outcomes included university attendance, tests of intelligence, attention, and memory, and subjective appraisals of memory problems. Scores were standardized using a local population-based control group (n=327). Analyses were stratified by parental education. **RESULTS:** Evacuees and classmates performed similarly and in the normal range on all tests, and no differential temporal changes were found. The results were comparable for the in utero subsample. The rates of university attendance and self-reported memory problems were also similar. Nevertheless, the evacuee mothers were almost three times as likely to report that their children had memory problems compared with controls. **CONCLUSIONS:** Chernobyl did not influence the cognitive functioning of exposed infants although more evacuee mothers still believed that their offspring had memory problems. These lingering worries reflect a wider picture of persistent health concerns as a consequence of the accident.

PMID: 18177528 [PubMed - in process]

Related Articles

- ▶ School and neuropsychological performance of evacuated children in Kyiv 11 years after the Chernobyl disaster. [J Child Psychol Psychiatry, 2000]
- ▶ Effects of diabetes on learning in children. [Pediatrics, 2002]
- ▶ Cognitive and academic consequences of bronchopulmonary dysplasia and very low birth weight: 8-year-old outcomes. [Pediatrics, 2003]
- ▶ Children's well-being 11 years after the Chernobyl catastrophe. [Arch Gen Psychiatry, 2000]
- ▶ Adolescent mothers and their children: changes in maternal characteristics and child developmental and behavioral outcome at school age. [J Dev Behav Pediatr, 1996]

» See all Related Articles...

2: [Health Phys.](#) 2007 Nov;93(5):516-21.

Wolters Kluwer Health | Lippincott Williams & Wilkins Links

Psychological and perceived health effects of the Chernobyl disaster: a 20-year review.

[Bromet EJ](#), [Havenaar JM](#).

Department of Psychiatry, State University of New York at Stony Brook, NY 11794-8790, USA. evelyn.bromet@stonybrook.edu

The mental health impact of Chernobyl is regarded by many experts as the largest public health problem unleashed by the accident to date. This paper reviews findings reported during the 20-y period after the accident regarding

Related Articles

- ▶ The mental health of clean-up workers 18 years after the Chernobyl accident. [Psychol Med, 2008]
- ▶ Creating opportunities for parent empowerment: program effects on the mental health/coping outcomes of critically ill young children and their mothers. [Pediatrics, 2004]
- ▶ Suicide risk among chernobyl cleanup workers in estonia still increased: an updated cohort study. [Ann Epidemiol, 2006]

Done Local intranet

Evaluation of progress and/or future directions

- Explore return on investment:
 - Publications and Patents
 - Research Resources: Advances in Tools, Analytics, Methodologies, Biologics, etc.
 - Medical Discoveries, Devices, Treatments, CURES...

- Identify promising avenues for future investment
 - Gap and overlap analysis
 - Using visualization tools
 - Looking at the wider portfolio – beyond NIH

Looking for Gaps and Overlaps in the Wider Portfolio

■ The Literature

- PubMed
- Web of Science
- Biological abstracts – a source of more current of information than publications

