



Uses of topic modeling



Topic modeling used to:

1. Characterize overall investment portfolio
2. Characterize strengths of individual institutions
3. Characterize research & publications by funded researchers

Value added:

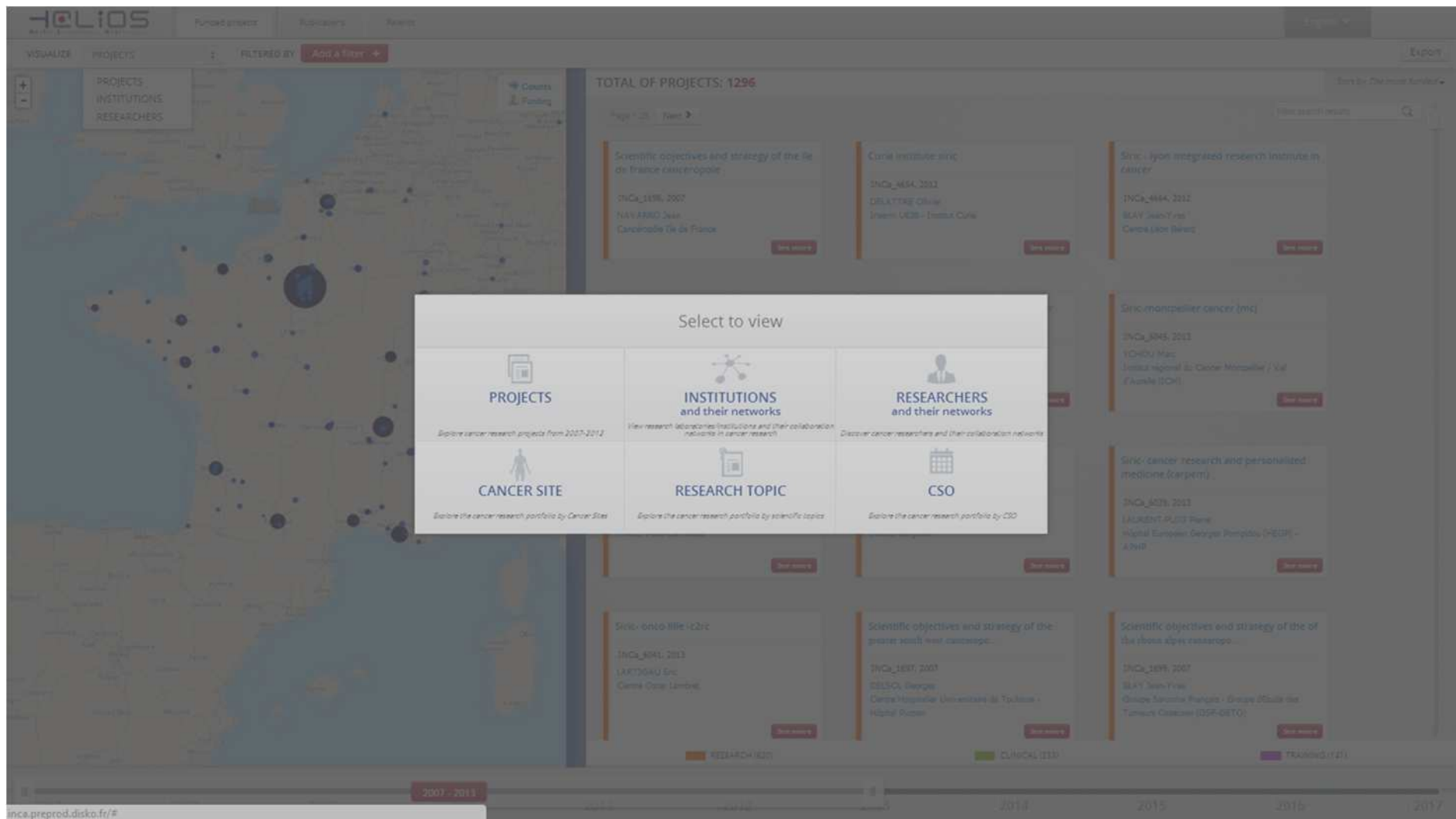
- Enrich existing categorizations
 - Common Scientific Outline and cancer sites



