

A complex network graph visualization with numerous blue nodes and connecting lines, forming a dense, star-like structure in the background.

Peer Community In & Peer Community Journal



Denis Bourguet
Thomas Guillemaud

INRAE



From preprint recommendation to Diamond
Open Access publication



Scientific publishing



Too long

Cascade of submissions/rejections

Sometimes between 1 or 2 years between submission and publication



Opaque

Evaluation reports and editor's name not published

Data, scripts and codes often not published

Conflicts of interest not disclosed

70% of articles are behind paywalls



Pernicious

The income of the publisher depends directly on the number of articles accepted



Too expensive

9 billion € / 3 millions articles = 3000 € / article (France: ~ 150 M € /year)

Extraordinary profit margin (35-40% for the 5 big publishers)



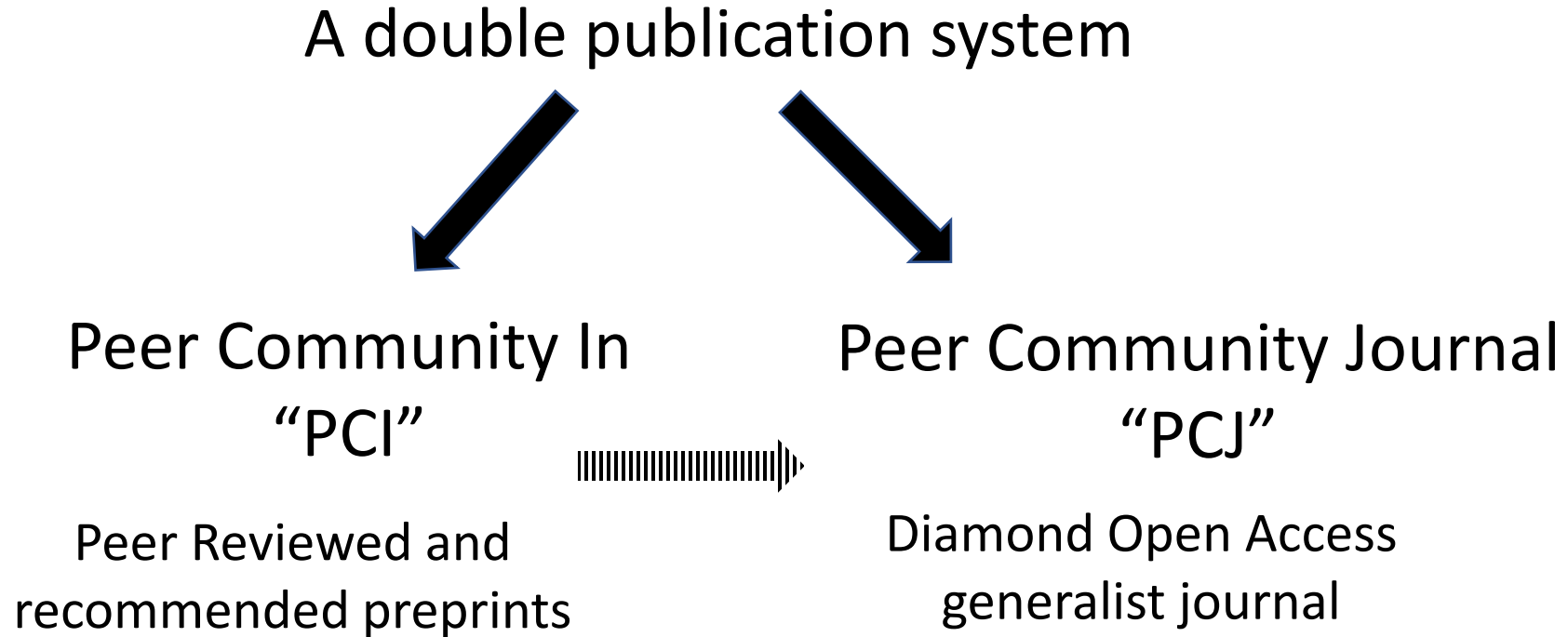
Researchers do nearly everything...for free

As authors, editors, reviewers,
they write, evaluate, edit, proofread

Re-appropriation of the
publication system:

Peer Community In
&
Peer Community Journal

Peer Community In & Peer Community Journal



What is PCI?

What is PCI?

