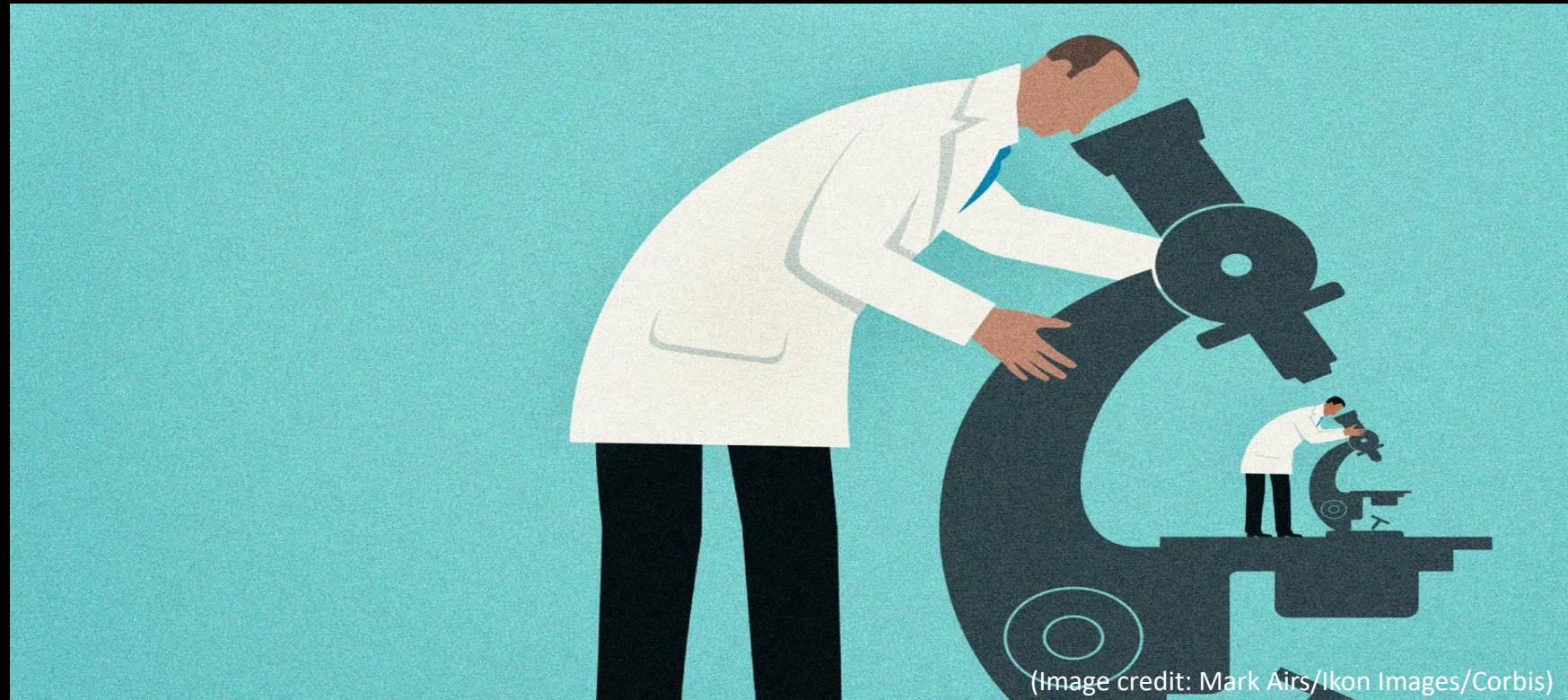


The dark side of academic publishing



(Image credit: Mark Airs/Ikon Images/Corbis)

Who we are:

A network of independent whistleblowers/scientists:

 Elisabeth Bik is in the Netherlands @MicrobiomDigest Dere følger hverandre	 Anna Abalkina @AbalkinaAnna Dere følger hverandre	 Dorothy Bishop @deevybee
 Leonid Schneider @LeonidSchneide1	 Prof Jennifer Byrne  @JAByrneSci Dere følger hverandre	 Nick Wise @nickwizzo Dere følger hverandre
 Smut Clyde, X-Ray Haruspex @SmutClyde Dere følger hverandre	 PSBrookes @PSBROOKES Dere følger hverandre	 Guillaume Cabanac (@gcabanac@sc... @gcabanac Dere følger hverandre
 虎仔  @TigerBB8 Dere følger hverandre	 Cheshire  @Thatsregrettab1 Dere følger hverandre	 James Heathers @jamesheathers@t.. @jamesheathers Dere følger hverandre
 Spotting @Spottingthespot Dere følger hverandre	 Sholto David @addictedtoigno1 Dere følger hverandre	 Mu Yang, Ph.D. @mumumouse Dere følger hverandre

What is scientific misconduct?

Scientific misconduct

Questionable Research practices

- Omit negative data
- Omit citations
- Sloppiness
- Statistical flaws
- Ethical issues

Plagiarism

- Reuse of text and ideas without giving credit

Falsification

- Changing data to fit hypothesis
- Omit outliers

Fabrication

- Use fictive data
- No measurements

The replication crisis in cancer research

2011:

Only **25%** of 67 cancer related articles could be replicated (Bayer)

Believe it or not: how much can we rely on published data on potential drug targets?

Florian Prinz, Thomas Schlange and Khusru Asadullah

2011 | NATURE REVIEWS | **DRUG DISCOVERY**

2012:

Only **11%** of 53 landmark cancer studies could be replicated (Amgen)

Raise standards for preclinical cancer research

C. Glenn Begley and Lee M. Ellis propose how methods, publications and incentives must change if patients are to benefit.

29 MARCH 2012 | VOL 483 | NATURE

Aim: To increase research credibility

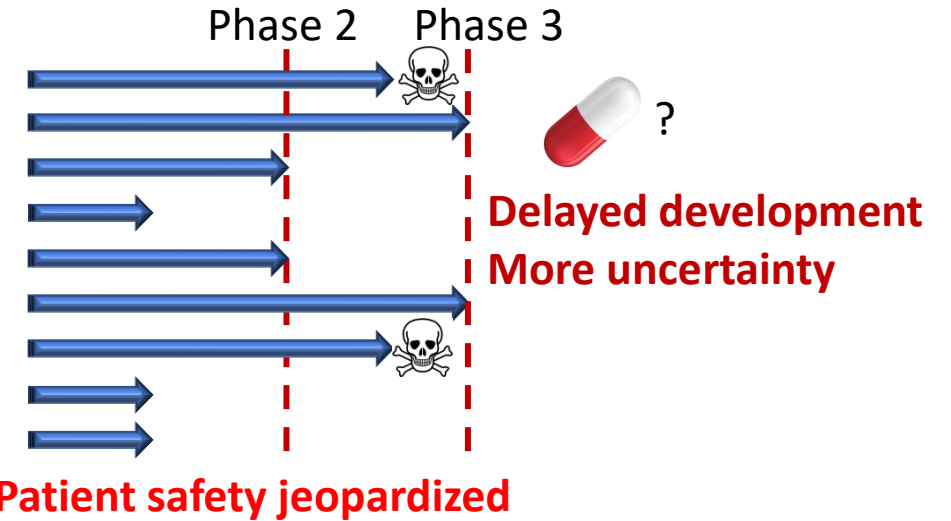
Situation today:

- Minimal quality control
- Too much «noise»
- Low quality
- Low replicability

Preclinical knowledge

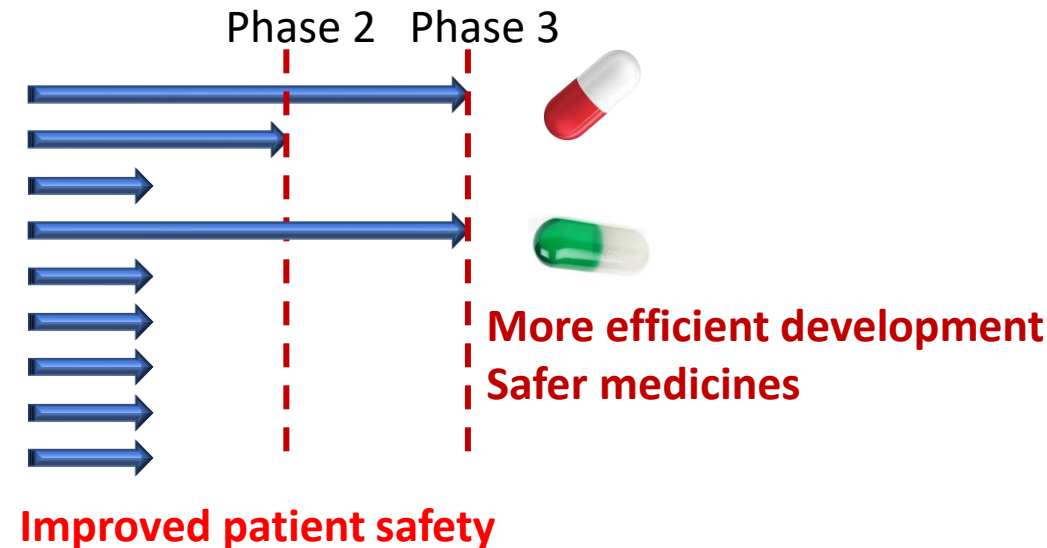


Clinical trials:



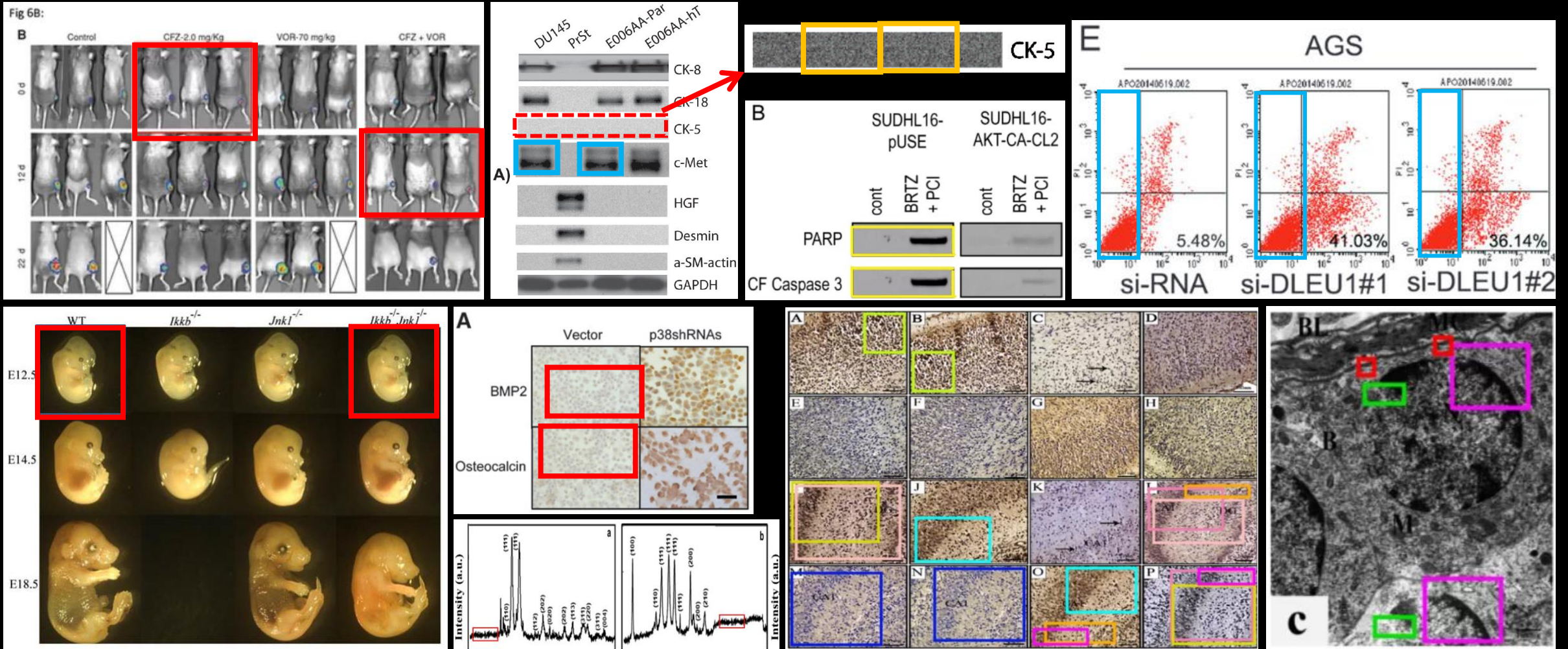
Our aim:

- Stricter quality control
- Fewer journals/articles
- Improved quality
- Increased replicability



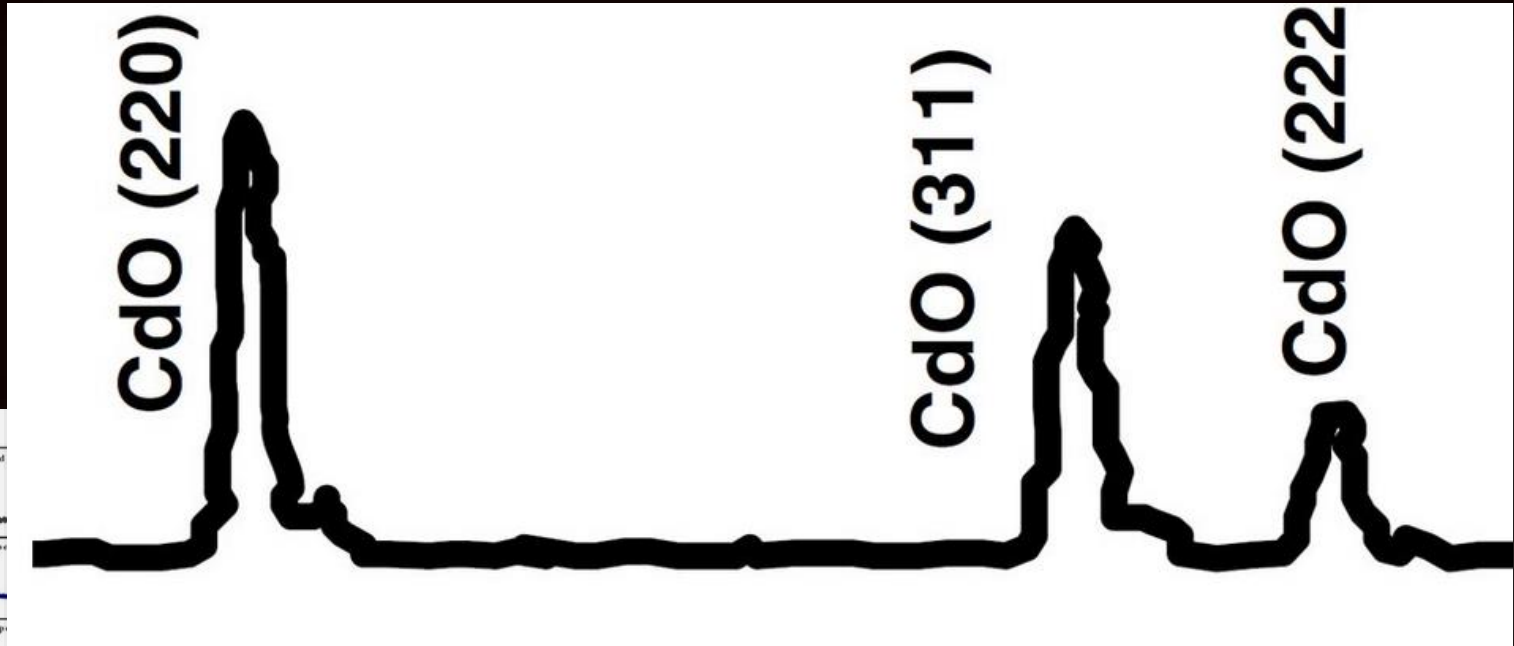
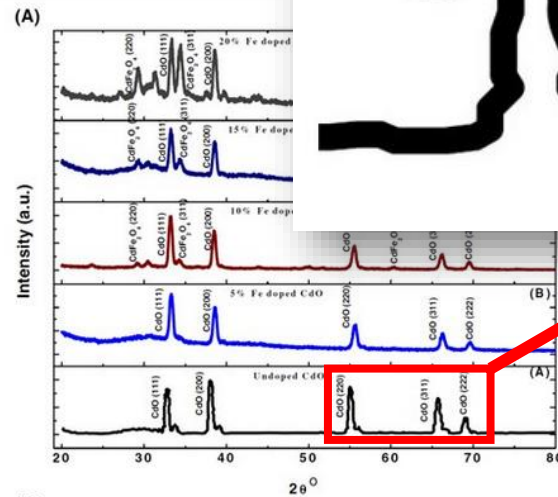
How we work