Technical approach

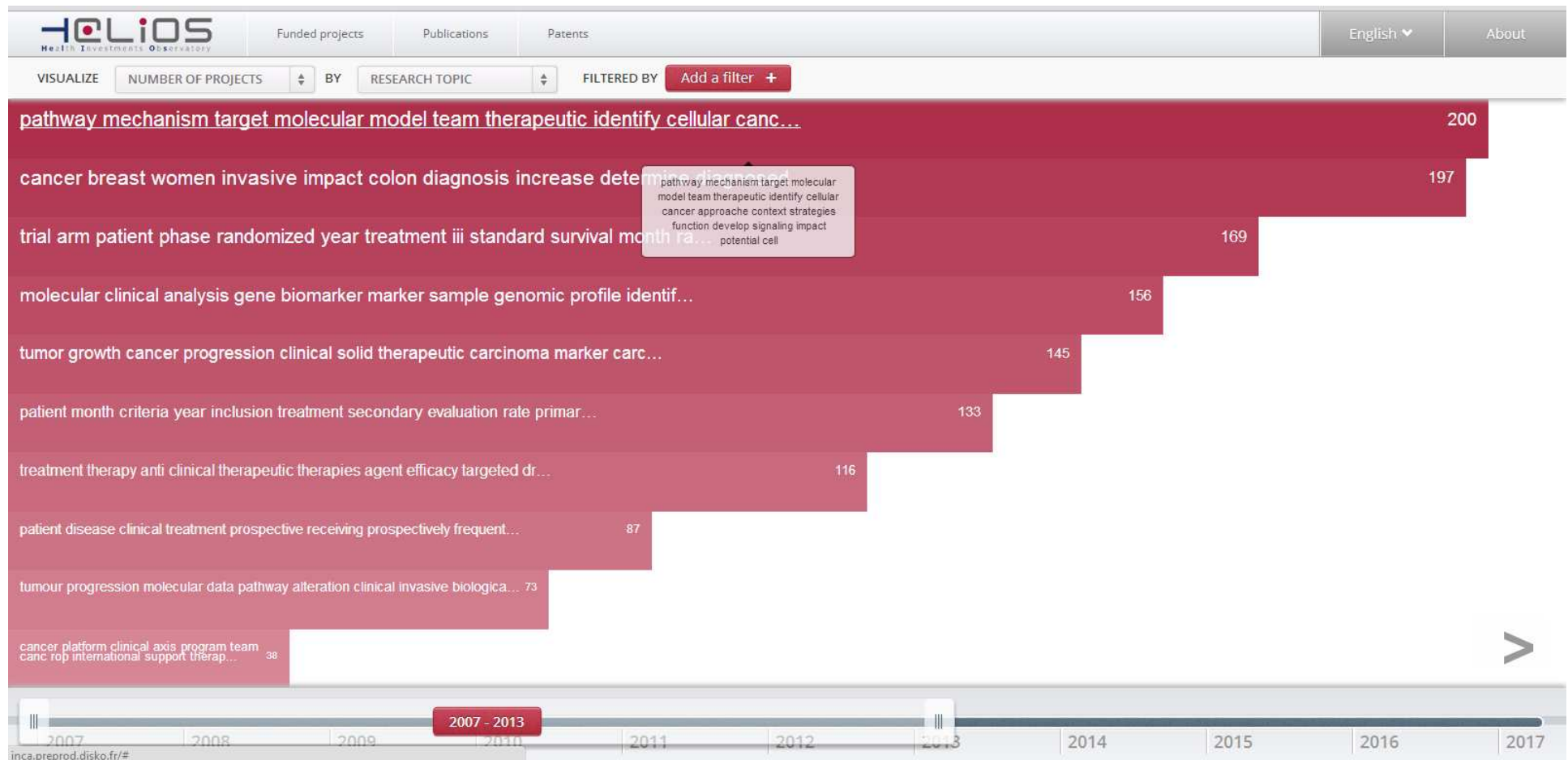
- Grant data
 - INCa/DGOS/Inserm
 - 1300 award abstracts (2007-2012)
- Publication data
 - 120 000 publication abstracts (2000-2011)
- LDA Topic model with 200 topics

Visualization approach



1. Characterize portfolio

HELIOS topics:



1. Characterize relative to NIH

HELIOS Health Investments Observatory

Funded projects | Publications | Patents | English | About

Back | PRALIMAP-INÉS : REDUCTION OF INEQUALITIES IN OVERWEIGHT AND OBESITY CARE MANAGEMENT IN HIGH SCHOOL ADOLESCENT | Export

PRALIMAP-INÉS : Reduction of inequalities in overweight and obesity care management in high school adolescent

Abstract

Background: The prevalence of overweight and obesity continues to increase in socially less advantaged populations but is stabilizing even is decreasing in socially more advantaged populations. The PRALIMAP trial (PRomotion de l'Alimentation et de l'Activité Physique) confirmed major social inequalities in overweight and obesity frequency in adolescents in grade 10. The trial highlighted the effectiveness of structured screening and care management in decreasing the prevalence of overweight and

PI

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HELIOS Research topics

- 28 - high low grade rate frequency higher intermediate population time due determine present level data profile range improved defined single
- 53 - term long short time year follow effect data number part duration period major survivor malaria remain increase longer lasting
- 65 - health intervention social action inequalities program care local participation prevention context improve practice aim public programme knowledge management healthcare
- 144 - trial arm patient phase randomized year treatment iii standard survival month rate experimental quality free risk primary randomization multicenter

