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Application of the use of high-throughput technologies to the determination of protein structures of bacterial and viral pathogens

M. J. Fogg,[a] P. Alzari,[b] Daenke,[c] O. Dym,[i] M.-I Nordlund,[l+] R.J. Owen S. Wilson,[a] O. Zimhony

[a]York Structural Biology Lab CEDEX 15, France,[c]Division SestoFiorentino, Italy,[e]EMBL CNRS/Universités de Provenc Interactions Group, Macromo Jordi Girona, 1808034 Barcel Outstation, Notkestrasse 85, I Biophysics, Stockholm Unive Correspondence e-mail: jonat

The Structural Proteomic determination of proteins

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STATUS RECORD

Journal
Acta Crystallographica Section D: Biological Crystallography

Content type
research papers

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Peer review

Peer reviewed
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Review process
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Publication history

Received
17 March 2006

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Getting to CrossMark

By Molly Sharp and Kevin Brandt
Posted: March 31, 2014

This week, we launched our participation in CrossRef's CrossMark program. It's an exciting step for PLOS, and getting there was a learning experience we hope you'll find interesting.

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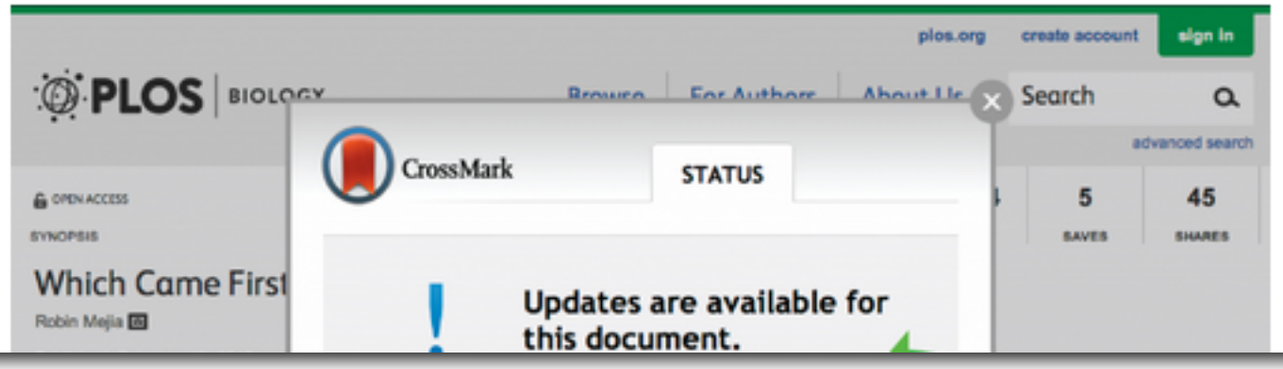

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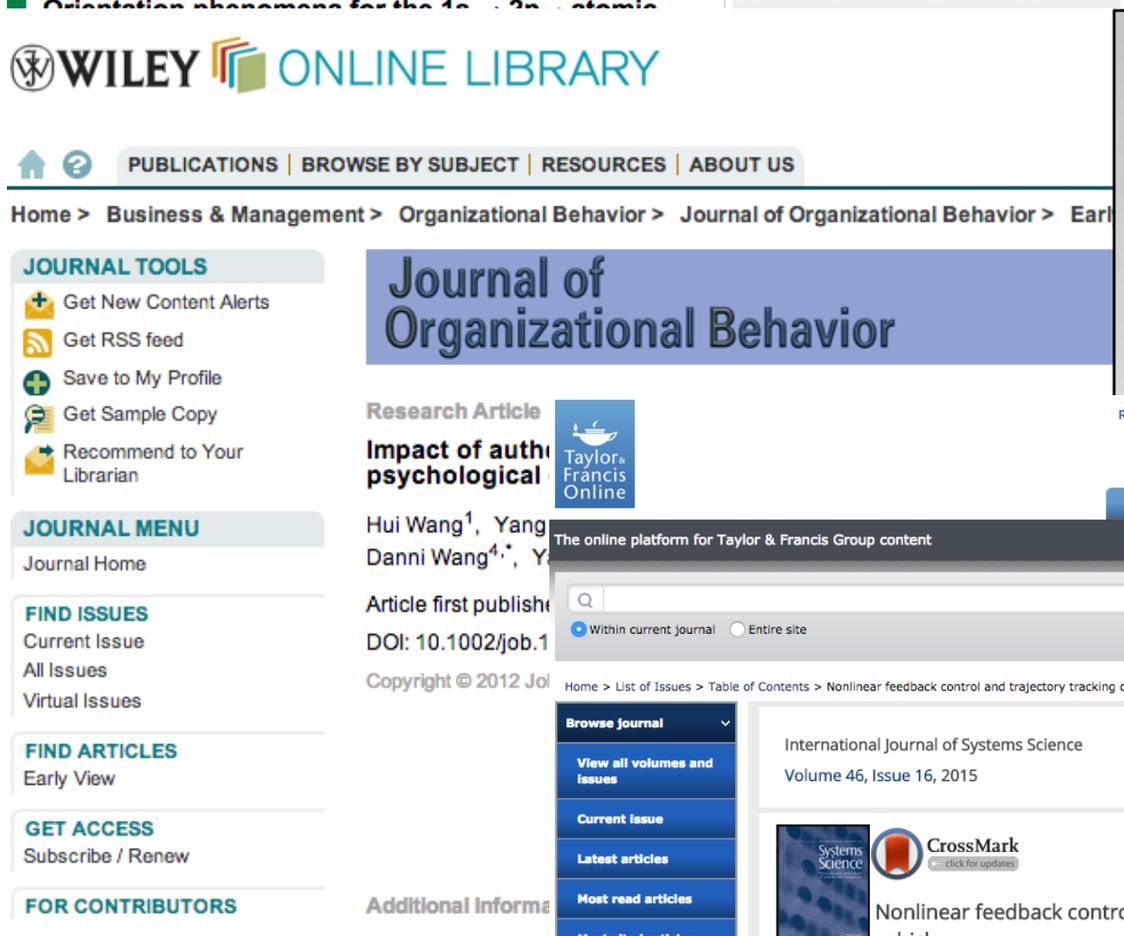