A non-profit, non-commercial organization

A set of communities of researchers handling the **evaluation** of (through peer review) and **recommending preprints** in their scientific field.

bioRxiv

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OSF PREPRINTS

etc ...

PCI Ecology

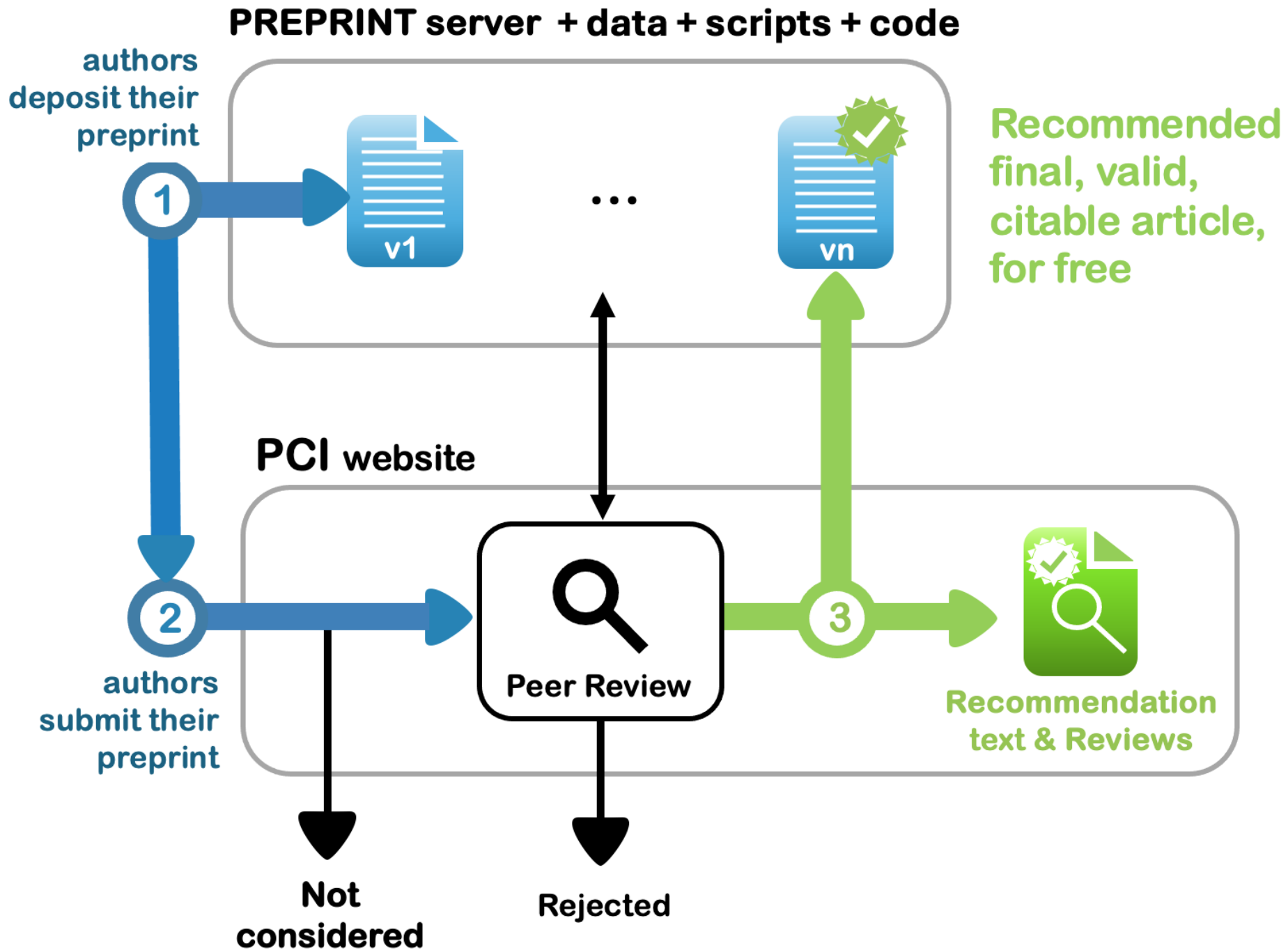
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etc..