NIH Topics

126 - trial treatment randomized clinical_trial patients months efficacy therapy trials placebo ... [View this topic at NIH](#)

physical_activity overweight bmi obese weight_loss children intervention diet ... [View this topic at NIH](#)

screening care settings primary_care effectiveness patients services treatment program ... [View this topic at NIH](#)

adolescent youth behaviors peer behavior social school relationships adolescence ... [View this topic at NIH](#)

Relative to NIH

1. Characterize relative to NIH

Topic 126 [Map Viewer](#) [Topic Browser](#) [Topics By Categories](#)

[Export Data](#) [Methods](#) [Feedback](#)  Powered by ChalkLabs

Topic Words: clinical_trial randomized treatment months placebo efficacy patients therapy subjects baseline intervention arm pilot outcomes standard receive safety conduct rct multicenter

Co-occurring Topics

373 data_management data_safety_monitoring_board site data_coordinating_center steering_committee safety_monitoring coord
 200 cardiovascular_disease risk_factors atherosclerosis inflammation cvd_risk subclinical cardiovascular_risk markers vascular blo
 572 surgery surgical patients postoperative post_operative procedures patients_undergoing complications outcomes surgeons peric

Associated Tags

NIH Concept Keywords: Randomized, Placebos, Clinical Trials, Double-Blind Method, Enrollment, Safety, Placebo Control, Patients, Outcome, Upper arm, follow-up, Computer Retrieval of Information on Scientific Projects Database, Quality of life, Institution, United States National Institutes of Health

Pubmed MeSH: Randomized Controlled Trials as Topic, Research Design, Clinical Trials as Topic, HIV Infections, Quality of Life, Dietary Supplements, Antineoplastic Combined Chemotherapy Protocols, Patient Selection, Breast Neoplasms, Hypertension, Antihypertensive Agents, Diabetes Mellitus, Type 2, Cardiovascular Diseases

Pubmed Journals: N Engl J Med, Clin Trials, JAMA, J Clin Oncol, Contemp Clin Trials, Ophthalmology, Lancet, Ann Intern Med, Am Heart J, Arch Intern Med, Obstet Gynecol, J Clin Endocrinol Metab, AIDS, Stroke, J Acquir Immune Defic Syndr

Similar Topics

622 clinical_trial safety dose tolerated phase_i_trial efficacy treatment phase_ii_trial therapy toxicity safe clinical conduct standa
 389 intervention participants randomized months baseline receive efficacy effectiveness program randomized_controlled_trial self
 39 placebo antidepressant weeks trial efficacy depression medication patients remission randomized baseline double_blind subje

Associated Grants Data

NIH Institutes: NCRR, NHLBI, NIDDK, NINDS, NCCAM, NICHD, NCI, NIA, NIAID, NIMH, NIDA, NEAMS, NEI, NINR, NIDCR

NIH Review Panels and Program Announcements:

Clinical Trials Review Committee, MENTORED PATIENT-ORIENTED RESEARCH CAREER DEVELOPMENT AWARD, INVESTIGATOR INITIATED MULTI-SITE CLINICAL TRIALS, ANCILLARY STUDIES IN CLINICAL TRIALS, Behavioral Medicine, Interventions and Outcomes Study Section, TECHNOLOGY DEVELOPMENT FOR BIOMEDICAL APPLICATIONS, AIDS Clinical Studies and Epidemiology Study Section, Clinical and Integrative Cardiovascular Sciences Study Section, NCCAM EXPLORATORY/DEVELOPMENTAL GRANT FOR CLINICAL STUDIES, NIH CLINICAL TRIAL PLANNING GRANT PROGRAM, ALZHEIMER'S DISEASE PILOT CLINICAL TRIALS, NIAID CLINICAL TRIAL PLANNING GRANTS, ALTERNATIVE THERAPIES FOR BENIGN PROSTATE SYMPTOMS-CLINICAL TRIALS CONSORTIUM, LIMITED COMPETITION: COMPETING APPLICATIONS FOR AFRICAN AMERICAN STUDY OF KIDNEY DISEASE (AASK COHORT), RFA-ANNOUNCEMENT OF A LIMITED COMPETITION FOR THE CONTINUATION OF THE URINARY INCONTINENCE TREATMENT NETWORK (UITN)

