

## Deep Insights into Your Research: The PlumX Suite

Mike MacKinnon Director of Sales, Plum Analytics mackinnon@plumanalytics.com



# Journal citations are the traditional form of Scholarly Measure

Elastic ice shells of synchronous moons: Implications for cracks on Europa and non-synchronous rotation of Titan

Peter M. Goldreich<sup>a,b</sup>, Jonathan L. Mitchell<sup>o,b</sup>

#### Abstract

A number of synchronous mous are though to harbor water oceans beneath their outer ice shells. A subsurface ocean frictionally decouples the shell from the interior. This has led to proposals that a weak tidal or atmospheric torque might cause the shell to rotate differentially with respect to the synchronously rotating interior. Applications along these lines have been made to Europa and Titat. However, the shell is coupled to the ocean by an elastic torque. As a result of contribugal and tidal forces, the ocean would assume an ellipsoidal shape with its long axis aligned toward the parent planet. Any displacement of the shell away from its equilibrium position would indexe strains thereby increasing its olastic energy and giving rise to an elastic rostoring torque. In the investigation reported on here, the elastic torque is compared with the tidal torque acting on Europa and the atmospheric torque acting on Titan.

#### References

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Ghatak, A., Mahadevan, L., Nov. 2003. Crack Street: The Cycloidal Wake of a Cylinder Tearing through a Thin Sheet. Physical Review Letters 91 (21), 215507.

Greeley, R., Sullivan, R., Coon, M. D., Geissler, P. E., Tufts, B. R., Head, J. W., Pappalardo, R. T., Moore, J. M., Sep. 1998. Terrestrial Sea Ice Mor-

Greenberg, R., Hoppa, G. V., Tufts, B. R., Geissfer, P., Riley, J., Kadel, S., Oct. 1999, Chaos on Europa. Icarus 141, 263–286. Greenberg, R., Weidenschilling, S. J., May 1984. How first do Galilean satellites

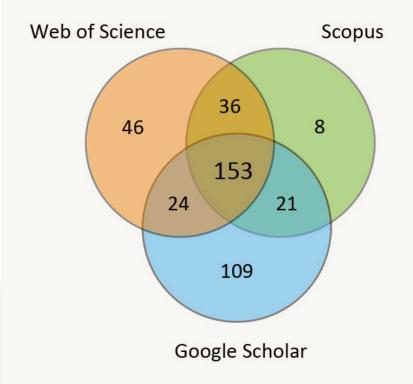
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# No Single Tool – Captures all Citations



Citations of a book in Bar-Ilan, J. (2010) Citations to the "Introduction to informetrics" indexed by WOS, Scopus and Google Scholar. Scientometrics, 82(3), p.504



## PlumX can help answer these questions you couldn't answer before

What impact has our research had in the past 12 months?

How do we arm our researchers to better compete for funding?

Can we measure non-STEM, non-article research?

Ś



European Research Measurement Guidance via

## **HEFCE REPORT, UK**



# **The Metric Tide**

Report of the Independent Review of the Role of Metrics in Research Assessment and Management

July 2015



## Recommendations

- The research community should develop a more sophisticated and nuanced approach to the contribution and limitations of quantitative indicators.
- At an institutional level, HEI leaders should develop a clear statement of principles on their approach to research management and assessment, including the role of quantitative indicators.
- Research managers and administrators should champion these principles and the use of responsible metrics within their institutions.
- HR managers and recruitment or promotion panels in HEIs should be explicit about the criteria used for academic appointment and promotion decisions.
- Individual researchers should be mindful of the limitations of particular indicators