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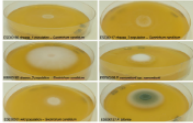
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Diverse outcomes in cheese fungi domestication

Christelle Fraïsse based on reviews by Delphine Sicard and 1 anonymous reviewer

A recommendation of:



Domestication of different varieties in the cheese-making fungus *Geotrichum candidum*

Bastien Bennetot, Jean-Philippe Vernadet, Vincent Perkins, Sophie Hautefeuille, Ricardo C. Rodríguez de la Vega, Samuel O'Donnell, Alodie Snirc, Cécile Grondin, Marie-Hélène Lessard, Anne-Claire Peron, Steve Labrie, Sophie Landaud, Tatiana Giraud, Jeanne Ropars (2023), bioRxiv, ver.4, peer-reviewed and recommended by PCI Evol Biol <https://doi.org/10.1101/2022.05.17.492043>

READ PREPRINT IN PREPRINT SERVER

9

- Data used for results
- Codes used in this study
- Scripts used to obtain or analyze results
- Abstract
- Suggested Reviewers
- Opposed reviews

Link to PCI-recommended preprint

Final, valid, findable and citable article

 Open Access
  Open Peer-Review
  Open Data
  Open Code

Recommendation text

Published, citable and argued editorial decision

Submission: posted 12 August 2022

Recommendation: posted 23 March 2023, validated 24 March 2023

Recommendation

Domestication is a complex process that imprints the demography and the genomes of domesticated populations, enforcing strong selective pressures on traits favourable to humans, e.g. for food production [1]. Domestication has been quite intensely studied in plants and animals, but less so in micro-organisms such as fungi, despite their assets (e.g. their small genomes and tractability in the lab). This elegant study by Bennetot and collaborators [2] on the cheese-making fungus *Geotrichum candidum* adds to the mounting body of studies in the genomics of fungi, proving they are excellent models in evolutionary biology for studying adaptation and drift in eukaryotes [3].

Bennetot et al. newly showed with whole genome sequences that all *G. candidum* strains isolated from cheese form a monophyletic clade subdivided into three genetically differentiated populations with several admixed strains, while the wild strains sampled from diverse geographic locations form a sister clade. This suggests the wild progenitor was not sampled in the present study and calls for future exciting work on the domestication history of the *G. candidum* fungus. The authors scanned the genomes for footprints of adaptation to the cheese environment and identified promising candidates, such as a gene involved in iron uptake (this element is limiting in cheese). Their functional genome analysis also provides evidence for higher contents of transposable elements in cheese-making strains, likely due to relaxed selection during the domestication process.

This paper is particularly impressive in that the authors complemented the population genomic approach with the phenotypic characterization of the strains and tested their ability to outcompete common fungal food spoilers. The authors convincingly showed that cheese-making strains display phenotypic differences relative to wild relatives for multiple traits such as slower growth, lower proteolysis activity and a greater amount of volatiles attractive to consumers, these phenotypes being beneficial for cheese making.

Finally, this work is particularly inspiring because it thoroughly discusses convergent evolution during domestication in different cheese-associated fungi. Indeed, studying populations experiencing similar environmental pressures is fundamental to understanding whether evolution is repeatable [4]. For instance, all three cheese populations of *G. candidum* exhibit a lower genetic diversity than wild populations. However, only one population displays a stronger domestication syndrome, resembling the *Penicillium camemberti* situation [5]. Furthermore, different cheese-making practices may have led to varying situations with clonal lineages in non-Roquefort *P. roqueforti* and *P. camemberti* [5, 6], while the cheese-making *G. candidum* populations still harbour some diversity. In a nutshell, Bennetot's study makes an important contribution to evolutionary biology and highlights the value of diversifying our model organisms toward under-represented clades.

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Fate of recommended articles

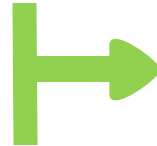
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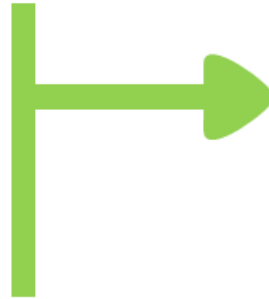