Grants with Highest Allocation

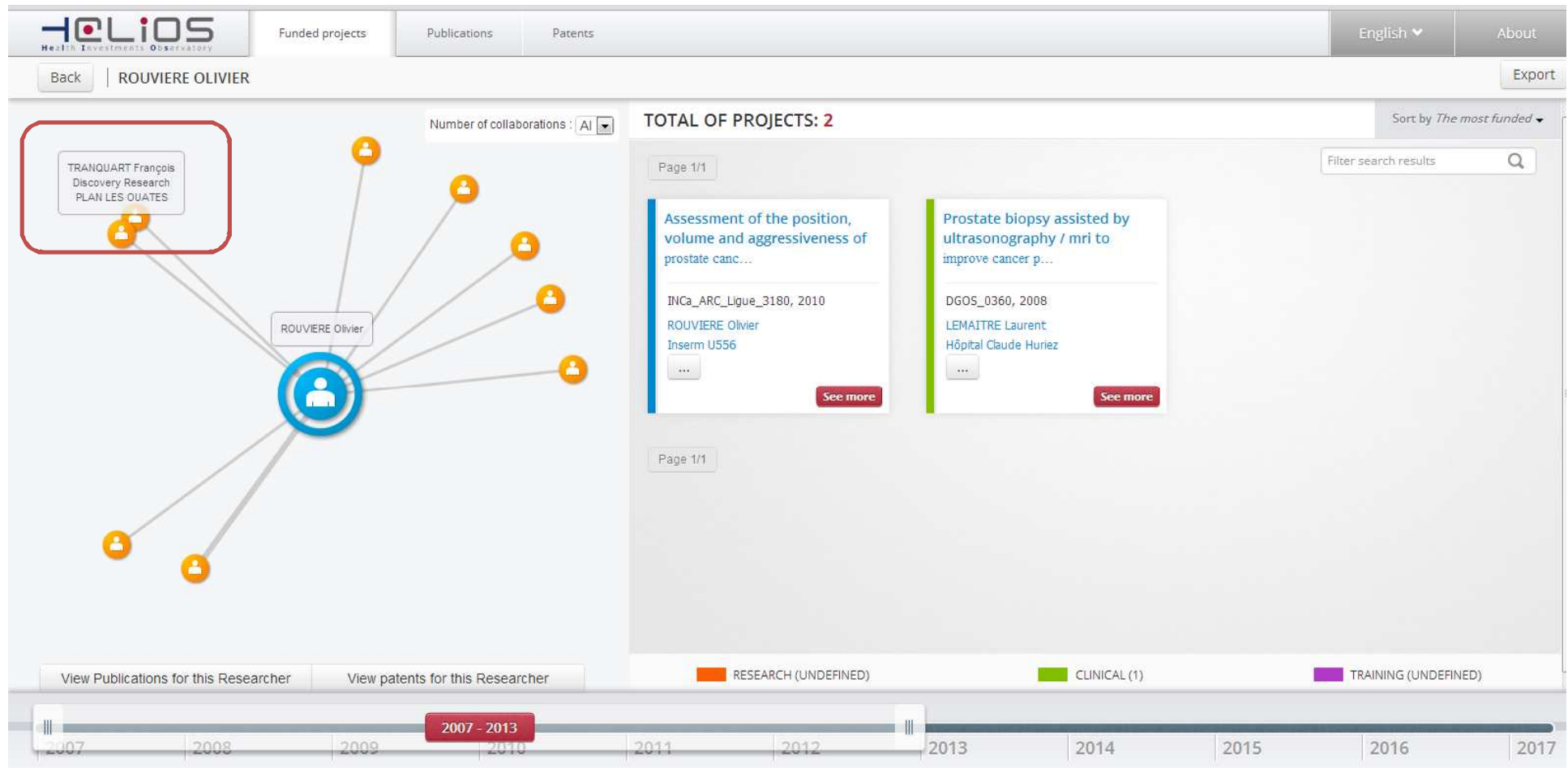
%	Co	NIH Institut	Project/Subproject Num	Title	Investigator(s)	#1 Topic	#1 Topic Words	+
73.75		NINDS	3U01NS042685-08S1	Thymectomy in Non-Thymomatous MG Patients on Prednisone	CUTTER, GARY	126 (74%)	clinical_trial randomi...	
73.75		NINDS	5U01NS042685-08	Thymectomy in Non-Thymomatous MG Patients on Prednisone	CUTTER, GARY	126 (74%)	clinical_trial randomi...	
52.81		NINDS	2U10NS044465-11	Continuation of NET-PD Trials at The Parkinsons Institute	TANNER, CAROLINE M.	126 (53%)	clinical_trial randomi...	
52.60		NINDS	5U01NS061799-04	FOR-DMD:Double-blind randomized trial to optimize steroid regimen in Duchenne MD	BUSHBY, KATHERINE MARY DYPNNA; GRIGGS, ROBERT C (contact)	126 (53%)	clinical_trial randomi...	
52.32		NIDCD	5U01DC007411-04	Tinnitus Retraining Therapy Trial (TRTT)	FORMBY, CHARLES CRAIG	126 (52%)	clinical_trial randomi...	
50.89		NINDS	1R03NS079875-01A1	Factors determining placebo response in drug-resistant focal epilepsy	BAGIELLA, EMILIA	126 (51%)	clinical_trial randomi...	
49.60		NIDDK	5R21DK090343-02	A Prospective, Randomized, Controlled Trial of Rectal Indomethacin in the Prevent	ELMUNZER, BADIH JOSEPH	126 (50%)	clinical_trial randomi...	
47.85		NINDS	2U10NS044472-11	Continuation of NET-PD Trials at Indiana University	WOJCIESZEK, JOANNE M	126 (48%)	clinical_trial randomi...	
47.22		NINDS	2U10NS044448-12	Continuation of NET-PD Trials at the Hawaii Center	ROSS, GEORGE WEBSTER	126 (47%)	clinical_trial randomi...	
42.65		NHLBI	5R01HL105457-02	Guiding Evidence Based Therapy Using Biomarker Intensified Treatment (EQOL)	MARK, DANIEL B	126 (43%)	clinical_trial randomi...	
41.47		NIAMS	1UM1AR063386-01	Hip Fracture Evaluation Alternatives of Total Hip vs Hemi-arthroplasty (HEALTH)	EINHORN, THOMAS A.	126 (41%)	clinical_trial randomi...	
41.15		NINDS	2U10NS044425-11	PD Neuroprotection Clinical Trial: Clinical Centers	HAUSER, ROBERT A	126 (41%)	clinical_trial randomi...	