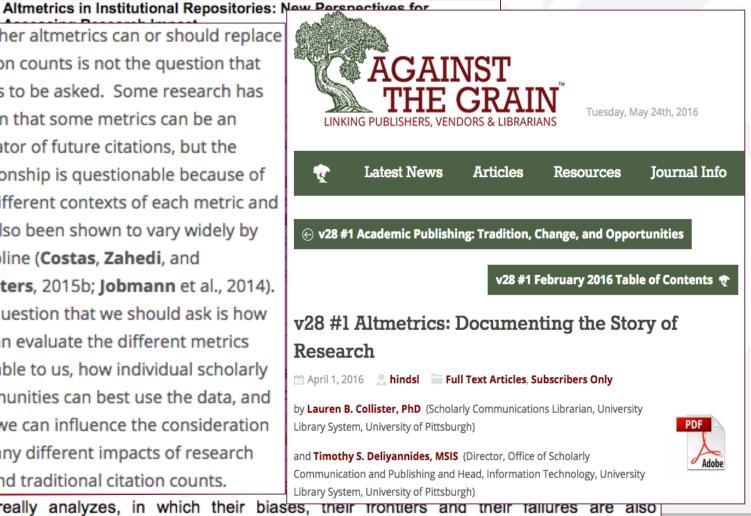


## **Altmetrics Gain Wide Support**

Whether altmetrics can or should replace citation counts is not the question that needs to be asked. Some research has shown that some metrics can be an indicator of future citations, but the relationship is questionable because of the different contexts of each metric and has also been shown to vary widely by discipline (Costas, Zahedi, and Woulters, 2015b; Jobmann et al., 2014). The question that we should ask is how we can evaluate the different metrics available to us, how individual scholarly communities can best use the data, and how we can influence the consideration of many different impacts of research beyond traditional citation counts.

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uncovered.



https://run.unl.pt/bitstream/10362/12398/1/LIDA%202014 poster Extended%20Abstract Salima%20Rehemtula%20et%20al.pdf

Given how tight budgets are around the world, governments are rightfully demanding effectiveness in the programs they pay for.

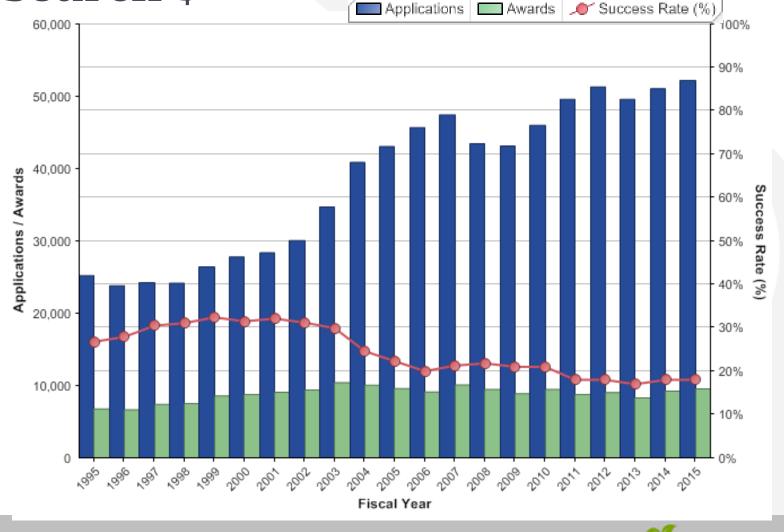


To address these demands, we need **better measurement tools** to determine which approaches work and which do not."

> Bill Gates Gates Foundation Annual Letter 2013



## NIH: The Competition for Research \$



http://report.nih.gov/NIHDatabook/Charts/Default.aspx?show m=Y&chartId=20&catId=2



10

EBSCC

## NHMRC: The Competition for Research \$\$\$





## 7 of 8 people do NOT get funded

4,045 Applications

606 Funded



## **JSPS: The Competition for Research \$\$\$ in 2014**



26.6% Success

EBSCO

3 in 4

people do

NOT

get funded

http://www.jsps.go.jp/english/e-grants/grants04\_2014.html



Jan Petter Myklebust 19 June 2015 Issue No:372



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Global Edition

Up to the end of February 2015, after 14 months, Horizon 2020, the EU Framework Programme for Research and Innovation 2014-20, had received 45,000 applications. This represents a large surge in the number of applications.