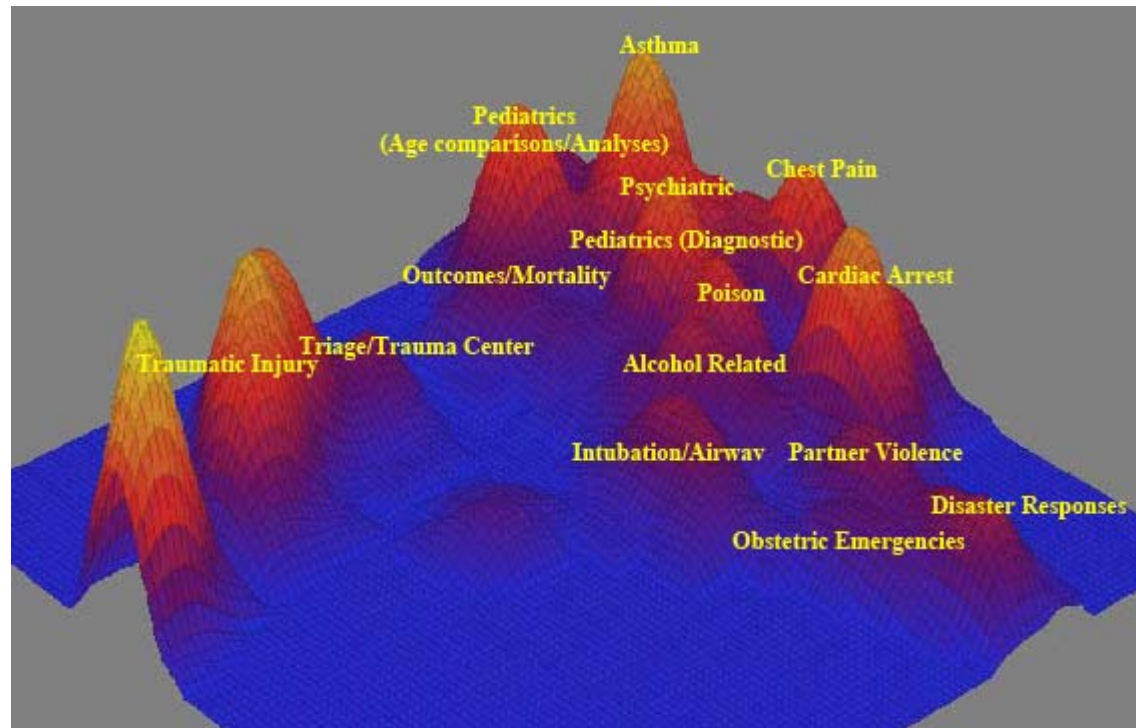
■ Portfolios of other Funding Agencies

- Federal agencies
- Private non-profits sponsors

- Tools for Mining Scientific Content
 - *PubMed tools*
 - *Other text mining tools*
 - *IN-SPIRE – text mining and clustering*
 - *Heat maps*

Analyzing Portfolio Data

Visualizing data with IN-SPIRE™ to facilitate the analysis of patterns – giving insight into gaps





Office of Extramural Research (OER)

Research Portfolio Online Reporting Tool (RePORT): <http://report.nih.gov/>



U.S. Department of Health & Human Services
NATIONAL INSTITUTES OF HEALTH
Research Portfolio Online Reporting Tool (RePORT)
BETA WEBSITE

REPORTS FREQUENTLY REQUESTED REPORTS CRISP GLOSSARY FAQs LINKS REQUEST REPORT

NEWS UPDATES
RePORT Reports, Data and Analyses (RDA) Beta Web site planned to be launched for the public in February 2008

QUICK LINKS
National Institutes of Health (NIH) Extramural Programs Data Book
Current Operating Year NIH Budget, Fiscal Year 2007
FY 2008 President's Budget Request
NIH Extramural Awards By State and Foreign Site
NIH Extramural Awards by State and Congressional District
Research Grant Award Data
Training and Career Awards
Data on New Investigators
Success Rates

NIH OVERVIEW
NIH PROGRAMS
NIH FUNDING
NIH RESEARCH ORGANIZATIONS INVESTIGATORS & TRAINEES
SEARCHABLE DATABASES

REPORTS, DATA AND ANALYSES OF NIH RESEARCH AND DEVELOPMENT ACTIVITIES
Dr. Zerhouni's Vision for the Future of NIH
National Institutes of Health (NIH) Extramural Programs Data Book
NIH Budget, 2007 and 2008
Research Project Grants (RPGs)
Research Centers
R01s and R01-Equivalent Grants
Research Grants by Mechanism: Percent Share
Targeted Research
First-Time Investigators
Training and Fellowship Trends
Career Development Trends
Modular Grants
Women in Research
Small Business Innovation Research (SBIR)
Index to Facts and Figures

- Conclusions – comprehensive analyses of the scientific content of research portfolios affords powerful means for evaluating and managing complex research portfolios

- Questions
 - How are you analyzing your research portfolios?
 - What are the opportunities for cross-federal analyses?
 - Are there opportunities to share data?