1. Characterize investments in specific areas

The screenshot displays the HeliOS Health Investments Observatory interface. At the top, there are navigation tabs for 'Funded projects', 'Publications', and 'Patents'. Below this, a 'VISUALIZE' section shows 'PROJECTS' and a 'FILTERED BY' section with 'Prostate Cancer' and '30 imaging mri mr contrast lesion magnetic_resonanc...'. A map of France is on the left, with a red callout box labeled 'Where?' pointing to it. A red callout box labeled 'Site' points to a specific location on the map. A red callout box labeled 'Topic' points to the 'Prostate Cancer' filter. A red callout box labeled 'Who? What Institution?' points to the project details. The main content area shows 'TOTAL OF PROJECTS: 4' and a list of projects with details like 'Comparison of fluoride (18f) and fluorocholine (18f) pet/ct and mri "w...', 'Assessment of the position, volume and aggressiveness of prostate canc...', and 'Prostate biopsy assisted by ultrasonography / mri to improve cancer p...'. Each project entry includes the project ID, year, and lead researcher/institution, along with a 'See more' button.

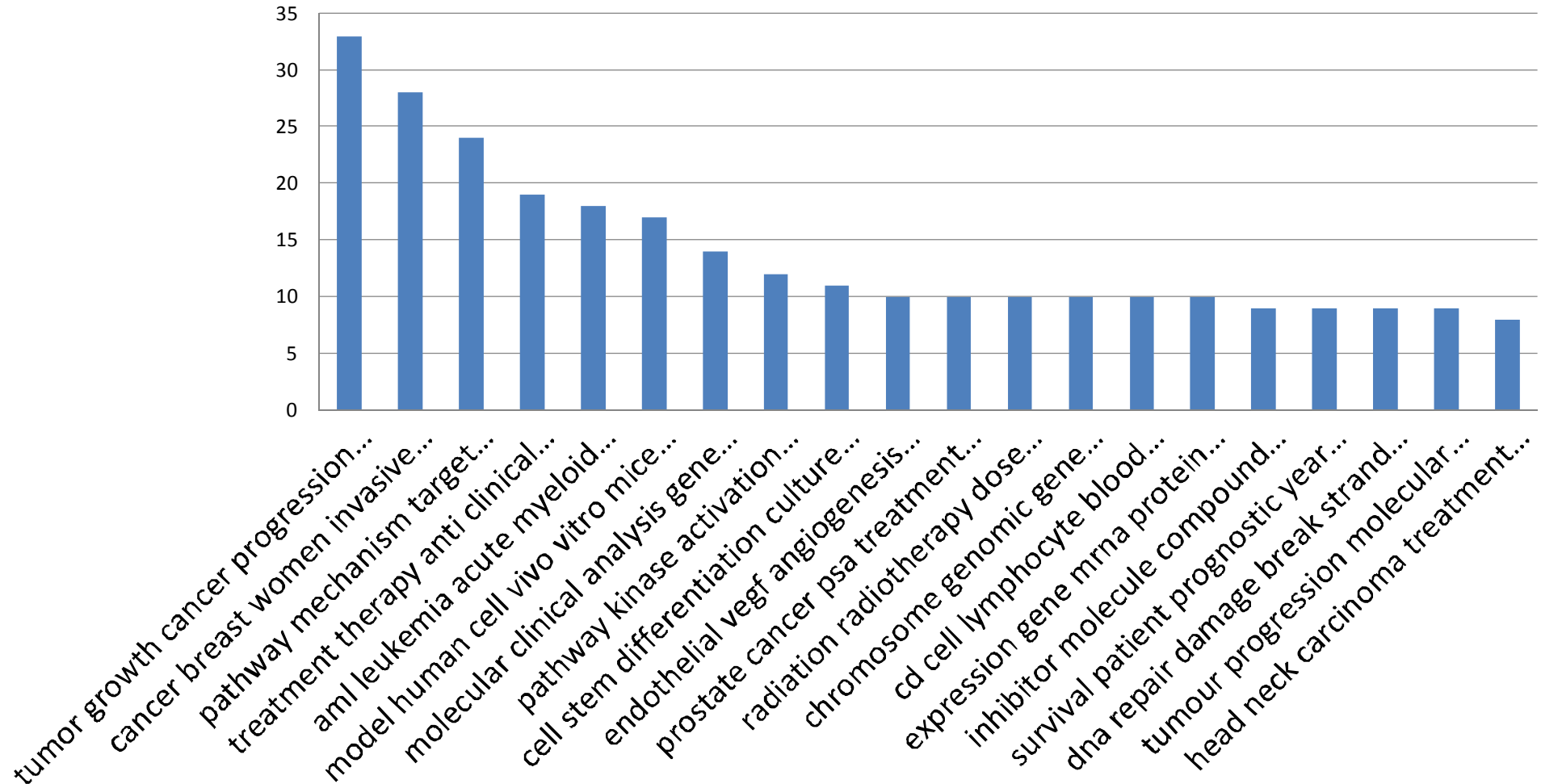
Project ID	Year	Lead Researcher	Institution
DGOS_1335	2011	TALBOT Jean-Noël	Hôpital Tenon
INCa_ARC_Ligue_3180	2010	ROUVIERE Olivier	Inserm U556
DGOS_0360	2008	LEMAITRE Laurent	Hôpital Claude Huriez