The success rate for applications was 14% to 15% on average, while in Framework Programme 7 (2007-13), the predecessor of Horizon 2020, the success rate was between 19% and 22%. In some of the sub-programmes of Horizon 2020, notably in the Health Sciences and in Future and Emerging Technologies, or 'FET



**University Leaders** 

## "14% to 15% on Average"

http://www.universityworldnews.com/article.php?story=20150617162927313BSCO

## **NHMRC 2016 Changes**

### 2.11 CV-CP: Conference Participation

### 2.12 CV-CE: Community Engagement

Please provide details of any community engagement that you have been involved in within the last five years. The Statement on Consumer and Community Participation in Health and Medical Research has been developed because many consumers and researchers recognise the contribution that consumers can make to health and medical research and their right to do so.

### 2.13 CV-P: Patents

In this section, please provide details of any patents for which you contributed more than 20% of the development efforts. Entries will be listed in reverse chronological order (i.e. the most recent first).

### 2.20 CV-Pub: Publications

Program Grant applications require details on all your publications for the last five years. This information can be uploaded using a tab delimited file using Microsoft Excel® or by exporting your Endworde® Library as an .xml file. Further details on how to do this can be found on the CV-PU: Publication Uploads page in POMO.

Your publications will be grouped together by the type of publication and then listed in reverse chronological order.

https://mro.unimelb.edu.au/sites/default/files/public/grants/nhmrc/program-cv-and-profile-requirements.pdf

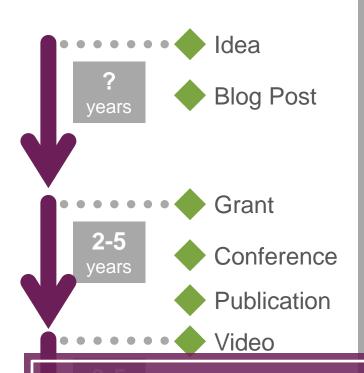




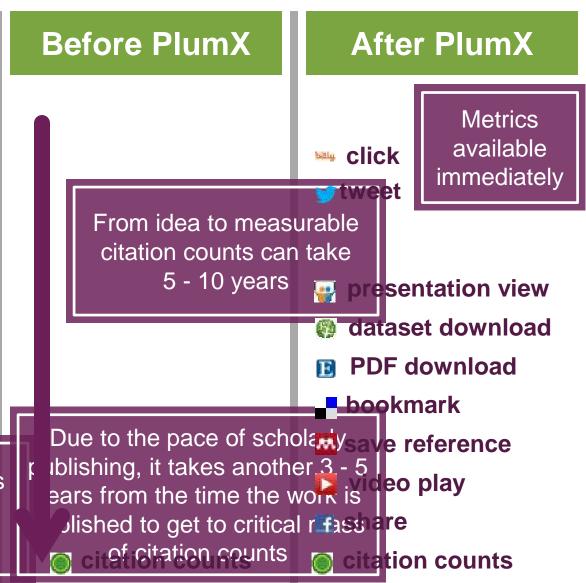
### Researchers have Moved Online



### Metrics timeline: From Idea to Impact



It can take at least 2 - 5 years from idea to a published peer-reviewed journal article





### **Examples: Scholarly Data Exhaust**





## **The PlumX Suite**



### **PlumX Metrics**

Get more value from your institutional repository.



### **PlumX Dashboards**

Know what is going on with your research. Without waiting years.



### PlumX +Grants

Gain insight about your grants.



### **PlumX Benchmarks**

See how you compare. Now.



**PlumX Funding Opportunities** Find the right funding opportunities.



## 250+ Using PlumX...







National Taiwan University







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CEIBS

CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL

中防國際2 商學院





서 울 대 학 교 SEOUL NATIONAL UNIVERSITY

KAUST

King Abdullah University of Science and Technology

### **Gordon Institute** of Business Science

University of Pretoria







## **Samples of PlumX Metrics Sources**

- a Amazon
- 🐃 Bit.ly
- 🗣 CrossRef
- Delicious
- Oryad
- dSpace
- EBSCO
- ePrints
- Facebook
- figshare

- Github
- **9** Goodreads
- 👪 Google+
- Medwave
- Mendeley
- 🐲 PLOS
- PubMed Central
- Reddit
- Research Blogging

