Open Research Publishing

18th June 2018

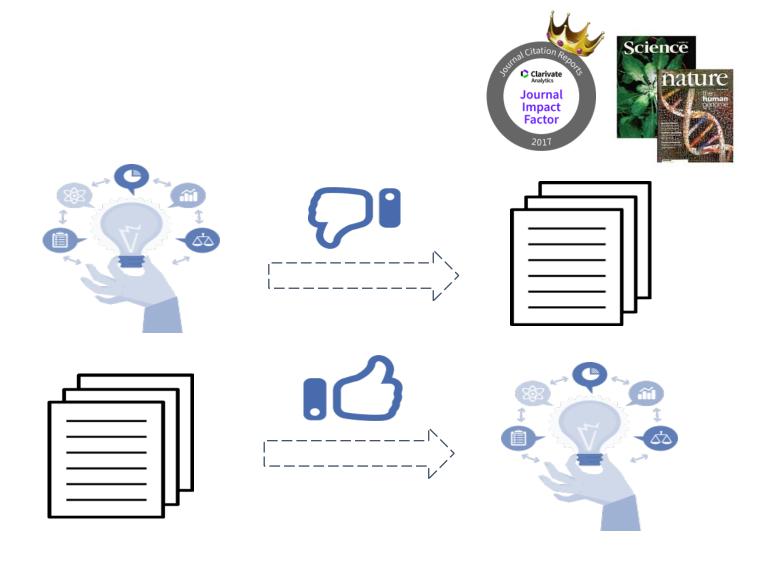
Michael Markie

@mmmarksman

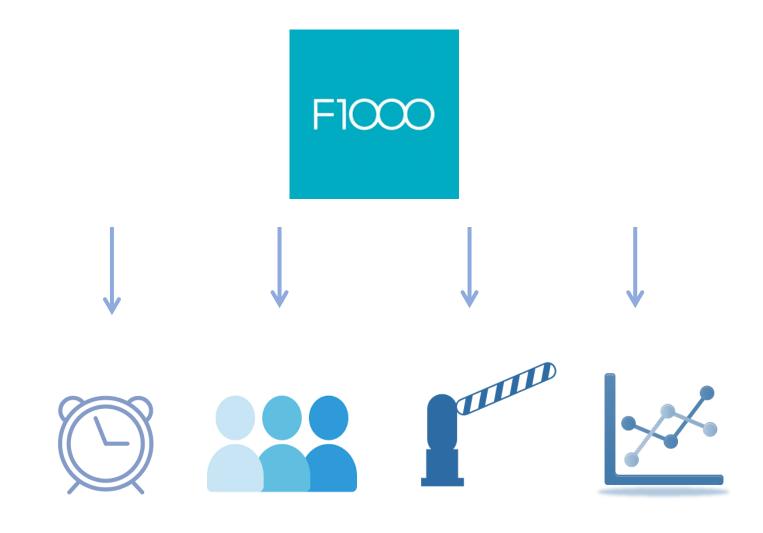
Publisher, F1000 Platforms



How we share research currently:

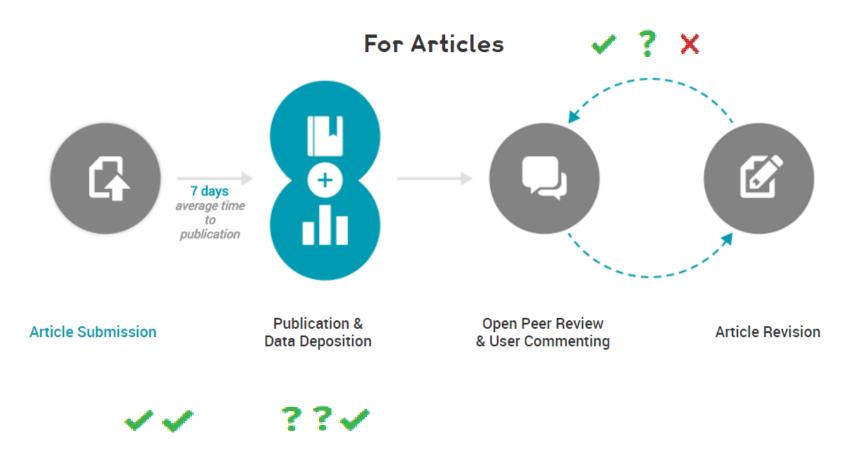


Evolving how we communicate research



How it works:

The Publishing Process



 Articles that pass peer review will be fully indexed in Europe PMC, PMC, PubMed, Scopus, Google Scholar and other bibliographical databases.