1. Characterize structure of investments (private/public partnerships)



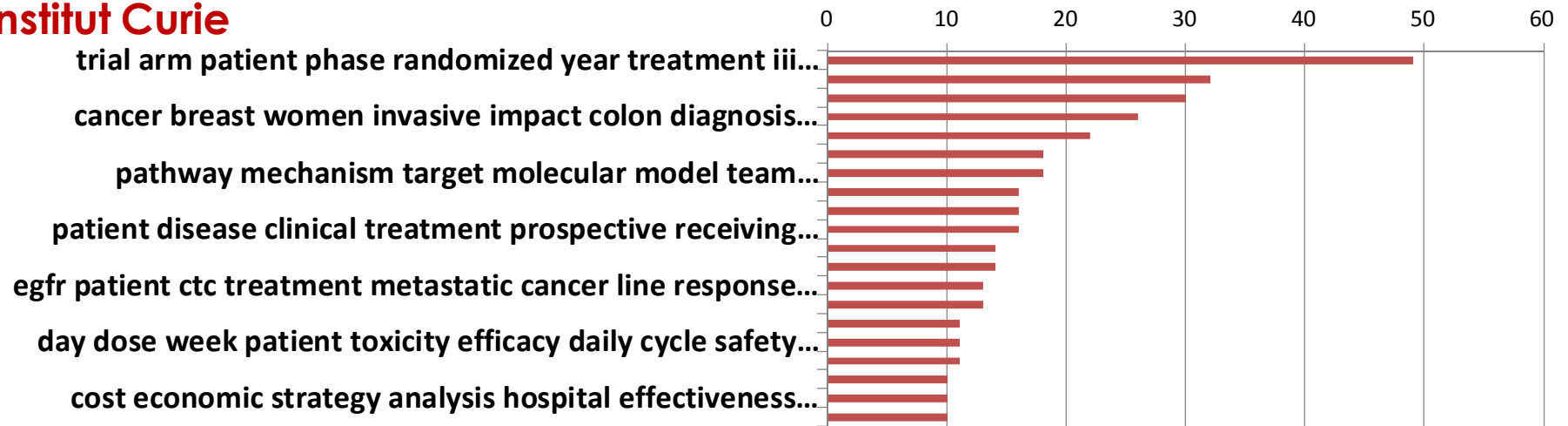
1. Characterize investments in training

Top Topics of Training Awards

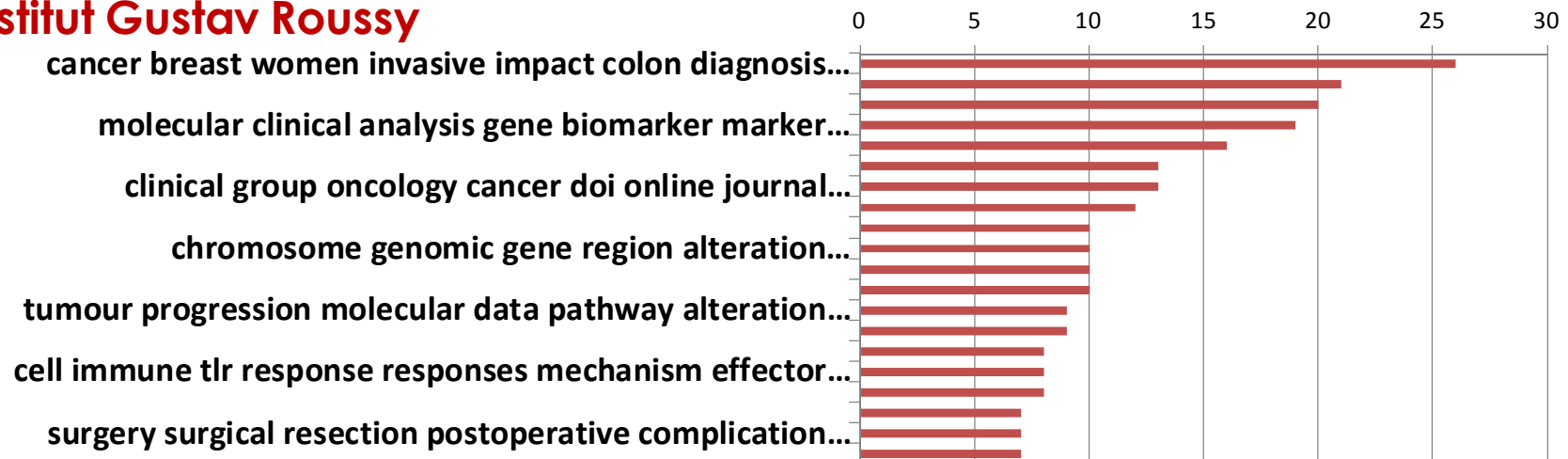


2. Characterize the strengths of research institutions

Institut Curie

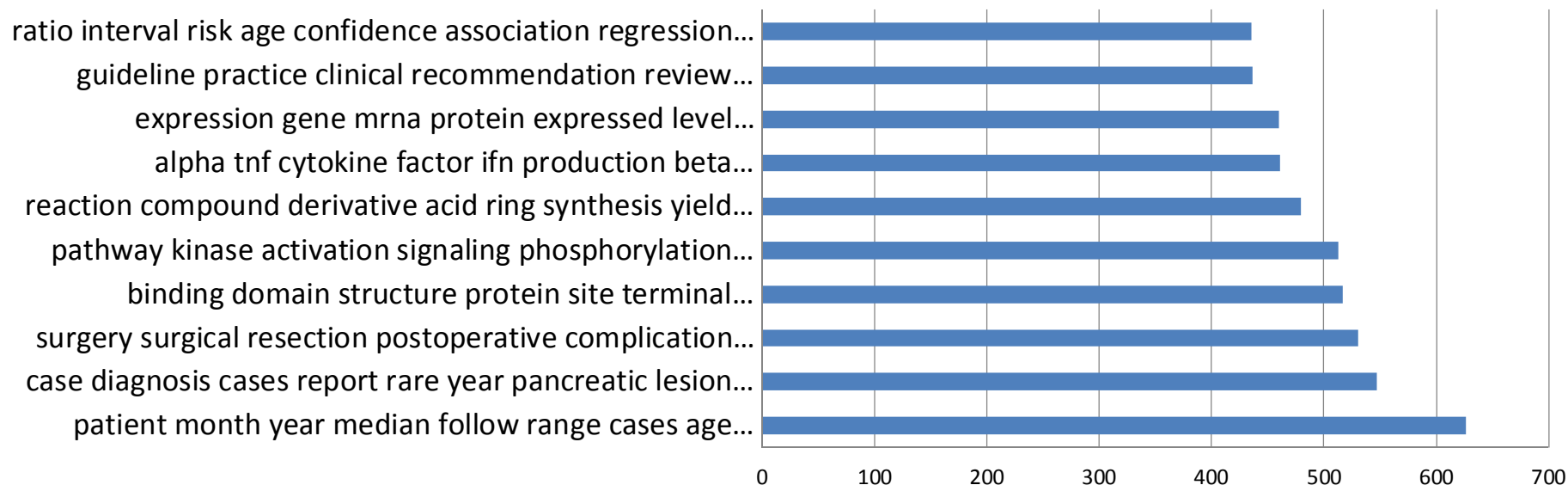