- Scopus
- SlideShare
- SourceForge
- Stack Overflow
- 💆 Twitter
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  - 5 Worldcat (OCLC)
  - YouTube



## **All Types of Research Artifacts**

- Articles
- Blog posts
- Book chapters
- Books
- Cases
- Clinical Trials
- Conference Papers
- Data Sets
- Figures
- Grants

- Interviews
- Letters
- Media
- Patents
- Posters
- Presentations
- Reports
- Source Code
- Theses / Dissertations
- Videos
- Web Pages







### NEUROMUSCULAR ELECTRICAL STIMULATION AS A METHOD TO MAXIMIZE THE BENEFICIAL EFFECTS OF MUSCLE STEM CELLS TRANSPLANTED INTO DYSTROPHIC SKELETAL MUSCLE

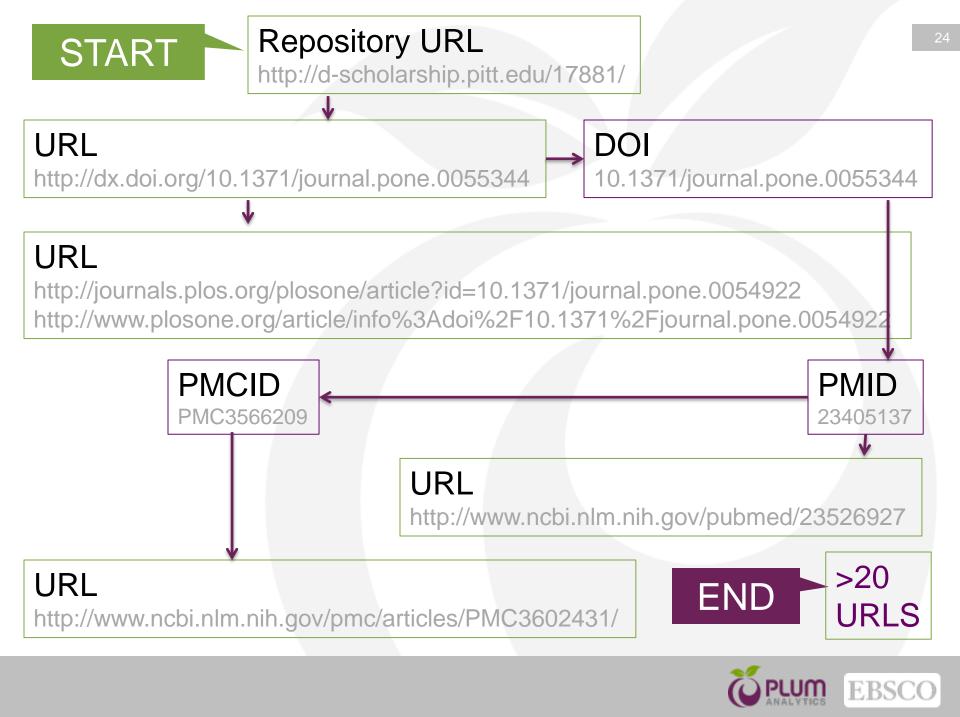
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## PLUMX Metrics Categories



MENTIONS (blog posts, comments, reviews, Wikipedia links)



USAGE (clicks, downloads, views, library holdings, video plays)



SOCIAL MEDIA (+1s, likes, shares, tweets)



CAPTURES (bookmarks, code forks, favorites, readers, watchers)



### CITATIONS (PubMed Central, Scopus, patents)





## clicks, downloads, views, library holdings, video plays

USAGE

- Is anyone reading our work?
- Did anyone watch our videos?
- Usage is the #1 stat researchers want to know after Citation counts
- PlumX is the only product that includes Usage





## bookmarks, favorites, readers, watchers

- Captures indicate that someone wants to come back to the work
- Early indicator of future citations





blog posts, comments, reviews, Wikipedia links

- This category measures people truly engaging with your research
- Automatically uncover the conversations about your research
- Discover feedback, opinions, etc.