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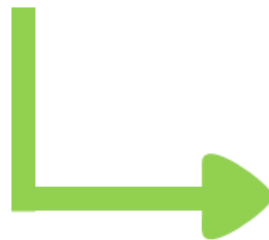
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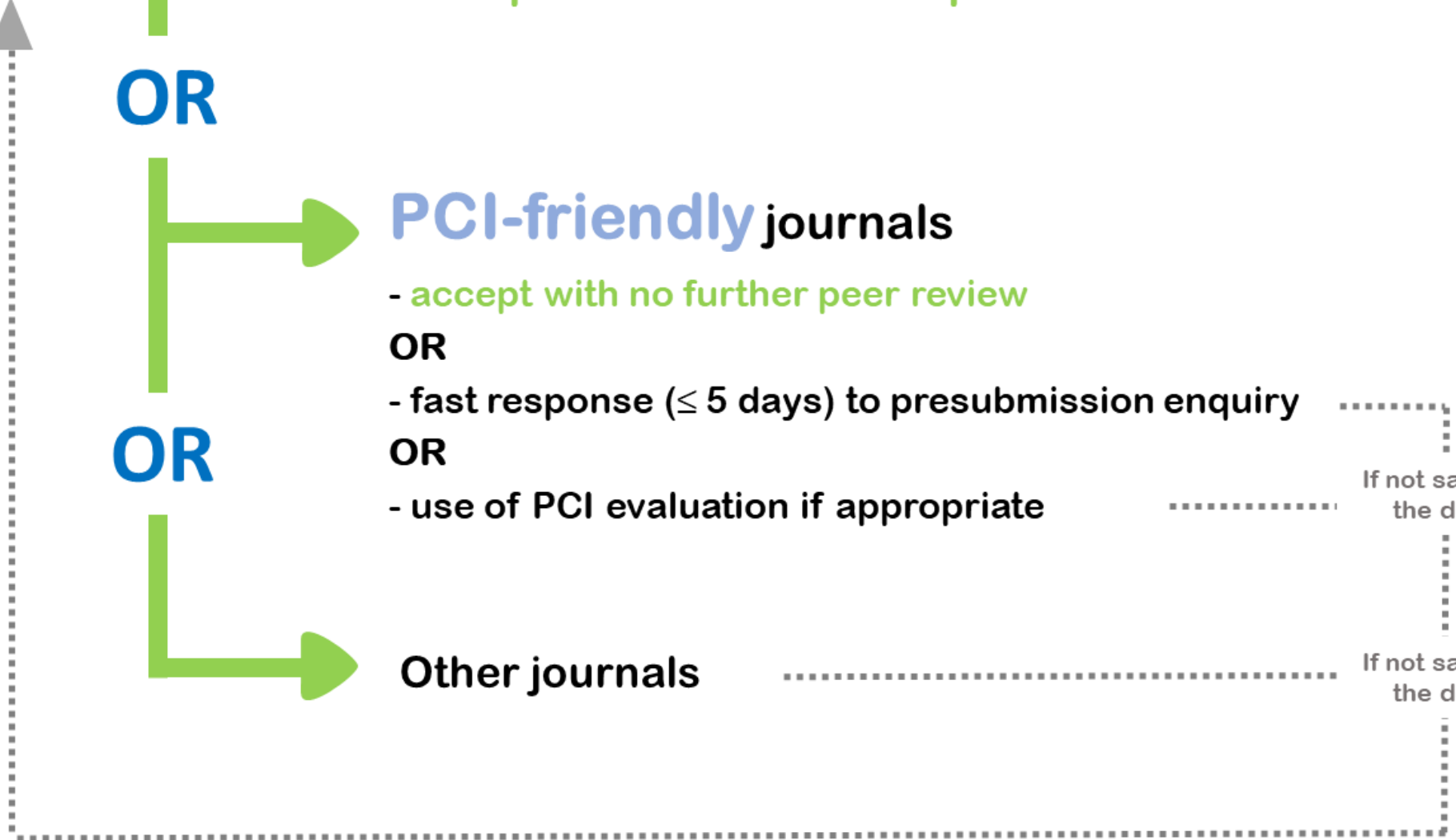
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If not satisfied by
the decision