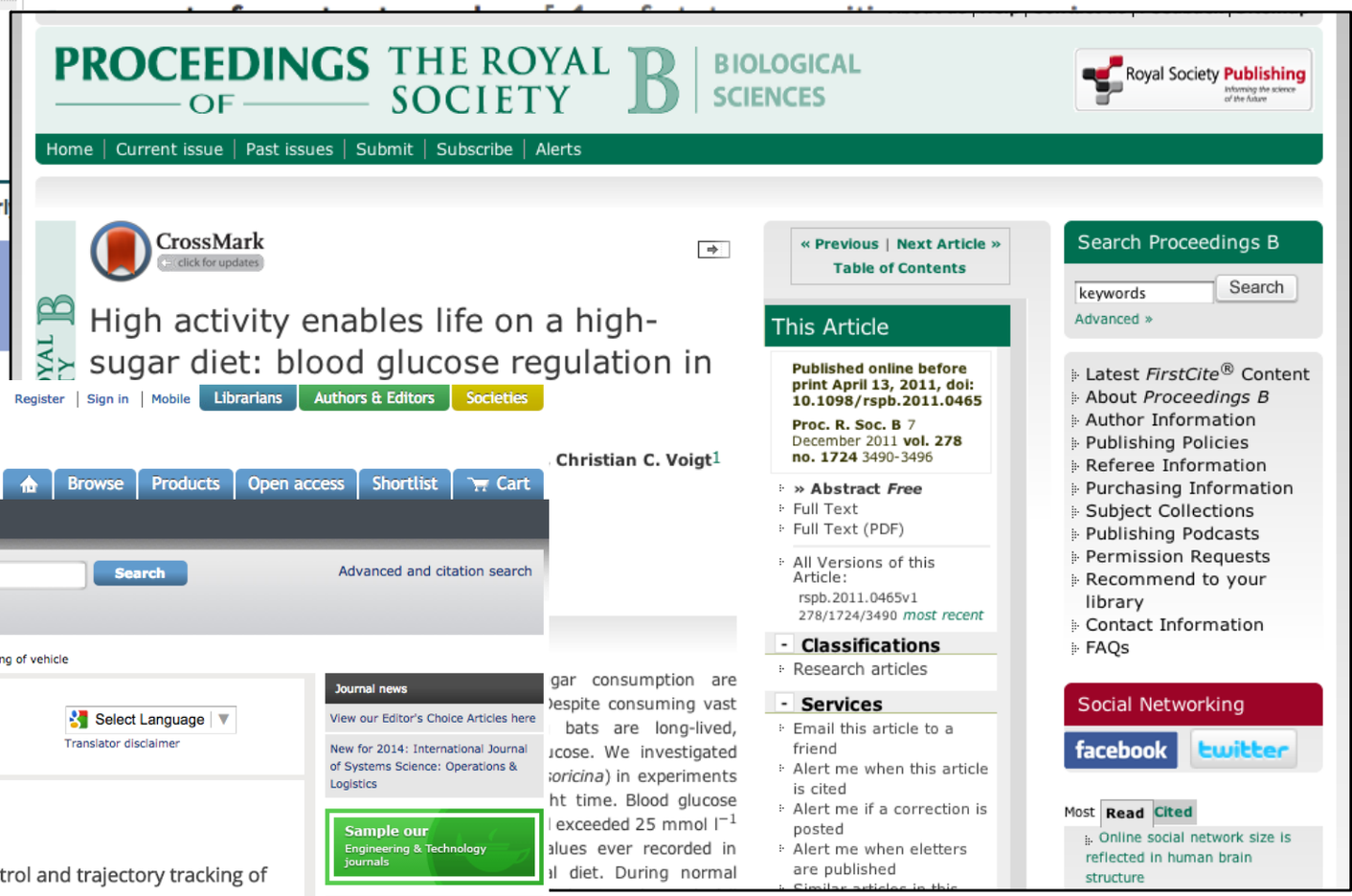

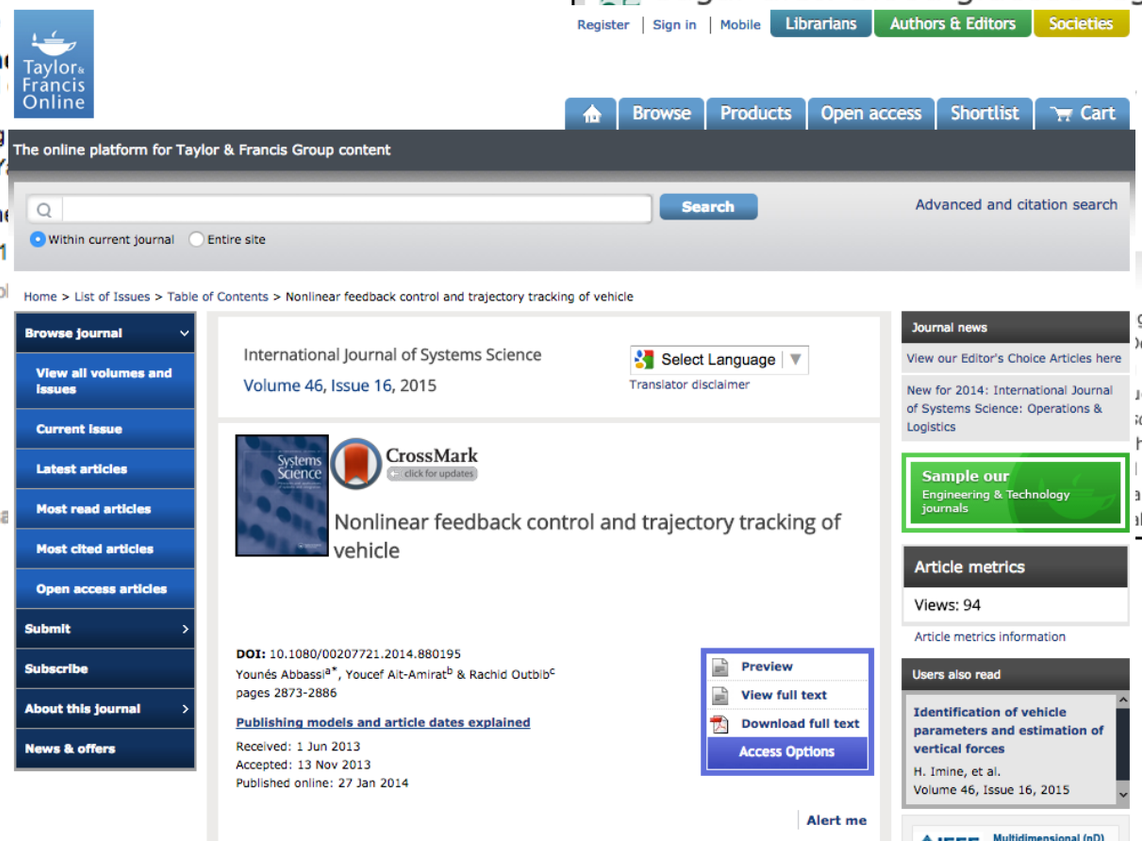

Biosensors and Bioelectronics 49 (2013) 1-8

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H_2O_2
NADH
Lactate biosensor
Simultaneous determination

Electrochemical studies revealed that the Fe_3O_4/r-GO/CC electrode possess excellent electrocatalytic activities toward the low potential oxidation of NADH (0.05 V vs. Ag/AgCl) as well as the catalytic reduction of O_2 and H_2O_2 at reduced overpotentials. Via immobilization of lactate dehydrogenase (LDH) as a model dehydrogenase enzyme onto the Fe_3O_4/r-GO/CC electrode surface, the ability of modified electrode for biosensing lactate was demonstrated. In addition, using differential pulse voltammetry (DPV) to investigate the electrochemical oxidation behavior of ascorbic acid (AA), dopamine (DA) and uric acid (UA) at Fe_3O_4/r-GO/CC electrode, the high electrocatalytic activity of the modified electrode toward simultaneous detection of these compounds was indicated. Finally, based on the strong electrocatalytic action of Fe_3O_4/r-GO/CC electrode toward both oxidation and reduction of nitrite, a sensitive amperometric sensor for nitrite determination was proposed. The Fe_3O_4/r-GO hybrid presented here showing favorable electrochemical features may hold great promise to the development of electrochemical sensors, molecular bioelectronic devices, biosensors and biofuel cells.