### SOCIAL MEDIA

 Social media measures how well a researcher is promoting their work

+1s, likes, shares,

tweets

- This is especially important for early career researchers to measure and understand
- Track the buzz and attention around your research output





### • Citations still a standard of long-term impact

Citation Indexes, Patent

Citations, Clinical

Citations

- Including citations enables side-by-side analysis with other metrics categories
- PlumX is expanding the definition of citations
  - Patent citations, Clinical Citations, etc.



## **Clinical Citations**

OPLUMX Welcome Sales Demo ~ 0 University of Western Australia Groups ~ O Embed Widget Home / Global, regional, and national p... 😪 NCBI 🛛 Resources 🖸 How To 🖂 Pub Med.gov PubMed EBSCO US National Library of Medicine Advanced National Institutes of Health Abstract -Send to: -DvnaN Lancet. 2014 Aug 30;384(9945):766-81. doi: 10.1016/S0140-6736(14)60460-8. Epub 2014 May 29. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a ISAGE ¥ systematic analysis for the Global Burden of Disease Study 2013. Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C, Mullany EC, Biryukov S, Abbafati C, Abera SF, Abraham JP, Abu-Rmeileh NM, Achoki T, Abstract View AlBuhairan FS, Alemu ZA, Alfonso R, Ali MK, Ali R, Guzman NA, Ammar W, Anwari P, Banerjee A, Barguera S, Basu S, Bennett DA, Bhutta Z, Blore J, Cabral N, Nonato IC, Chang JC, Chowdhury R, Courville KJ, Criqui MH, Cundiff DK, Dabhadkar KC, Dandona L, Davis A, Dayama A, Dharmaratne SD, Ding EL, Durrani Link-outs @ AM, Esteghamati A, Farzadfar F, Fay DF, Feigin VL, Flaxman A, Forouzanfar MH, Goto A, Green MA, Gupta R, Hafezi-Nejad N, Hankey GJ, Harewood HC, Clicks © Overvi Havmoeller R, Hay S, Hernandez L, Husseini A, Idrisov BT, Ikeda N, Islami F, Jahangir E, Jassal SK, Jee SH, Jeffreys M, Jonas JB, Kabagambe EK, Khalifa SE, ready a subso Kengne AP, Khader YS, Khang YH, Kim D, Kimokoti RW, Kinge JM, Kokubo Y, Kosen S, Kwan G, Lai T, Leinsalu M, Li Y, Liang X, Liu S, Logroscino G, Lotufo Relate PA, Lu Y, Ma J, Mainoo NK, Mensah GA, Merriman TR, Mokdad AH, Moschandreas J, Naghavi M, Naheed A, Nand D, Narayan KM, Nelson EL, Neuhouser ML. Nisar MI, Ohkubo T, Oti SO, Pedroza A, Prabhakaran D, Roy N, Sampson U, Seo H, Sepanlou SG, Shibuya K, Shiri R, Shiue I, Singh GM, Singh JA, Skirbekk V, Gener Stapelberg NJ, Sturua L, Sykes BL, Tobias M, Tran BX, Trasande L, Toyoshima H, van de Vijver S, Vasankari TJ, Veerman JL, Velasquez-Melendez G, Vlassov VV, Vollset SE, Vos T, Wang C, Wang X, Weiderpass E, Werdecker A, Wright JL, Yang YC, Yatsuya H, Yoon J, Yoon SJ, Zhao Y, Zhou M, Zhu S, Lopez AD, Epider Murray CJ, Gakidou E. Inci Erratum in untries evalu Lancet. 2014 Aug 30;384(9945):746. This arti Like Its ≥ 20 year Abstract Pos BACKGROUND: In 2010, overweight and obesity were estimated to cause 3.4 million deaths, 3.9% of years of life lost, and 3.8% of disability-Obesity adjusted life-years (DALYs) worldwide. The rise in obesity has led to widespread calls for regular monitoring of changes in overweight and obesity Ass March 8, 20 prevalence in all populations. Comparable, up-to-date information about levels and trends is essential to quantify population health effects and to oping countri prompt decision makers to prioritise action. We estimate the global, regional, and national prevalence of overweight and obesity in children and adults Read More Etiolog during 1980-2013. History and Physical Reference - Lancet 2014 Aug 30;384(9945):766, editorial can be found in Lancet 2014 Aug 30;384(9945):728



