Equilibre entre évaluation avant et après publication:

vers plus d'ouverture et de discussion

Iratxe Puebla, Managing Editor, *PLOS ONE*

Octobre 2016

Equilibre entre évaluation avant et après publication: vers plus d'ouverture et de discussion

- Le modèle *PLOS ONE*
- Assurance de qualité avant publication
- Evaluation après publication
- Vers plus d'ouverture

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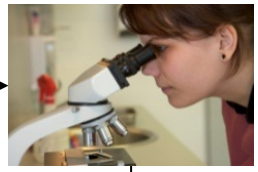

Recherche

Soumission du manuscrit

Evaluation par les pairs

Publication

Financement

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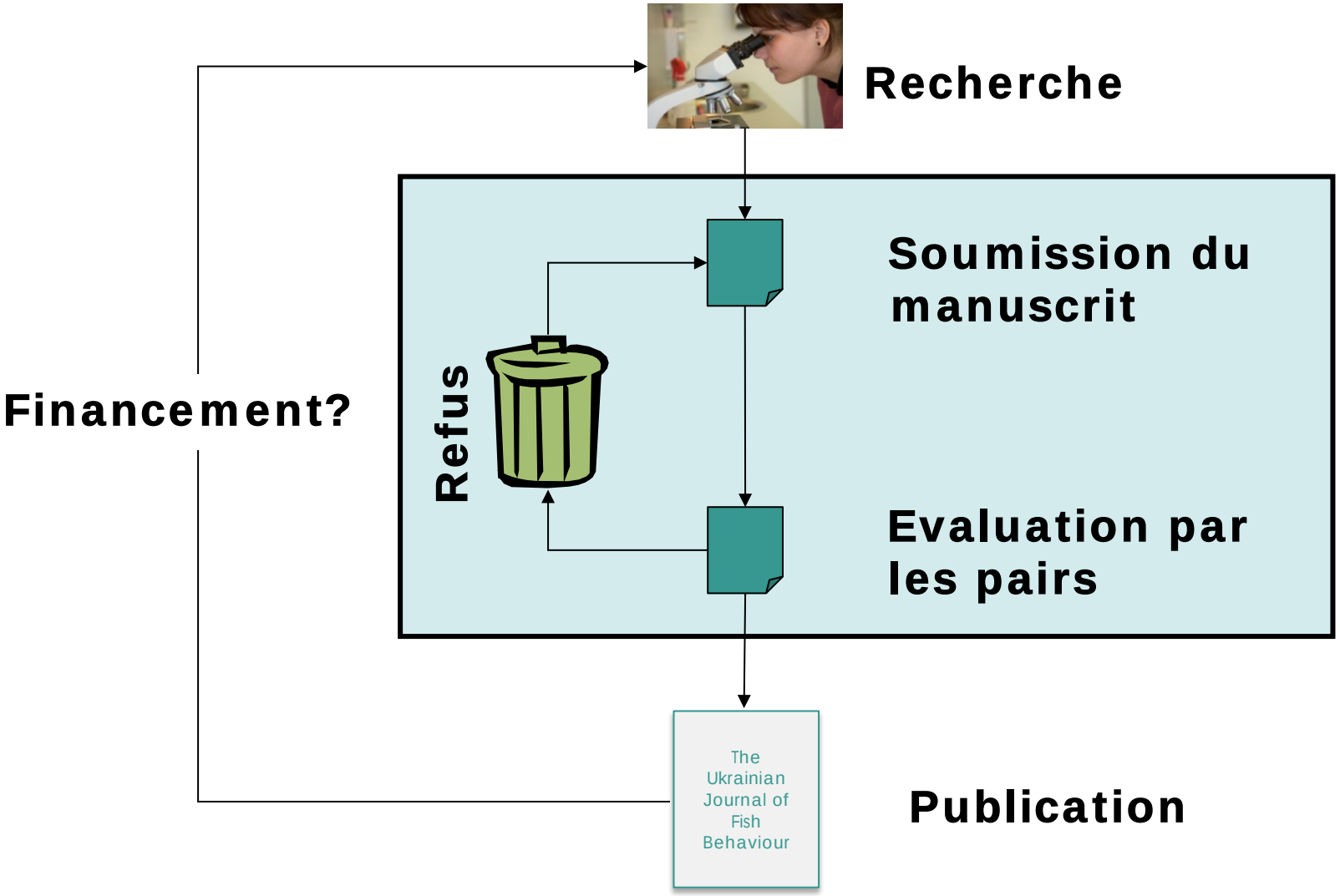
Recherche
Soumission du manuscrit
Refus
Evaluation par les pairs
Financement?
The Ukrainian Journal of Fish Behaviour
Publication