Funder-based publishing platforms





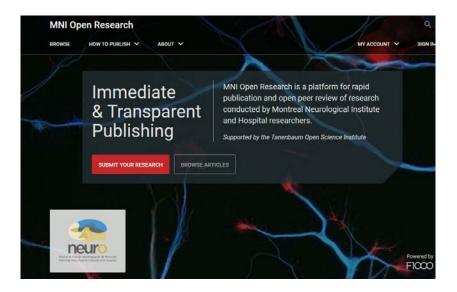


Funder-based publishing platforms





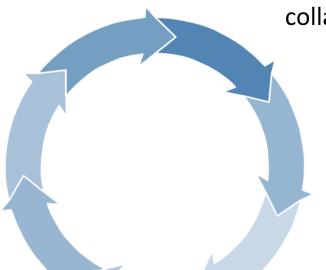
Institutional publishing platforms





Changing requirements of funders/institutions

Demand for rapid access



Drive to open & collaborative research

Demand to accelerate impact

Drive towards open data, software and materials

Why do funders want an open research platform?

- a service to their researchers outlet (complementary) for <u>all</u> research findings that is funded.
- testing **new approach** to improve science & its impact:
 - accelerate access & sharing of findings & data
 - efficiency to reduce waste & support reproducibility
 - alternative OA model access, transparency, cost
- enable researchers get credit & recognition for a wider range of research outputs

Case Study: The Wellcome Trust

"To improve the way research is communicated by enabling researchers to publish in an open and accessible way"

- Make it easier for researchers to provide information that supports reproducibility.
- Support a move away from the flawed metrics of the Journal Impact Factor and related measures.
- Help to "shift the needle" and inform new policies on researcher assessment.

Case Study: The Wellcome Trust



RESEARCH ARTICLE

REVISED Free serum haemoglobin is associated with brain atrophy in secondary progressive multiple sclerosis [version 2; referees: 3 approved]

Alex Lewin^{1,5*}, Shea Hamilton $\stackrel{1}{\text{lo}}$ 2*, Aviva Witkover², Paul Langford $\stackrel{1}{\text{lo}}$ 2, Richard Nicholas³, Jeremy Chataway⁴, Charles R.M. Bangham $\stackrel{1}{\text{lo}}$ 2

- * Equal contributors
- + Author details
- + Grant information

Abstract

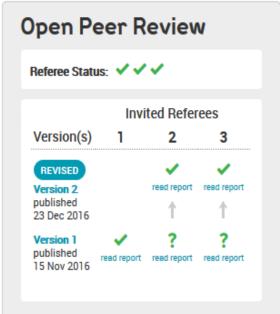
Background: A major cause of disability in secondary progressive multiple sclerosis (SPMS) is progressive brain atrophy, whose pathogenesis is not fully understood. The objective of this study was to identify protein biomarkers of brain atrophy in SPMS.

Methods: We used surface-enhanced laser desorption-ionization time-of-flight mass spectrometry to carry out an unbiased search for serum proteins whose concentration correlated with the rate of brain atrophy, measured by serial MRI scans over a 2-year period in a well-characterized cohort of 140 patients with SPMS. Protein species were identified by liquid chromatography-electrospray ionization tandem mass spectrometry.

Results: There was a significant (p<0.004) correlation between the rate of brain atrophy and a rise in the concentration of proteins at 15.1 kDa and 15.9 kDa in the serum. Tandem mass spectrometry identified these proteins as alphahaemoglobin and beta-haemoglobin, respectively. The abnormal concentration of free serum haemoglobin was confirmed by ELISA (p<0.001). The serum lactate dehydrogenase activity was also highly significantly raised (p<10⁻¹²) in patients with secondary progressive multiple sclerosis.







- Hans Lassmann, Medical University of Vienna, Austria
 Simon Hametner, Medical University of Vienna, Austria
- George Harauz, University of Guelph, Canada Vladimir V. Bamm, University of Guelph, Canada
- 3 Franz Fazekas, Medical University of Graz, Austria Michael Khalil, Department of Neurology, Medical University of Graz, Graz, Austria, Austria

All reports (5)

Comments on this article

All comments (1)

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Case Study: The Wellcome Trust

Referee Report 18 Nov 2016

Hans Lassmann, Center for Brain Research, Medical University of Vienna, Vienna, Austria Simon Hametner, Center for Brain Research, Medical University of Vienna, Vienna, Austria

Approved



This is a very interesting study providing convincing evidence for an association between the serum level increases of free haemoglobin with the extent of brain atrophy progression, determined by MRI, in secondary progressive multiple sclerosis. This was originally observed by the authors using an unbiased proteomics approach, aimed at determining potential serum biomarkers for disease progression. The patient collective derives from a well-controlled clinical trial investigating the effect of simvastatin on the rate of brain atrophy progression in secondary progressive MS. Having found this association, the authors then confirmed free hemoglobin increase in SPMS patients by an independent approach using ELISA.