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"Fe3O4 magnetic nanoparticles/reduced graphene oxide nanosheets as a novel electrochemical and bioeletrochemical sensing platform"

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DOI: 10.1016/j.bios.2013.04.034
ISSN: 0956-5663
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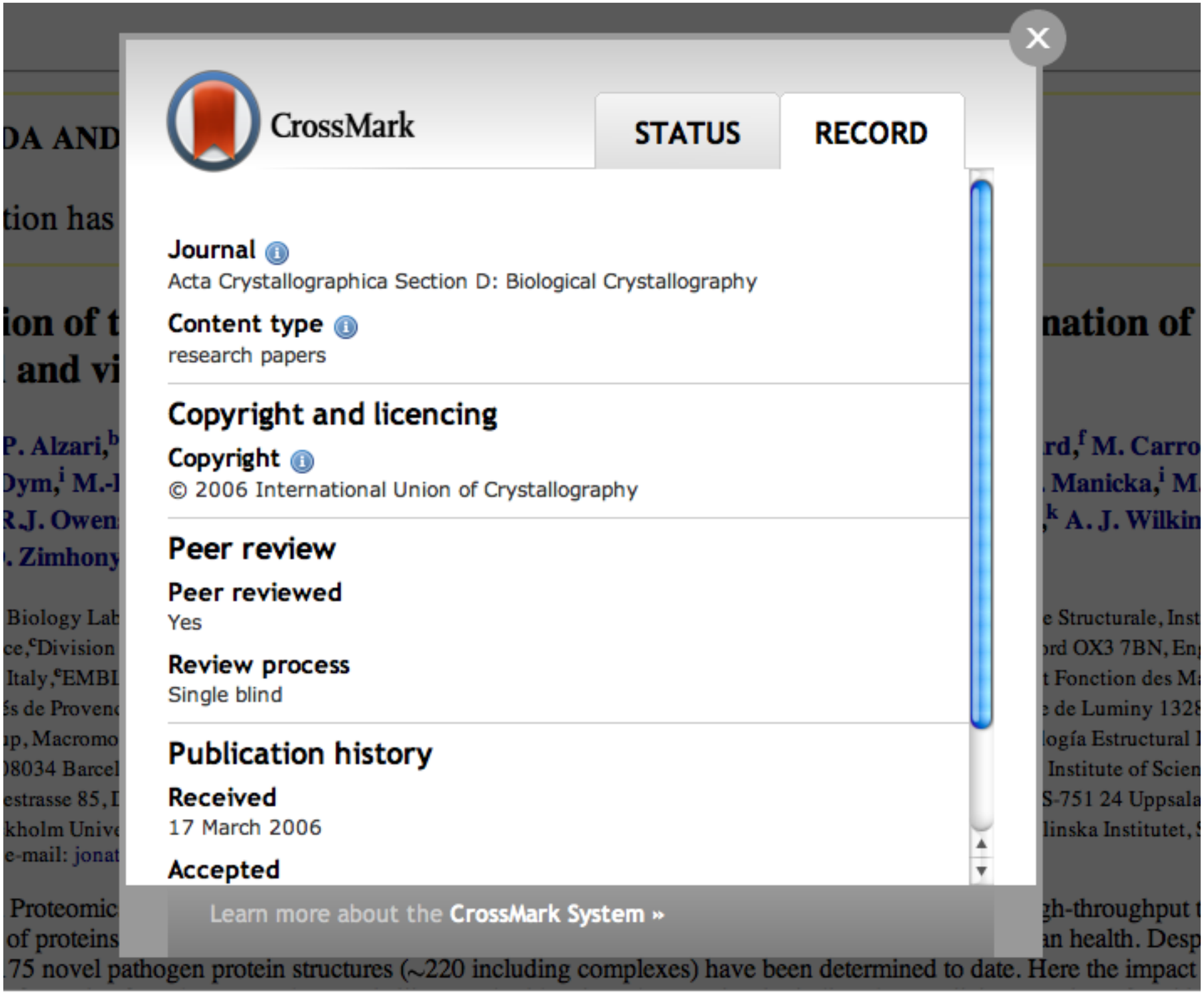