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à

Le modèle *PLOS ONE*

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Evaluation scientifique **avant** publication basée sur des critères de rigueur scientifique et technique

- Normes éthiques
- Description complète et reproductible de la méthodologie
- Conclusions soutenues par les données

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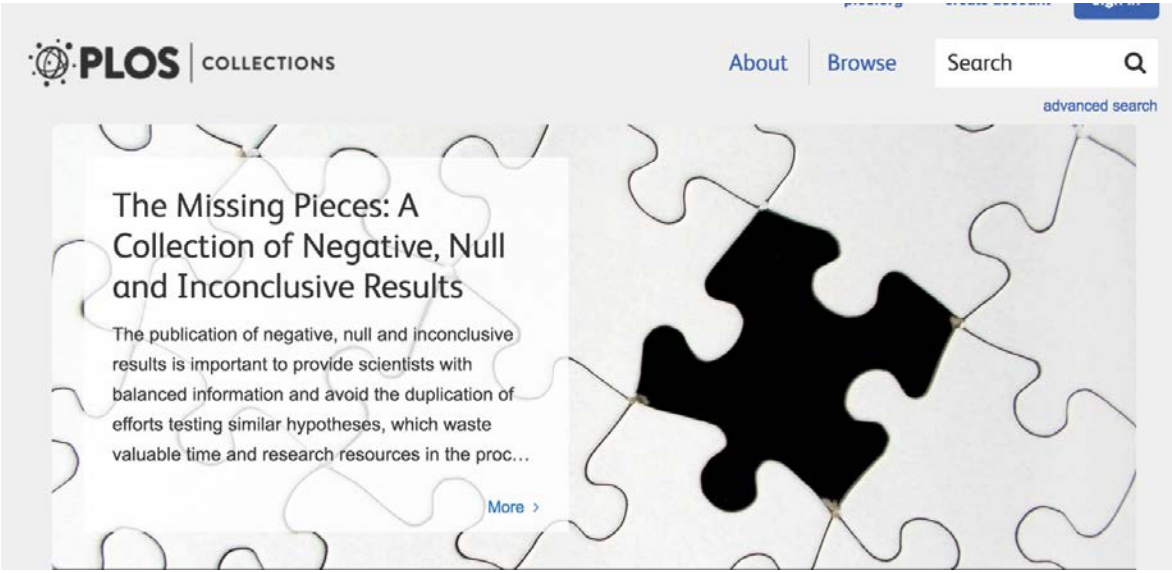
Le modèle *PLOS ONE*

Evaluation d'impact ou niveau d'intérêt faite **après** publication

- Par la communauté scientifique et pas juste l'éditeur et relecteurs
- Publication d'articles présentant des résultats négatifs ou réplications d'études



Assurance de qualité *avant* publication

Contrôles internes	Evaluation par les pairs
Approbation éthique, permis	Méthodologie, conception experimentale
Conflits d'interêt	Analyse
Financement	Statistiques
Disponibilité des données	Interpretation et conclusions
Enregistrement des essais cliniques	
Recommendations type CONSORT, PRISMA	
Plagiat	

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Assurance de qualité *avant* publication

- Développement des politiques éditoriales –normes éthiques et de publication
- Collaboration avec la communauté scientifique – Groupes consultatifs
- Progrès vers l'open data – PLOS Data policy
- Etude de l'évaluation par les pairs ou des conséquences de diverses règles éditoriales

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Mais l'évaluation par les pairs a ses limites…

- Lente
- Risque de subjectivité
- Pas d'incitation à la collaboration
- L'évaluation par pairs est une boite noir – il n'est pas simple a rechercher ou évaluer son efficacité
- La science est plus multidisciplinaire qu'elle ne l'était