If not satisfied by
the decision



PCI-friendly journals

PCI-friendly journals

3 categories

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- European zoological journal
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- BMC Ecology and Evolution
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- Botany Letters
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- Canadian Journal of Animal Science
- Canadian Journal of Fisheries and Aquatic Sciences
- Canadian Journal of Forest Research
- Canadian Journal of Zoology
- Comptes Rendus Palevol
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- Cryptogamie, Bryologie
- Cryptogamie, Mycologie
- EXARC Journal
- FACETS
- G3: Genes, Genomes, Genetics
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- Genetics Selection Evolution
- Genome
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- ISME Journal
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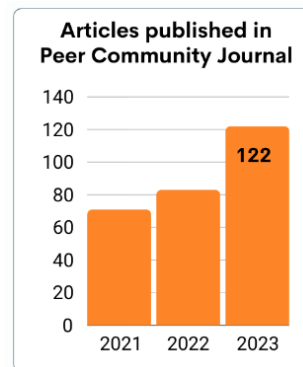
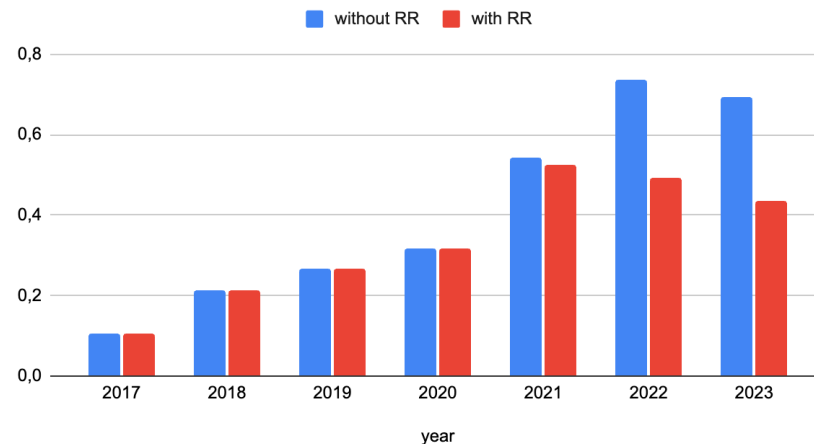
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e-ISSN 2804-3871

Peer Community Journal
Section: Health & Movement Sciences

RESEARCH ARTICLE

Published
2023-08-31

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Correspondence
a.rebar@cqu.edu.au

Peer-review
Peer reviewed and recommended by PCI Health & Movement Sciences.
<https://doi.org/10.24072/pci-healthmovement.100002>

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Comparing habit-behaviour relationships for organised versus leisure time physical activity

Katerina Newman¹, Cyril Forestier², Boris Cheval^{3,4}, Zachary Zenko⁵, Margaux de Chanaleilles⁶, Benjamin Gardner⁷, and Amanda L. Rebar^{8,1}

Volume 3 (2023), article e77
<https://doi.org/10.24072/pcjournal.311>

Abstract

Evidence shows that people with strong physical activity habits tend to engage in more physical activity than those with weaker habits, but little is known about how habit influences specific types of physical activity. This study aimed to test whether mean level of habit strength and magnitude of the habit strength-behaviour association differed as a function of physical activity modality. Participants (N = 120; M age = 25 years, 75% female) who reported engaging in organised sport separately reported their habit strength for organised sport and leisure time physical activity as well as the time they spent engaging in these physical activity behaviours. Means comparisons and multilevel modelling revealed that people had significantly stronger habit for organised sport than for leisure time physical activity. Crucially, no significant difference was found in the magnitude of the sport-habit and leisure-habit link. Post-hoc analyses revealed that habit was stronger for team sport compared to individual sport, but that there was no significant difference in sport-habit association between team and individual sports. Research should therefore focus on identifying the characteristics of team sports-based activity that are particularly conducive to habit formation as a precursor to developing interventions to promote performance of leisure time activity in a way that would attain such characteristics.