Inappropriate image duplications



Anything can be published

Fig. 2 (a). X-ray diffraction patterns of (a) undoped CdO, (b) 5 %, (c) 10 %, (d) 15 % and (e) 20 % Fe-doped CdO nanopowders. (b). The variation of the intensity ratios of (111)/(200) with different Fe concentration



Indeed, anything can be published

Scandinavian Journal of Psychology, 2024

DOI: 10.1111/sjop.13065

Empirical Article

Do conservatives really have an advantage in mental health? An examination of measurement invariance

EDWARD DUTTON¹  and EMIL KIRKEGAARD²

¹*Asbiro University, Łódź, Poland*

²*Independent Researcher, Aarhus, Denmark*

INTRODUCTION

A large number of studies have found that conservatism is correlated with sound mental health whereas leftism is associated with poor mental health (e.g., Bernardi, 2021; Garner, Mackay,

Key words: conservatives, liberals, mental health, measurement invariance, Finland, politics.

Edward Dutton, Asbiro University, Łódź, Poland. E-mail: e.c.dutton@dunelm.org.uk

INTRODUCTION

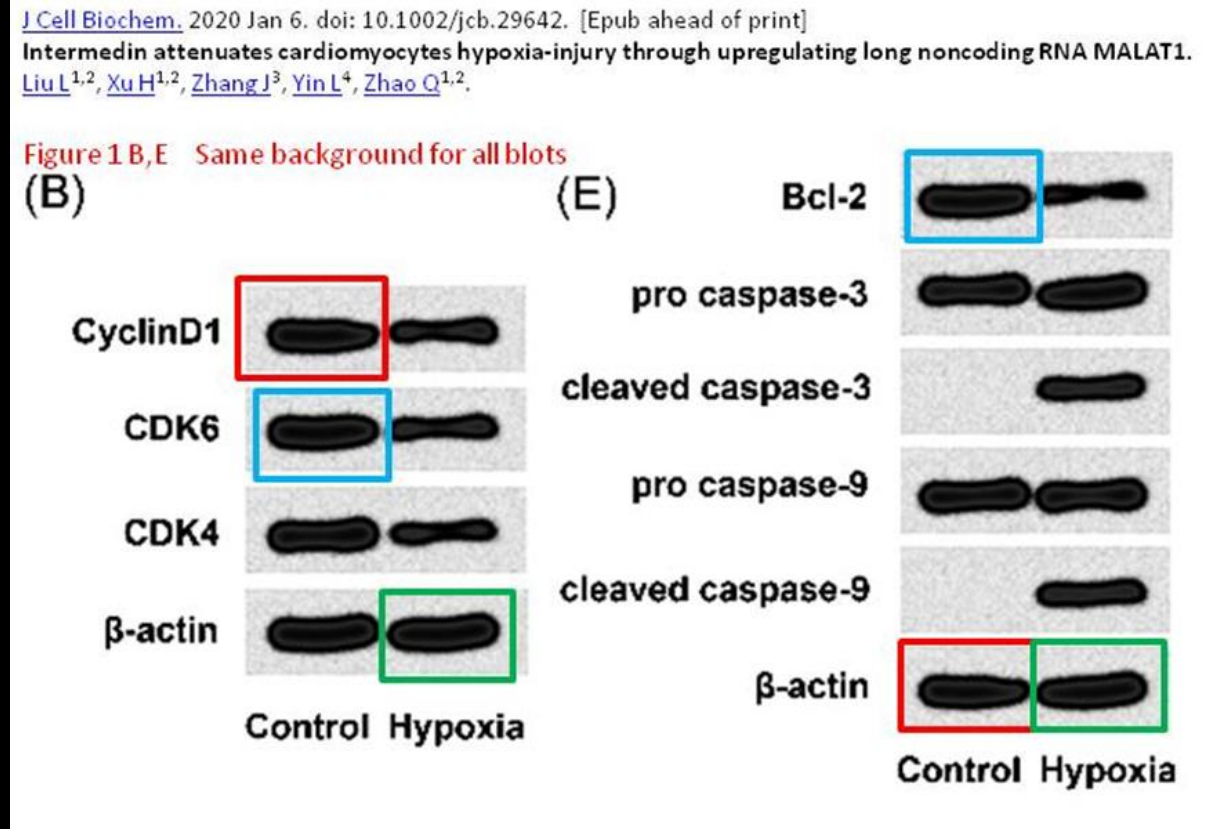