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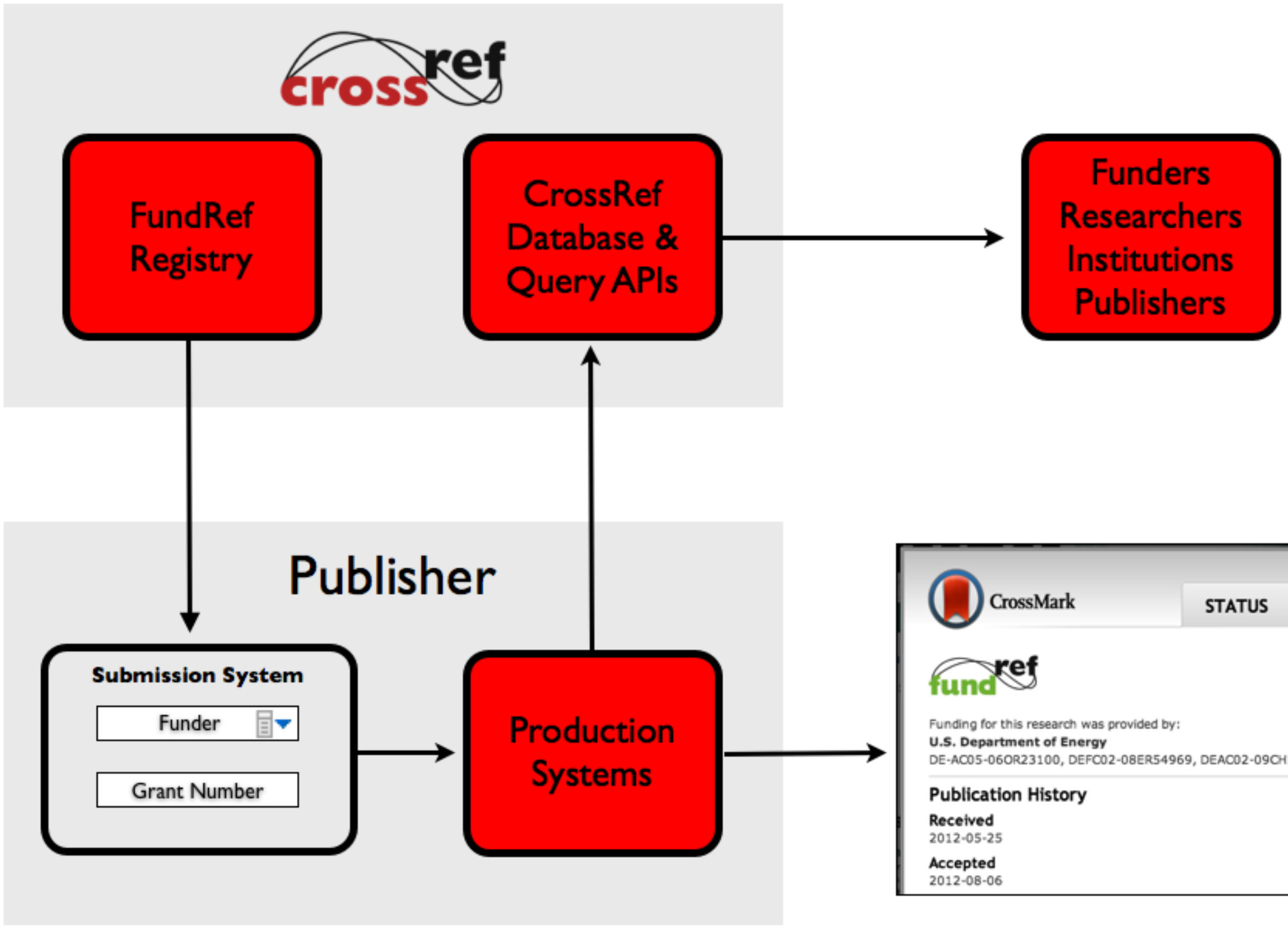
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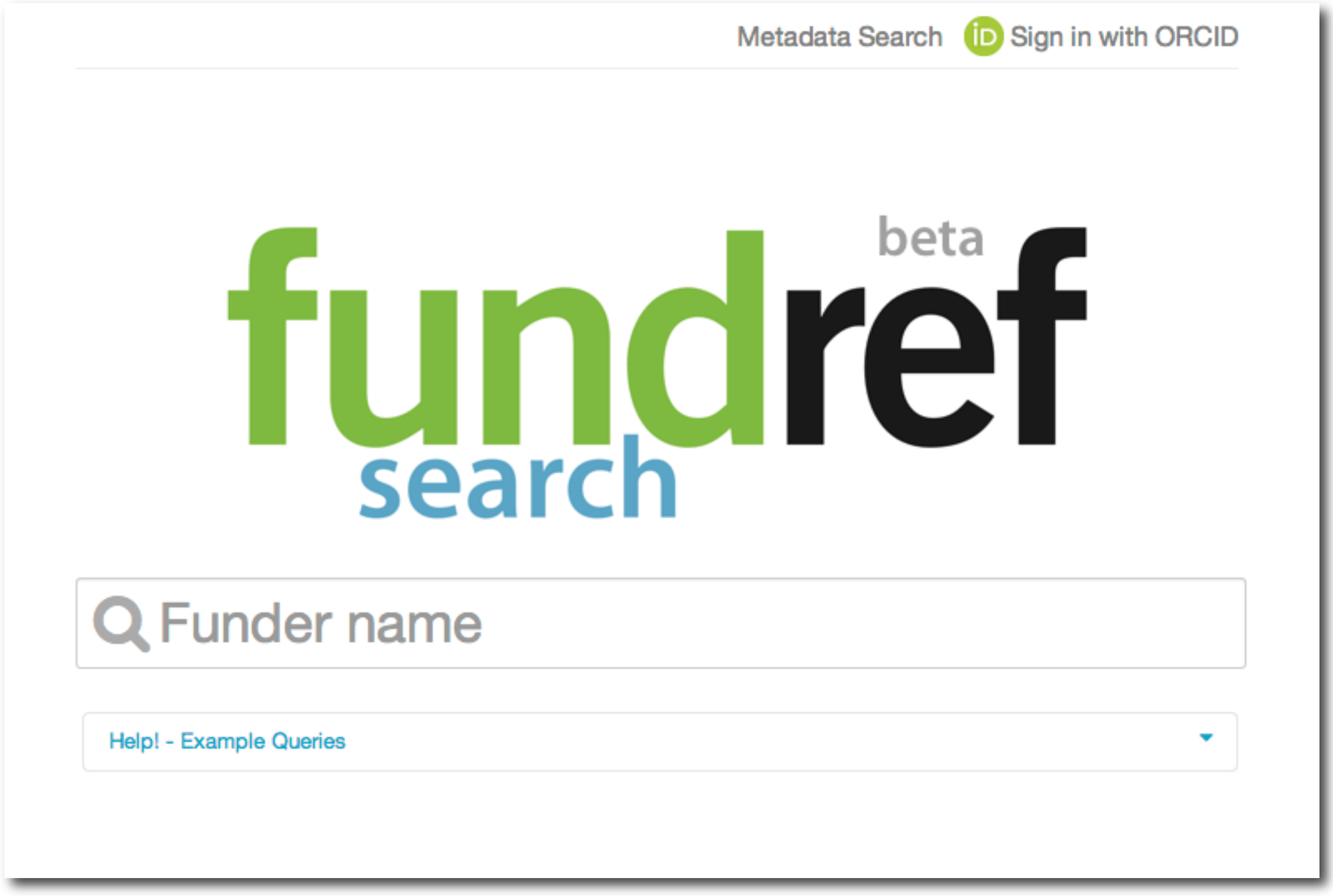