The study is very well performed, based on a sound and innovative technology and the results have major implications for the understanding of the neurodegenerative process in MS. Interestingly, the association between haemoglobin serum level increase and atrophy rate occurred independently from the effect of simvastatin treatment. Thus increased haemoglobin in the serum may contribute to the neurodegenerative process, but there are other mechanisms additionally involved. By showing also increased levels of serum LDH the authors further support the concept that there is a low

degree of hemolysis in the peripheral bl counts, haematocrit or total blood haen association between actual free hemog determined by mass spectrometry, and hemoglobin increase with brain atrophy conclude. Furthermore, the quantitative included in the ELISA quantification tak be available, and the analysis could be

There is good indirect evidence that iro amplification of oxidative injury. So far, disease process of MS is not fully unde haemoglobin, may be of major importar presumably bound to the haemoglobin blood-brain barrier and might lead to irc lesions. The key question, which howev the blood of MS patients. Interestingly, in MS patients (J. Prineas, 1968) and the result in liberation of haemoglobin (E.A.

REVISED Amendments from Version 1

We thank the reviewers for their comments and suggestions. In the revised version of the paper (v.2), we have taken into account the points raised by each set of reviewers. The main changes are the following:

- clarification of points of methodology (e.g. sampling; use of Top 12 protein depletion columns)
- more cautious wording on possible therapy, and to make clear the principle that we have not proved causality or claim that free serum haemoglobin is the sole correlate of brain atrophy in SPMS
- clearer and fairer representation of the results reported in previous publications
- addition of 8 papers to the bibliography, citing as suggested both old work (on erythrocyte fragility) and very recent work
- answering specific points concerning the normal total blood haemoglobin concentration and the kinetics of neurodegeneration
- significance values for pairwise statistical tests in Figure 3.

See referee responses

Wellcome Open Research



RESEARCH ARTICLE

REVISED Estimating the number of cases of podoconiosis in Ethiopia using geostatistical methods [version 2; referees: 4 approved]

Kebede Deribe (b) 1.2, Jorge Cano (b) 3, Emanuele Giorgi (b) 3.4, David M. Pigott⁵, Nick Golding (b) 6.7, Rachel L. Pullan³, Abdisalan M. Noor^{8,9}, Elizabeth A. Cromwell⁵, Aaron Osgood-Zimmerman⁵, Fikre Enquselassie¹, Asrat Hailu¹⁰, Christopher J. L. Murray⁵, Melanie J. Newport (b) 2, Simon J. Brooker¹¹, Simon I. Hay^{5,12}, Gail Davey (b) 2

- + Author details
- + Grant information

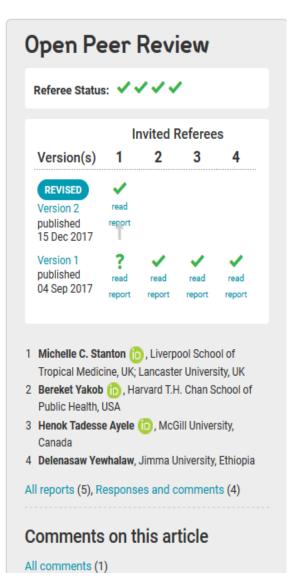
Abstract

Background: In 2011, the World Health Organization recognized podoconiosis as one of the neglected tropical diseases. Nonetheless, the magnitude of podoconiosis and the geographical distribution of the disease is poorly understood. Based on a nationwide mapping survey and geostatistical modelling, we predict the prevalence of podoconiosis and estimate the number of cases across Ethiopia.

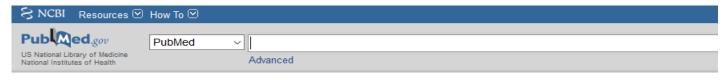
Methods: We used nationwide data collected in Ethiopia between 2008 and 2013. Data were available for 141,238 individuals from 1,442 communities in 775 districts from all nine regional states and two city administrations. We developed a geostatistical model of podoconiosis prevalence among adults (individuals aged 15 years or above), by combining environmental factors.

The number of people with podoconiosis was then estimated using a gridded map of adult population density for 2015. **Results**: Podoconiosis is endemic in 345 districts in Ethiopia: 144 in Oromia, 128 in Southern Nations, Nationalities and People's [SNNP], 64 in Amhara, 4 in Benishangul Gumuz, 4 in Tigray and 1 in Somali Regional State. Nationally, our





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Format: Abstract

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Wellcome Open Res. 2017 Sep 4;2:78. doi: 10.12688/wellcomeopenres.12483.2. eCollection 2017.