Institut Gustav Roussy

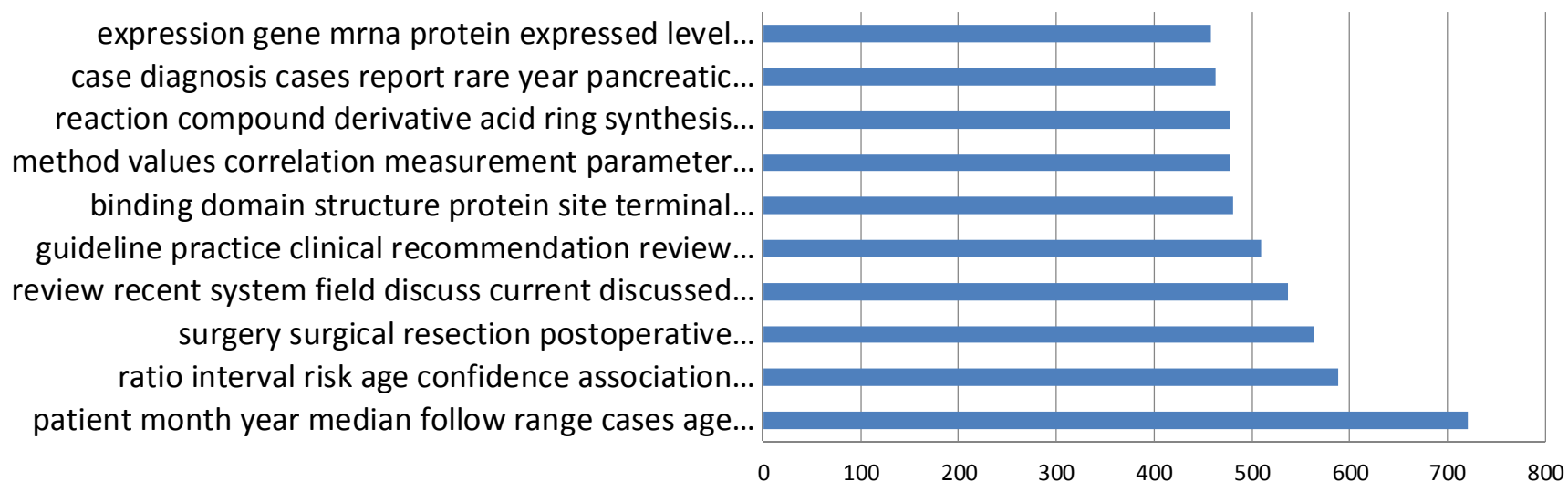


3. Characterize researcher publications

Top Publication Topics - 2008



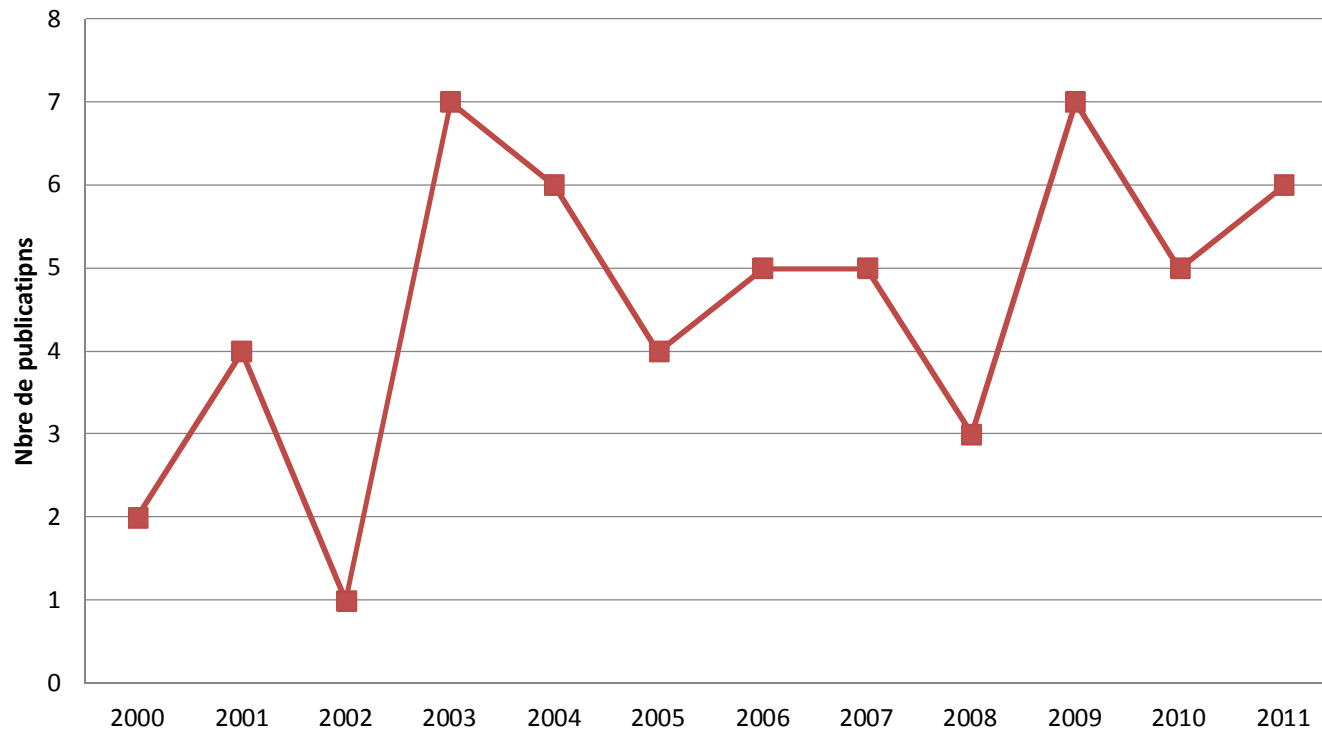
Top Publication Topics - 2011



3. Characterize researcher publications in specific fields

-Enrich existing categorizations

Prostate Cancer Publications with an 'Imaging' Topic



Lessons learned

Strengths

- Useful characterization of investments
 - Common categorization for heterogeneous data (both grants and publications)
 - Contextualization relative to international research
- Low cost and low burden

Weaknesses

- Precision after aggregation
- Interpretation and communication
 - Next steps?