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Authors: Andrei V. Medvedev

Other IDs: S1053811913005946

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DOAJ High-resolution visualization of mouse cardiac microvasculature using optical histology

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Research funded by National Institute of Child Health and Human Development (R01HD065536) | National Institute of Biomedical Imaging and Bioengineering (P41EB015890) | Arnold and Mabel Beckman Foundation

Authors: Austin J. Moy, Patrick C. Lo, Bernard Choi

http://dx.doi.org/10.1364/boe.5.000069 Actions ADD TO ORCID

DOAJ Toward nodal staging of axillary lymph node basins through intradermal administration of fluorescent imaging agents

Journal Article published **1 Jan 2014** in **Biomedical Optics Express** volume **5** issue **1** on page **183**

Research funded by National Institutes of Health (U54 CA136404) | National Center for Research Resources (3 UL1RR024148)

Authors: Funda Meric-Bernstam, John C. Rasmussen, Savitri Krishnamurthy, I-Chih Tan, Banghe Zhu, Jamie L. Wagner, Gildy V. Babiera, Elizabeth A. Mittendorf, Eva M. Sevick-Muraca

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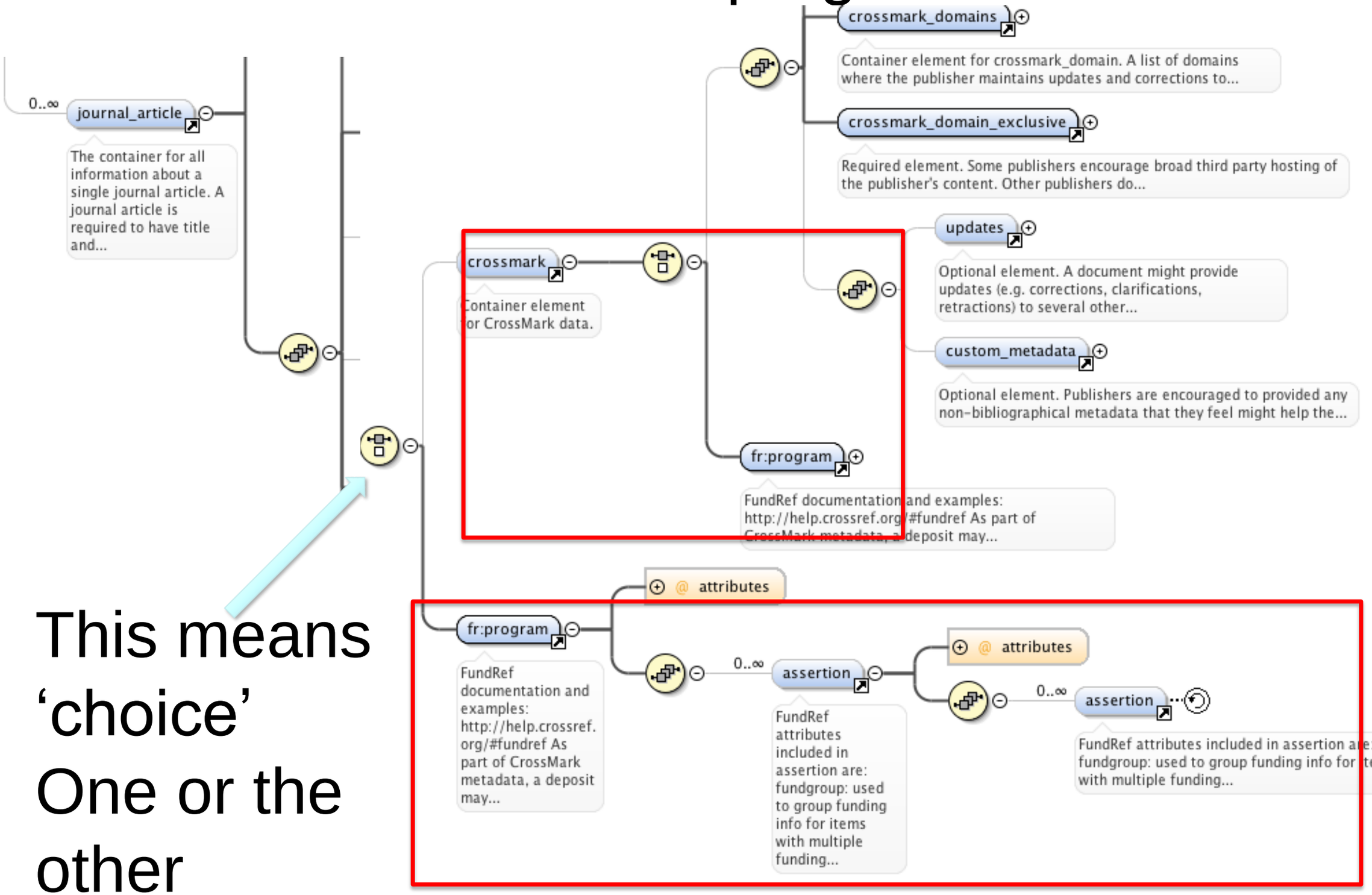