A large number of studies have found that conservatism is correlated with sound mental health whereas leftism is associated with poor mental health (e.g., Bernardi, 2021; Garner, Mackay, Cepeda & Storch, 2021; Kirkegaard, 2020; Pienaar, Buekes & Esterhuysen, 2006; Schlenker, Chambers & Le, 2012). There is

(Bernardi, 2021) and in US data regarding whether one votes Democrat or Republican (Kwon, 2022).

Various correlates of leftism, such as vegetarianism/veganism, are also associated with depression (Dobersek, Wy, Adkins *et al.*, 2021; Iguacel, Huybrechts, Moreno & Michels, 2021) as is non-standard gender identity and non-heterosexuality

The Chinese papermills

- 2020: The first identification of a fabricated papermill paper
- Papermill 1: >600 fabricated papers
- 2024: Retracted: ~70%

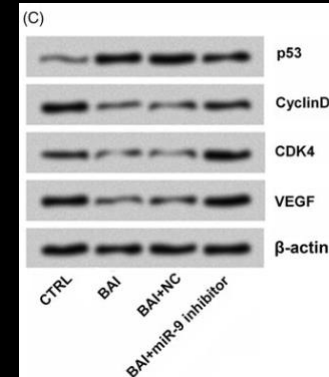


The Chinese papermill industry

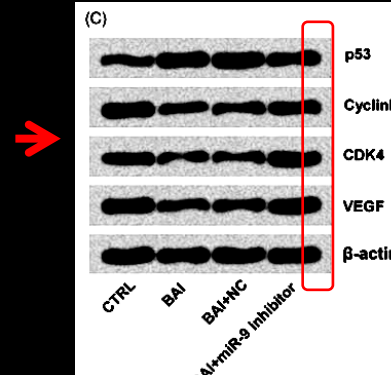
Papermill 1

WB: Diffuse blots with identical background
Bar graph: Similar design and use of colors. Black first.