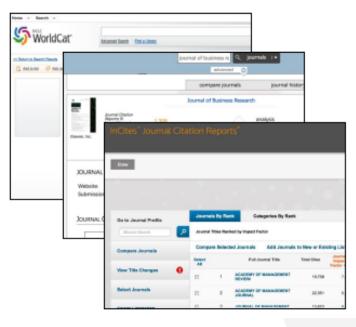
## **Case Study:**

## Saint Mary's College Custom Rubric

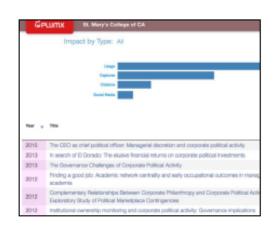
### Standard Journal Metrics

### Newer Journal Metrics

### Alt Metrics

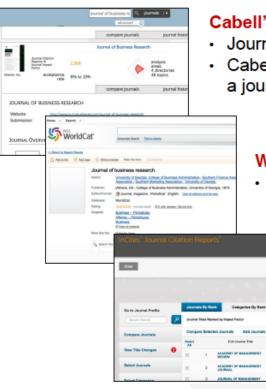


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### **Standard Journal Metrics**



### **Cabell's International**

- · Journal acceptance rate
- Cabell's Classification Index (CCI) reports the influence of a journal in a particular discipline

### WorldCat

 Reported holdings / ownership from libraries and institutions worldwide

### **Journal Citation Reports**

 Journal Impact Factor, a widely recognized measurement from Thomson Reuters, developed to rank and compare journals based on the times a typical article is cited.



### **Newer Journal Metrics**

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### SClamgo Journal Rank (SJR)

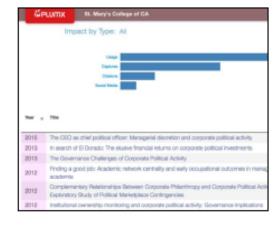
 A newer measure of journal influence, SJR measures both article citation counts, but also the influence of the other journals that those citations are in.

### SNIP

 One of the newest metrics, SNIP Indicator (Source Normalized Impact per Paper) aims to compare typical citation metrics but compared within the field only.



### **Alt Metrics**







## Impact Rubric St. Mary's College

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Peer-reviewed journal article	2016	Kolkede, E. and Gomez-Arias, J.T. (2016). Segmentation of infrequent performing aits consumer. Arts and the Market. 6 (1), 83-110.		25	70%	Qualified: Management and Marketing		not reported	not reported	not reported	25	not	reported			×		Jf	
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## **PlumX +Grants** Gain insight about your grants.

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### All Grants >





## PlumX Funding Opportunities Find the right funding opportunities.

### ŰPLUMX

### Funding Opportunities

#### Filter

#### Category

- Education
- Environment
- Food and Nutrition
- 🕑 Health
- Housing
- Income Security and Social Services

#### Agency

- Department of Defense
- Department of Health and Human Services
- Department of State