This means ‘choice’
One or the other

An example XML deposit

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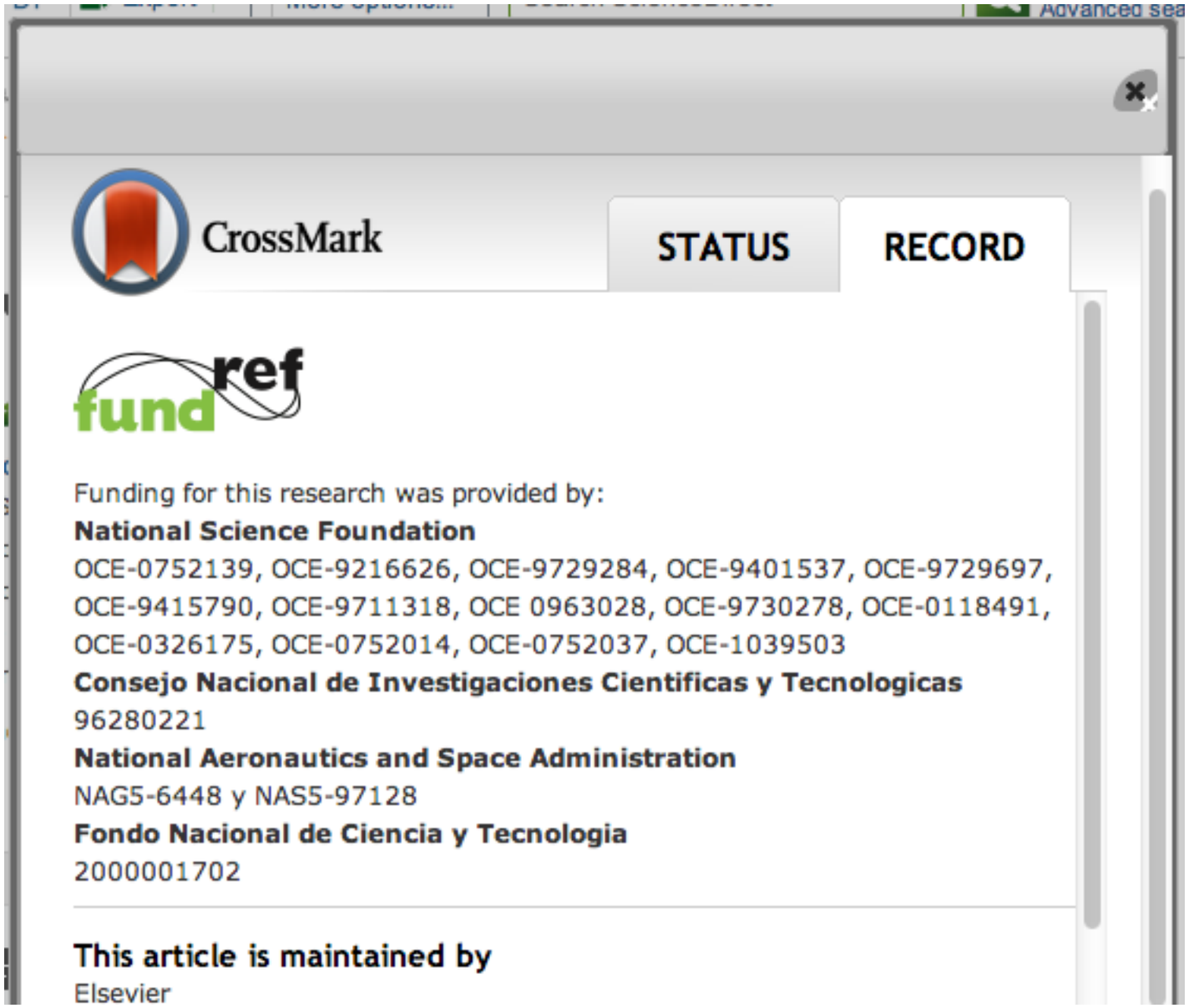
FundRef Dialogue featuring CrossMark



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http://www.sciencedirect.com/science/article/pii/S0967064513000039

Text and Data Mining

- A new service from CrossRef, launched May 2014
- A cross-publisher API to support the retrieval of full-text content for text and data mining

What is text and data mining?