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Mais l'évaluation par pairs a ses limites…

OPEN ACCESS

ESSAY

Why Most Published Research Findings Are False

John P. A. Ioannidis

Published: August 30, 2005 • http://dx.doi.org/10.1371/journal.pmed.0020124

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Abstract

Modeling the Framework for False Positive Findings

Bias

Testing by Several Independent Teams

Corollaries

Most Research Findings Are False for Most Research Designs and for Most Fields

Claimed Research Findings May Often Be Simply Accurate Measures of the Prevailing Bias

Abstract

Summary

There is increasing concern that most current published research findings are false. The probability that a research claim is true may depend on study power and bias, the number of other studies on the same question, and, importantly, the ratio of true to no relationships among the relationships probed in each scientific field. In this framework, a research finding is less likely to be true when the studies conducted in a field are smaller; when effect sizes are smaller; when there is a greater number and lesser preselection of tested relationships; where there is greater flexibility in designs, definitions, outcomes, and analytical modes; when there is greater financial and other interest and prejudice; and when more teams are involved in a scientific field in chase of statistical significance. Simulations show that for most study designs and settings, it is more likely for a research claim to be false than true. Moreover, for many current scientific fields, claimed research findings may often be simply accurate measures of the prevailing bias. In this essay, I discuss the implications of these problems for the conduct and interpretation of research.

Related PLOS Articles

Most Published Research Findings Are False—But a Little Replication Goes a Long Way

When Should Potentially False Research Findings Be Considered Acceptable?

When Should Potentially False Research Findings Be Considered Acceptable?

Minimizing Mistakes and Embracing Uncertainty

1 editeur + 2/3 relecteurs –est ce suffisant?

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Ioannidis JPA (2005) Why Most Published Research Findings Are False. PLoS Med 2(8): e124.

Evaluation *après* publication

L'évaluation d'impact ou importance peut se faire

après publication

au niveau de ***l'article individuel*** et non le journal

De nouvelles modalités d'évaluation d'impact sont nécessaires

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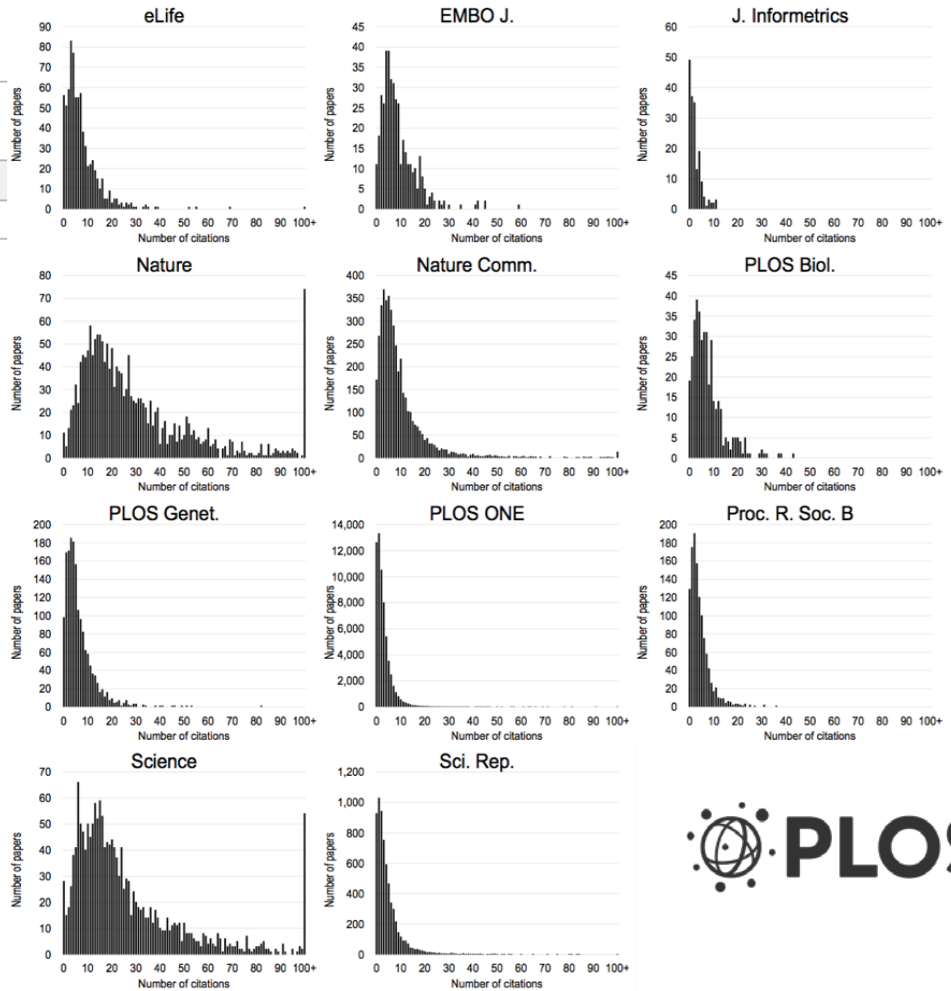
New Results