Estimating the number of cases of podoconiosis in Ethiopia using geostatistical methods.

 $\underline{\text{Deribe } K^{1,2}, \underline{\text{Cano } J^3}, \underline{\text{Glorqi } E^{3,4}, \underline{\text{Piqott } DM^5}, \underline{\text{Golding } N^{6,7}, \underline{\text{Pullan } RL^3}}, \underline{\text{Noor } AM^{8,9}, \underline{\text{Cromwell } EA^5}, \underline{\text{Osqood-Zimmerman } A^5}, \underline{\text{Enquselassie } F^1, \underline{\text{Hailu } A^{10}}, \underline{\text{Murray } CJL^5}, \underline{\text{Newport } MJ^2, \underline{\text{Brooker } SJ^{11}, \underline{\text{Hay } Sl^{5,12}}, \underline{\text{Davey } G^2}}.$

Author information

Abstract

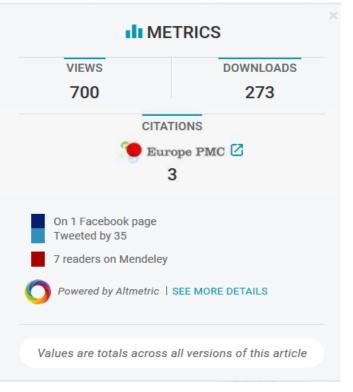
BACKGROUND: In 2011, the World Health Organization recognized podoconiosis as one of the neglection Nonetheless, the number of people with podoconiosis and the geographical distribution of the disease a nationwide mapping survey and geostatistical modelling, we predict the prevalence of podoconiosis across Ethiopia.

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RESULTS: Podoconiosis is endemic in 345 districts in Ethiopia: 144 in Oromia, 128 in Southern Nations [SNNP], 64 in Amhara, 4 in Benishangul Gumuz, 4 in Tigray and 1 in Somali Regional State. Nationally, 1,537,963 adults (95% confidence intervals, 290,923-4,577,031 adults) were living with podoconiosis i Oromia and Amhara) contributed 99% of the cases. The highest proportion of individuals with podocor (39%), while 32% and 29% of people with podoconiosis resided in Oromia and Amhara Regional State Benishangul Gumuz Regional States bore lower burdens, and in the remaining regions, podoconiosis Discussion: The estimates of podoconiosis cases presented here based upon the combination of curred data and a robust modelling approach clearly show that podoconiosis is highly endemic in Ethiopia. Gi prevention, and morbidity management and disability prevention services, it is our collective responsib rapidly.

KEYWORDS: Ethiopia; elephantiasis; lymphoedema; mossy foot; neglected tropical disease; podoconiosis

DMD- 20152506 DMCD- DMC56690027 DOI: 10 12699/walloomoon.com 12102 2



Gateways

Gateways provide personalized portals for institutions or organizations, with links to other resources.



Avon Longitudinal Study of Parents and Children (ALSPAC)



KEMRI | Wellcome Trust



Mahidol Oxford Tropical Medicine Research Unit (MORU)



View

Malawi-Liverpool Wellcome Trust Clinical Research Programme



Oxford University Clinical Research Unit (OUCRU)



The Francis Crick Institute



Transforming Genetic Medicine Initiative (TGMI)



Wellcome Trust/DBT India Alliance

<u>Gateways</u>



ABOUT ~

About this Gateway

ABOUT THIS GATEWAY

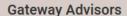
BROWSE

The Francis Crick Institute is a biomedical discovery institute dedicated to understanding the fundamental biology underlying health and disease. Its work is helping to understand why disease develops and to translate discoveries into new ways to prevent, diagnose and treat illnesses such as cancer, heart disease, stroke, infections, and neurodegenerative diseases.

HOW TO PUBLISH ~

An independent organisation, its founding partners are the Medical Research Council (MRC), Cancer Research UK, Wellcome, UCL (University College London), Imperial College London and King's College London.

The Crick was formed in 2015, and in 2016 it moved into a brand new state-of-the-art building in central London which brings together 1500 scientists and support staff working collaboratively across disciplines, making it the biggest biomedical research facility under a single roof in Europe.