Text Mining is an interdisciplinary field combining techniques from linguistics, computer science and statistics to build tools that can efficiently retrieve and extract information from digital text.

http://blogs.plos.org/everyone/2013/04/17/announcing-the-plos-text-mining-collection/

It uses powerful computers to find links between drugs and side effects, or genes and diseases, that are hidden within the vast scientific literature. These are discoveries that a person scouring through papers one by one may never notice.

http://www.theguardian.com/science/2012/may/23/text-mining-research-tool-forbidden

Marc Weeber and colleagues used automated text mining tools to infer that the drug thalidomide could treat several diseases it had not been associated with before. Thalidomide was taken off the market 40 years ago, but is still the subject of research because it seems to benefit leprosy patients via their immune systems. Weeber and Grietje Molema, an immunologist, used text mining tools to search the literature for papers on thalidomide and then pick out those containing concepts related to immunology. One concept, concerning thalidomide's ability to inhibit Interleukin-12 (IL-12), a chemical involved in the launch of an immune response, struck Molema as particularly interesting. A second automated search for diseases that improve when the action of IL-12 is blocked, revealed several not previously linked with thalidomide, including chronic hepatitis, myasthenia gravis and a type of gastritis.

"Type in thalidomide and you get 2-3000 hits. Type in disease and you get 40,000 hits. With automated text mining tools we only had to read 100-200 abstracts and 20 or 30 full papers. We've created hypotheses for others to follow up" says Weeber.

Weeber et al. J Am Med Inform Assoc. 2003 10 252-259

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- Subscription-based publishers find it impractical to negotiate multiple bilateral agreements with thousands of researchers and institutions in order to authorize TDM of subscribed content.
- All parties would benefit from support of standard APIs and data representations in order to enable TDM across both open access and subscription-based publishers.

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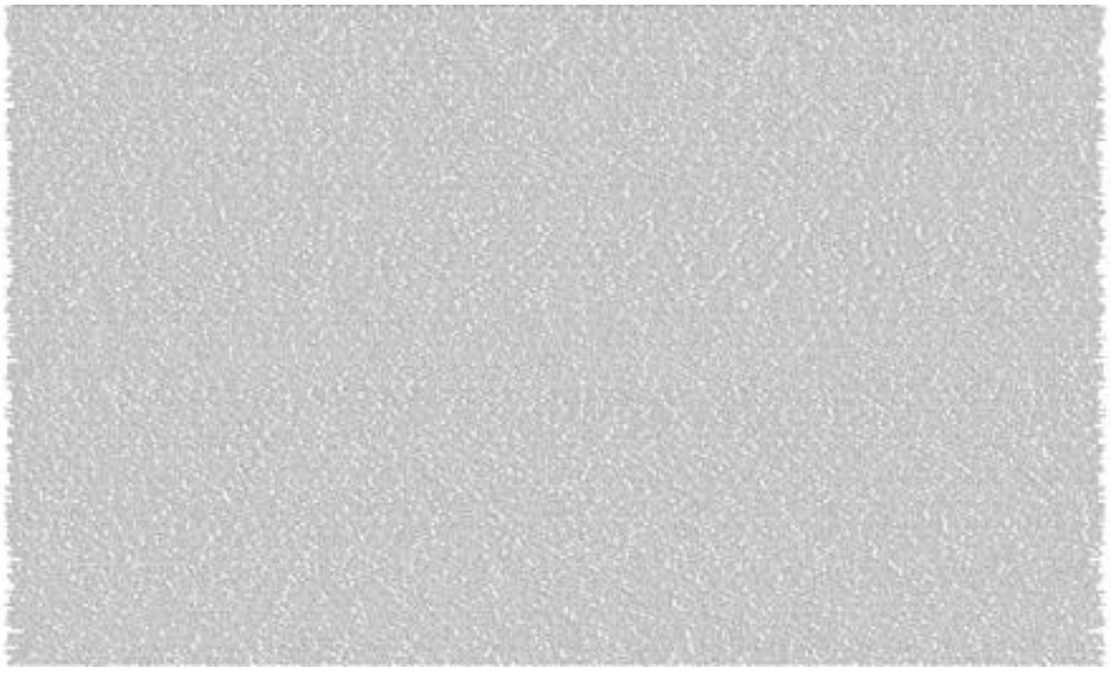
Bilateral agreements don’t scale



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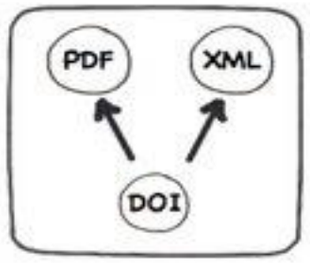

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