A simple proposal for the publication of journal citation distributions

Vincent Lariviere, Veronique Kiermer, Catriona J MacCallum, Marcia McNutt, Mark Patterson, Bernd Pulverer, Sowmya Swaminathan, Stuart Taylor, Stephen Curry

doi: http://dx.doi.org/10.1101/062109



Evaluation *après* publication

Article-level metrics

Une série de mesures qui donne une notion globale de la performance, influence et suivi des articles

- Vues
- Téléchargements
- Citations
- Marque page
- Twitter
- Facebook
- Commentaires

A Comprehensive Assessment of Impact with Article-Level Metrics (ALMs)

ALMs are quantifiable measures that document the many ways in which both scientists and the general public engage with published research.

Traditional metrics, which consider only citation count and journal name to assess impact, capture a narrow view of a work's value and do so only after the accumulation of citations in academic literature.

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Evaluation *après* publication

OPEN ACCESS PEER REVIEWED

RESEARCH ARTICLE

Nutrition and Health – The Association between Eating Behavior and Various Health Parameters: A Matched Sample Study

Nathalie T. Burkert, Johanna Muckenhuber, Franziska Großschädl, Éva Rásky, Wolfgang Freidl

Published: February 7, 2014 • http://dx.doi.org/10.1371/journal.pone.0088278

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PMC	24,673	2,117	n.a.	26,790
Totals	219,048	162,380	100	381,528

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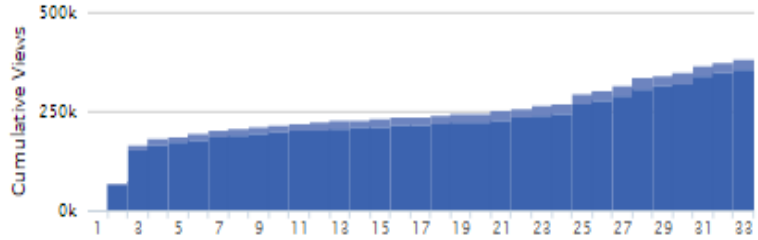

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6	866	1023	108	15

Evaluation *après* publication

Commentaires

Plateformes de commentaires pour une discussion ouverte, disponible a tout lecteur

Evaluation et discussion après publication

- Analyse du travail et des études dans son domaine
- Identification des erreurs
- Questions aux auteurs

Generalization of economic results

Posted by damiller51 on **05 Nov 2012 at 18:36 GMT**

In your economic analysis of the compared cropping systems, you indicate you used current NASS reported crop values. While this assumption will hold for an individual case or for minimal adoption of the cropping rotation, it definitely would not hold for large-scale adoption as the acreage of corn and soybeans would be dramatically decreased and the acreage of oats and alfalfa significantly increased if there were, in fact, large scale adoption of the longer rotations. Given that a 3-year rotation reduces annual acreage of corn and soybeans by 33% each, and increases acreage of the small grains and alfalfa by large percentages, if even the state of Iowa adopted this production system, there would be large negative economic reactions. This should have been pointed out in the discussion, particularly since there is media pick-up of the article suggesting that "all farmers" could adopt this type of farming system with "no adverse economic impacts"