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The Francis Crick Institute,

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The Francis Crick Institute,



Markus Ralser The Francis Crick Institute, UK

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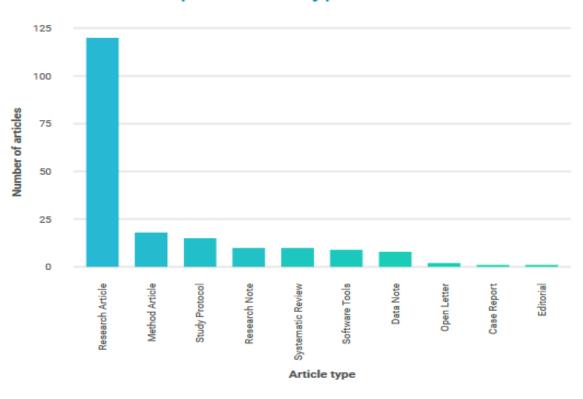
WOR – Article types

65% Research Articles

35% Other Article types

All articles have a data availability statement

Publications per article type

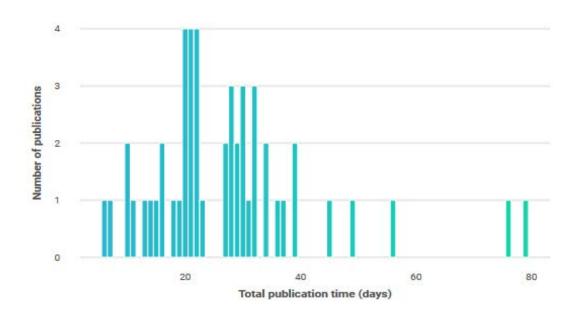


WOR – Publication times

PROCESS	MEDIAN	MEAN
Submission to Publication	23 days	28.72 days
Submission to Indexed	66 days	84.87 days

PROCESS	MEDIAN	MEAN
Submission to prepublication checks	2 days	2.75 days
Prepublication checks to authors	1 day	1.19 days
Final Submission to publication	8 days	10.65 days

Article publication time



WOR – Peer Review times

PROCESS	MEDIAN	MEAN
Days until 1 st referee report received	15	20
Days until 2 nd referee report received	28	39
Days until article passes peer review	36	57





WOR – Impact thus far

226 Published Articles

• 170 Articles indexed in PubMed, PMC & Europe PMC.

Total Article views: ~250,000

Total downloads: ~50,000

Total citations: 150 from

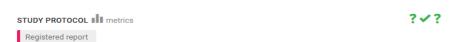
60+ articles



Article innovations

Registered reports





Stage 1 Registered Report: Variation in neurodevelopmental outcomes in children with sex chromosome trisomies: protocol for a test of the double hit hypothesis [version 1; referees: 1 approved, 2 approved with reservations]

Dianne F. Newbury, Nuala H. Simpson, Paul A. Thompson, Dorothy V. M. Bishop

REFEREES Armin Raznahan; Beate St Pourcain; David Skuse

FUNDERS Wellcome Trust | European Research Council

PUBLISHED 12 Feb 2018

Interactive figures and embedding reproducibility





What are the Benefits?

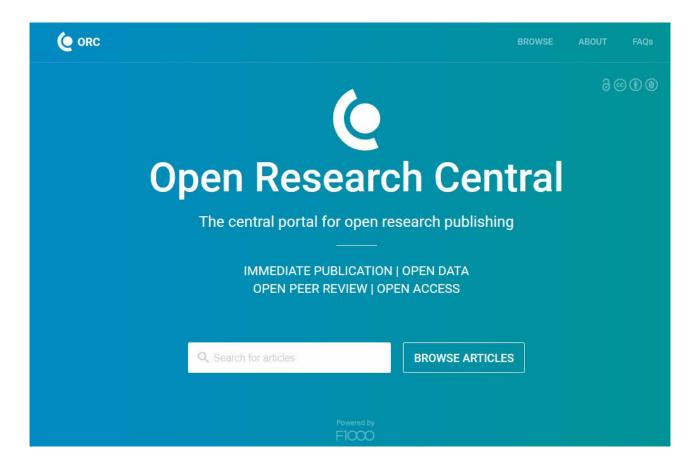
- Fast articles can be published within a week
- Inclusive can publish <u>all</u> research outputs
- Open fulfils funders OA & data sharing requirements
- Reproducible data is published alongside article
- Transparent open, author-driven, peer review
- Easy costs are met directly by the funders

Long Term Vision



- Prove the model works effectively: can accelerate impact
- Researchers embrace approach, supported by Funders/Institutions
- Publisher role changes: from gatekeepers to facilitators; compete to provide best services
- Changes piste for metrics: greater access to range of research outputs & data on behaviours/contributions

Long Term Vision



https://openresearchcentral.org/

Open Research Central – platforms merge & across all fields of research

