Interactive Maps of S&T

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International Symposium on Science of Science and Innovation Policy “Toward Synergetic Collaborations and Realization of Innovation”
The University of Tokyo, Tokyo, Japan

December 13, 2012

Find your way
Find collaborators, friends
Identify trends

Take terra bytes of data

Black Box
Google Map JavaScript API was used to implement both maps with two aggregation layers for each. The geographic map aggregates to the **state level** and the **city level**. The science map has a high level of aggregation of 13 top-level scientific **disciplines** and a low level of 554 **sub-disciplines**.
The geographic map at **state level**.

The geographic map at **city level**.
Search result for “corn”
Icons have same size but represent different #records

Click on one icon to display all records of one type. Here publications in the state of Florida.
Detailed information on demand via original source site for exploration and study.

Search result for “Miscanthus,” a special energy biomass crops for second generation biofuel.
The science map at 13 top-level scientific disciplines level.

The science map at 554 sub-disciplines level.
Thermal tolerant avicelase from Acidothermus cellulolyticus

Abstract

The invention provides a thermal tolerant (thermostable) cellulase, AvIII, that is a member of the glycoside hydrolase (GH) family. AvIII was isolated and characterized from Acidothermus cellulolyticus and, like many cellulases, the disclosed polypeptide and/or its derivatives may be useful for the conversion of biomass into biofuels and chemicals.

Inventors: Ding, Shi You (Golden, CO), Adney, William S. (Golden, CO), Vissant, Todd B. (Golden, CO), Himmel, Michael E. (Lafayette, CO)

Assignee: Midwest Research Institute (Kansas City, MO)

Date: April 29, 2008
MAGE-A3/12 Metastatic Cancer Treatment With Anti-MAGE-A3/12 TCR-Gene Engineered Lymphocytes

This study has been suspended.

First Received on January 7, 2011. Last Updated on March 14, 2012

Purpose

Background:
- MAGE-A3/12 is a type of protein commonly found on certain types of cancer cells, particularly in metastatic cancer. Researchers have developed a process to take lymphocytes (white blood cells) from cancer patients, modify them in the laboratory to target cancer cells that contain MAGE-A3/12, and return them to the patient to help attack and kill the cancer cells. These modified white blood cells are an experimental treatment, but researchers are interested in determining their safety and effectiveness as a possible treatment for cancers that involve MAGE-A3/12.

Objectives:
- To evaluate the safety and effectiveness of anti-MAGE-A3/12 lymphocytes as a treatment for metastatic cancers that have not responded to standard treatment.

Eligibility:
- Individuals at least 18 years of age who have been diagnosed with metastatic melanoma, renal cell cancer, or another type of metastatic cancer that has not responded to standard treatment.

Design:
- Participants will be screened with a full medical history and physical examination, as well as blood and urine tests, tumor samples, and imaging studies.
- Participants will have leukapheresis to collect enough white blood cells for modification in the laboratory.
- Seven days before the start of anti-MAGE-A3/12 treatment, participants will have chemotherapy with cyclophosphamide and fludarabine to suppress the immune system in preparation for the treatment.

NIH Topic Maps

A Topic Database of NIH-Funded Grants

https://app.nihmaps.org
A Topic Database of NIH-Funded Grants

OBESITY, INSULIN RESISTANCE, IGF'S, AND BREAST CANCER RISK IN AFRICAN AMERICANS

The purpose of this study is to better understand how lifestyle factors and their interaction with genetic factors influence a woman’s risk of developing breast cancer. In order to learn more about the causes of breast cancer, we need to compare the lifestyles of people who have breast cancer with those who do not. 600 women are expected to be enrolled.

https://app.nihmaps.org
**Geospatial Analysis (Where)** A geospatial map of the US is used to show where what science is performed by whom.

**Topical Analysis (What)** Science map overlays show where a person, department, or university publishes most in the world of science.

Video and paper are at [http://www.scivee.tv/node/27704](http://www.scivee.tv/node/27704)

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Sci² Tool – “Open Code for S&T Assessment”
[http://sci2.cns.iu.edu](http://sci2.cns.iu.edu)

OSGi/CIShell powered tool with NWB plugins and many new scientometrics and visualizations plugins.

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Sci² Tool Usage at National Institutes of Health

Sci² Tool now supports Web services and serves as a visual interface to publically available NIH RePORT Expenditure and Results Reporter (RePORTER) data provided by NIH.
Sci² Tool Usage at National Institutes of Health

NETE A|V - Temporal Analysis

Find and select one or multiple PIs

Visualize portfolio of projects on the timescale
- Projects with award amounts
- Projects by IC funding
- Projects by PIs
NETE A|V - Temporal Analysis – Projects with Award Amounts

Four-variable visualizations, e.g. time, amounts, PIs and projects

NETE A|V – Geospatial Analysis – Projects by External Organization
“Science of Science Research and Practice” Tutorial

Time/Date: 9:00am-12:30pm on December 14, 2012

Place: Building #73 on map, Room 213, Eng Bldg #2, Hongo Campus, Univ of Tokyo
http://www.u-tokyo.ac.jp/en/about/documents/Hongo_CampusMap_E.pdf

Instructor: Dr. Katy Börner, SLIS, Indiana University

Format: Lecture and “hands-on” training. Please bring your laptop and pre-install the tool (free download at http://sci2.cns.iu.edu).

Links:
http://sci2.cns.iu.edu
http://sci2.wiki.cns.iu.edu
http://scimaps.org/atlas


Interested to Learn More? Take the IVMOOC
References


• Scharnhorst, Andrea, Börner, Katy, van den Besselaar, Peter (2012) Models of Science Dynamics. Springer Verlag.


Places & Spaces: Mapping Science Exhibit (http://scimaps.org)

After eight years, there now exist 80 out of 100 maps.
Debut of 5th Iteration of Mapping Science Exhibit at MEDIA X was on May 18, 2009 at Wallenberg Hall, Stanford University, [http://medias.stanford.edu](http://medias.stanford.edu), [http://scaleindependentthought.typepad.com/photos/scimaps](http://scaleindependentthought.typepad.com/photos/scimaps)
Science Maps in “Expedition Zukunft” science train visiting 62 cities in 7 months 12 coaches, 300 m long Opening was on April 23rd, 2009 by German Chancellor Merkel

http://www.expedition-zukunft.de
Ingo Gunther's Worldprocessor globe design on display at the Giant Geo Cosmos OLED Display at the Museum of Emerging Science and Innovation in Tokyo, Japan.
All papers, maps, tools, talks, press are linked from http://cns.iu.edu

CNS Facebook: http://www.facebook.com/cnscenter
Mapping Science Exhibit Facebook: http://www.facebook.com/mappingscience