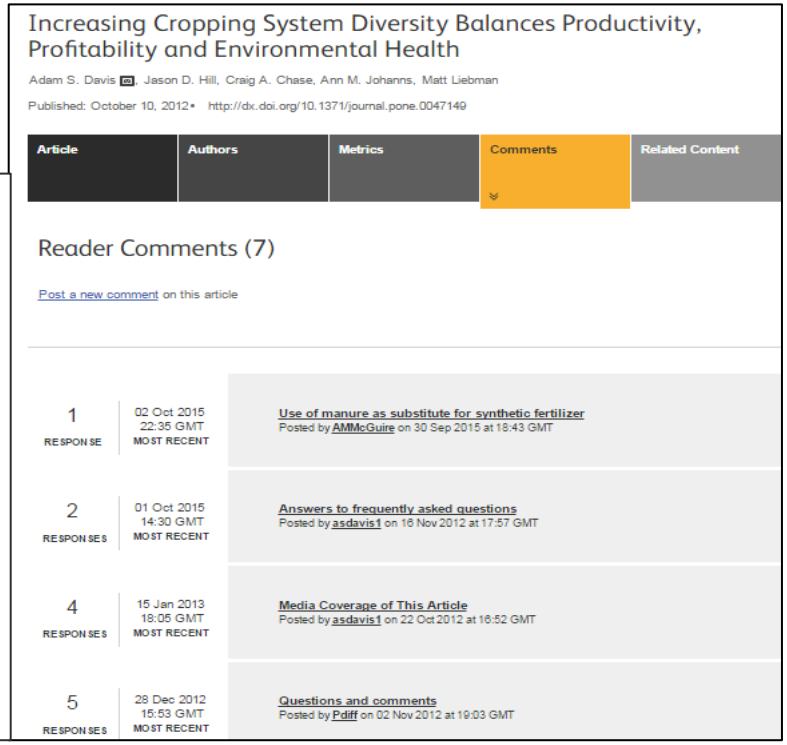
No competing interests declared.

report a concern | respond to this posting

RE: Generalization of economic results

mliebman replied to damiller51 on **08 Nov 2012 at 19:37 GMT**

The authors of this study work for either the USDA or public land grant universities, conducting research and then extending that research to a wide range of audiences; that is our mission. The economics portion of the study focused on answering the question: "can a farmer integrate alternative cropping systems that would gain environmental benefits and at the same time be profitable?" To answer that question, costs such as those for field operations conducted, inputs applied, and labor required were assessed for each cropping system included in the research. In essence, enterprise budgets were developed like a farmer would develop to determine profitability for each aspect of his or her operation for each crop, each year. The individual budgets were then aggregated over a designated time period. This procedure is very common among agricultural economists as a way to compare economic returns over different crop rotations, tillage systems, and fertility regimes, among many other research questions. It is a way for farmers to do an initial feasibility study of adopting a practice or an alternative cropping system without taking the risk of conducting it on their own farm. This approach is designed to illustrate to an individual farmer whether an alternative has the potential to be profitable. Whether the answer is yes, it is profitable, or no, it is not profitable, has policy implications.



Increasing Cropping System Diversity Balances Productivity, Profitability and Environmental Health

Adam S. Davis, Jason D. Hill, Craig A. Chase, Ann M. Johanns, Matt Liebman

Published: October 10, 2012 • http://dx.doi.org/10.1371/journal.pone.0047149

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Evaluation *après* publication

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Bülent Arman Aksoy: (March 18th, 2016 7:16pm UTC)

gene expression signature, called IPRES, the authors it group with the non-benefit one. To do this, authors alysis, followed by a gene set enrichment analysis f the enriched gene sets down to a core set that is used atient has an enriched IPRES signature. The authors y benefiting patients and that this signature defines a lata sets; yet it fails to identify benefiting patients in the

have yet to be seen; however, I found the way the his signature very concerning and I have the following paper:

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ived post. You won't be able to vote or comment.

PLOS Science Wednesdays: Hi, I'm Laura Jurgens here to talk about my research on the mass death of sea species along the Pacific Coastline — Ask Me Anything! self.science

1 year ago by * (last edited 1 year ago)PLOSScienceWednesday 20 PLOS Science Wednesday Guest

Updated post-AMA:

Hi Reddit, Thanks to all of you who submitted questions, answers and insights. I wish I could have gotten to all of them and I thank you for your interest!