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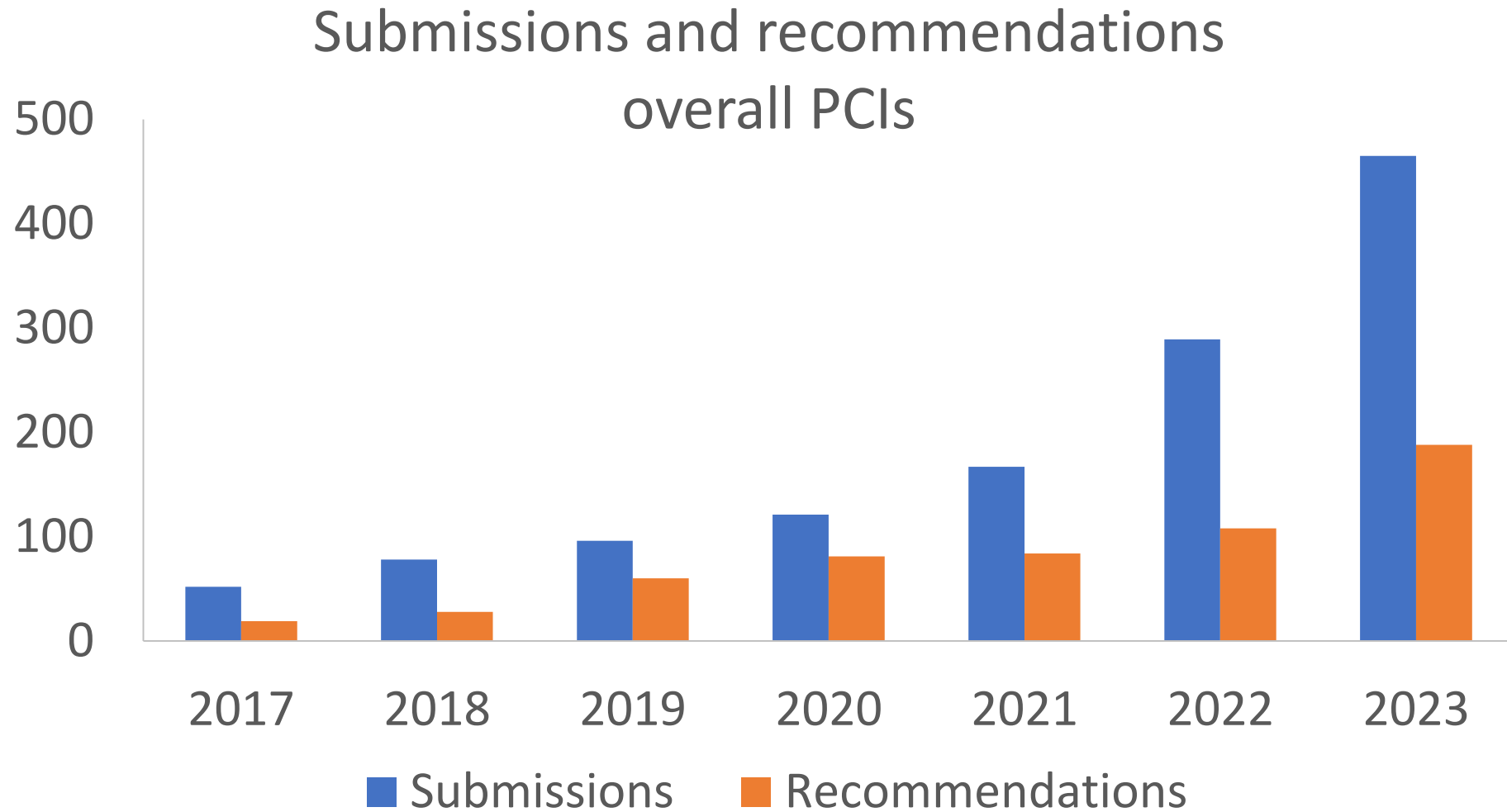
- PCI Plant Science
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PCI in figures

PCI in figures



Increasing activity



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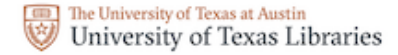
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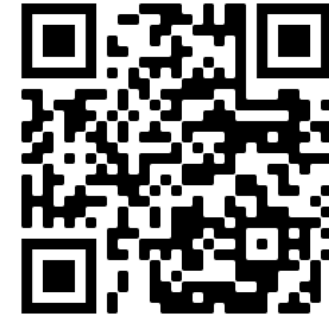
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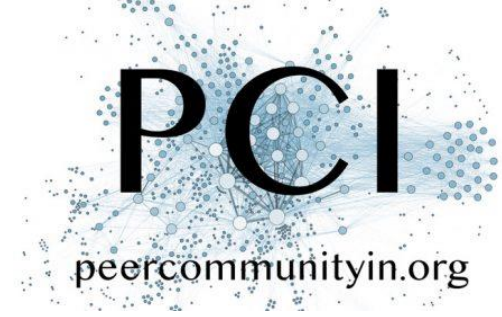
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