#### Eligibility

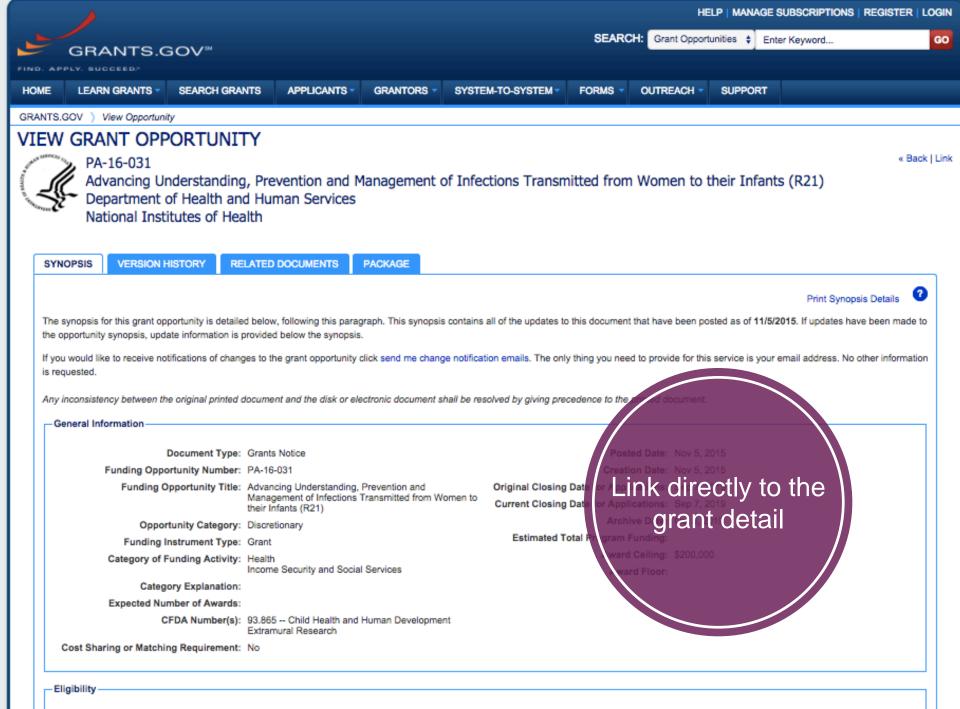
- City or township governments
- County governments
- Federally recognized Native American tribal governments
- E Federally unrecognized Native American

APPLICATIONS DUE: 2016-03-17 POSTED: 2015-12-11

### **Opportunity Number:** Keywords: HIV Show Expired Search Clear Search Sort by: Posted Date (newest first) \$ Total results: 120 showing: 1-50 Behavioral and Integrative Treatment Development Program (R34) AGENCY: Department of Health and Human Services APPLICATIONS DUE: 2019-01-07 POSTED: 2016-01-08 AWARD CEILING: \$225,000 NUMBER OF AWARDS: 25 Behavioral and Integrative Treatment Development Program (R01) AGENCY: Department of Health and Human Services Search for APPLICATIONS DUE: 2019-01-07 POSTED: 2016-01-08 NUMBER OF AWARDS: 25 **HIV** Funding Behavioral and Integrative Treatment Development Program (R03) **Opportunities** AGENCY: Department of Health and Human Services APPLICATIONS DUE: 2019-01-07 POSTED: 2016-01-08 AWARD CEILING: \$50,000 NUMBER OF AWARDS: 25 in Health Exploring Epigenomic or Non-Coding RNA Regulation in HIV/AIDS and AGENCY: Department of Health and Human Services APPLICATIONS DUE: 2016-03-02 POSTED: 2015-12-14 TOTAL FUNDING: \$3,000,000 AWARD CEILING: \$3,000,000 NUMBER OF AWARDS: 25 U.S.-China Program for Biomedical Collaborative Research (R01) AGENCY: Department of Health and Human Services



### **\$** ~



Eligible Applicants: Others (see text field entitled "Additional Information on Eligibility" for clarification)

## PlumX Benchmarks See how you compare. Now.

## New ways to benchmark

Usage								Explor	re by Usage 🗗
Rank	Institution	100	200	300	400	500	# Artifacts	# Interactions	Avg. per Artifact
324	UNIVERSITY OF MARYLAND BALTIMORE						1,630	955,464	586.2
359	JOHNS HOPKINS UNIVERSITY						7,109	3,836,896	539.7
379	STANFORD UNIVERSITY						4,121	2,133,468	517.7
513	HARVARD UNIVERSITY						468	188,393	402.5

Citation	IS						Explore	by Citations 🖻
Rank	Institution	10 	20 	30 I	40 I	# Artifacts	# Interactions	Avg. per Artifact
40	HARVARD UNIVERSITY					468	22,067	47.2
148	STANFORD UNIVERSITY					4,121	112,355	27.3
184	UNIVERSITY OF MARYLAND BALTIMORE					1,630	40,575	24.9
267	JOHNS HOPKINS UNIVERSITY					7,109	150,771	21.2



## **Thank You**

Find out more information at:

### http://www.plumanalytics.com

### **Mike MacKinnon**



MacKinnon@PlumAnalytics.com



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