Laura Jurgens (tweeting @seacurious)

§

Hi Reddit,

My name is Laura Jurgens and I am a postdoctoral researcher at Temple University and Smithsonian Institution. My research focuses on how marine organisms, and the interacting communities they form, respond to extreme events and global change.

Together with a wonderful group of collaborators, I recently published a study titled "Patterns of Mass Mortality among Rocky Shore Invertebrates across 100 km of Northeastern Pacific Coastline" in PLOS ONE. In it, we describe an unusual event that killed nearly 100% of two species, a tiny sea star and a sea urchin, over a large region, following a harmful algal bloom or "red tide". We discuss why it's especially important, but often hard, to document such events, which may be increasing in severity and frequency with human-induced changes to our oceans. We

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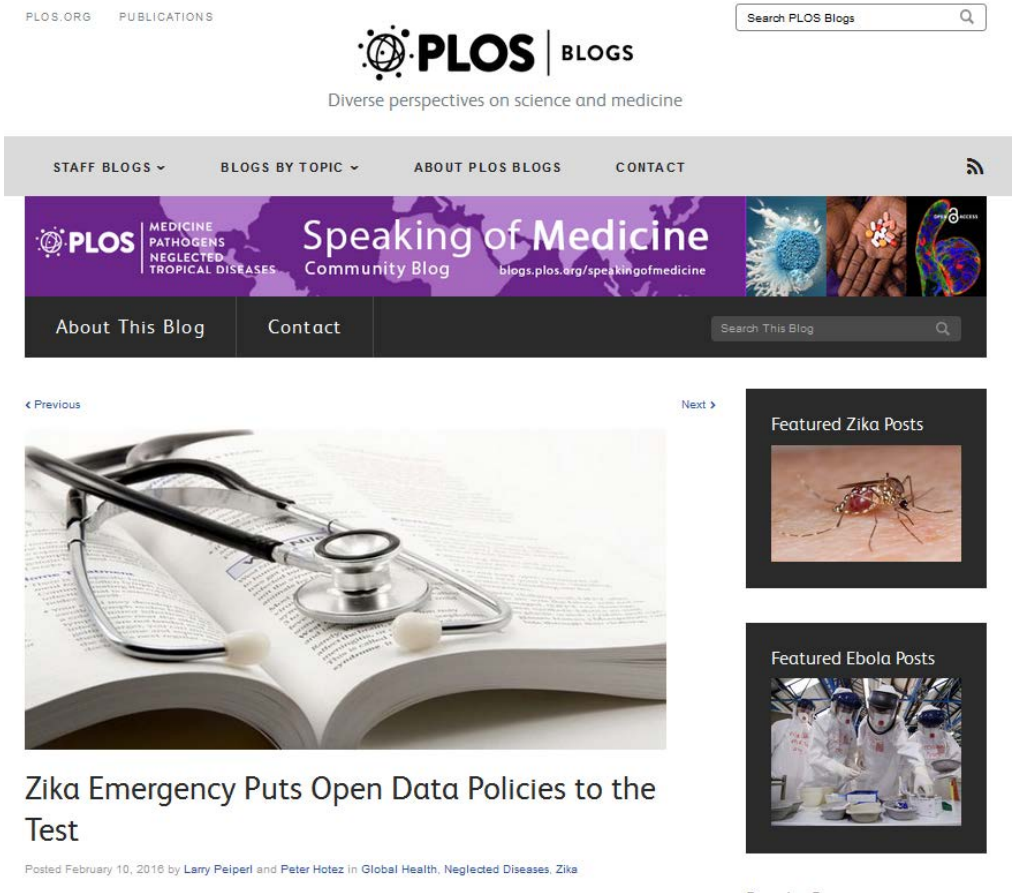
Vers plus d'ouverture

On peut avancer vers plus d'ouverture

Preprint servers – rendre l'information disponible plus rapidement



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Vers plus d'ouverture

On peut avancer vers plus d'ouverture

- Preprint servers – rendre l'information disponible plus rapidement
- Open peer review –publication des rapports signés
- Evaluation par les pairs en continu
- Récompenser l'ouverture, la fiabilité, le partage
  - Pour les relecteurs
  - Pour les auteurs- partage, bonnes pratiques
  - Pour toute activité scientifique-pas juste les articles

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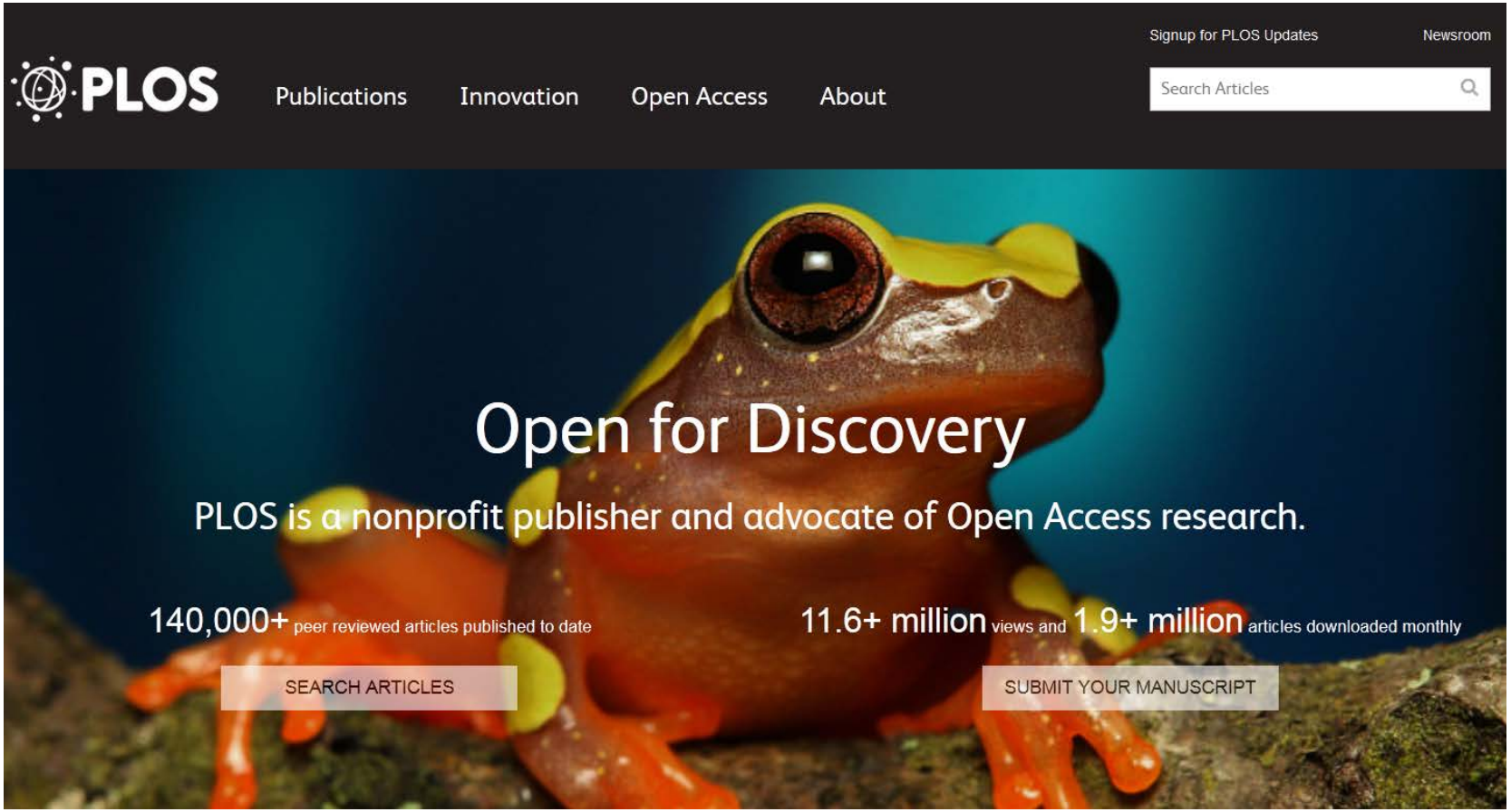
Le Open Access n’ést que le début



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Merci

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ipuebla@plos.org

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