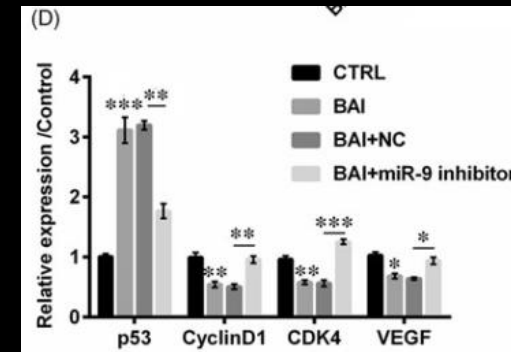
Diffuse Western blot



Increased contrast



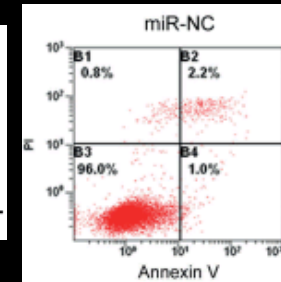
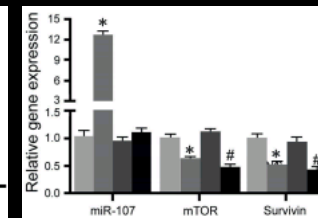
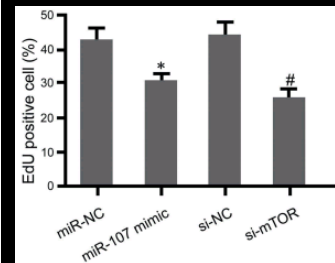
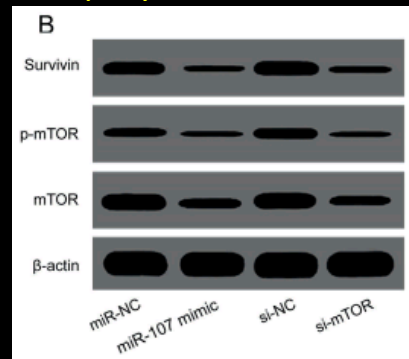
Black and gray bar graph



Papirmill 2

WB: Sharp, rounded bands, no background.
Bar graph: Gray and black, gray first.

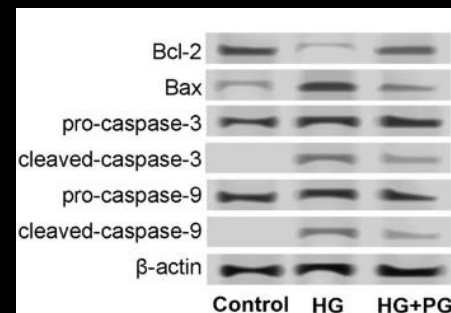
Sharp stylised Western blot Bar graph: All gray or gray/black bar graphs. Red dot plots



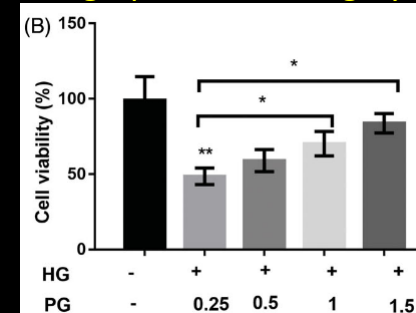
Papermill 3

WB: Diffuse, no background. Bands have a distinctive shape.
Bar graph: Black and gray, black first.

Diffuse Western, distinctive shape



Bar graph: Black and gray



New tools for more efficient detection of duplications

- ImageTwin
 - Fast automated screening for duplications
- ↓
- Images, micrographs and flow cytometric dot plots (and western blots)
- Identifies duplications internally and accross articles

imageTwin Scan Results History

GENERATE REPORT

11 / 16 nihms414810.pdf

12 / 16 nihms414810.pdf

Summary

Dupl. within pages	3
Dupl. publications	55

Filters

- Empty pages ☐
- Dupl. within pages ☒
- Dupl. publications ☒

Publications

A He

Authors: He Jin, Liu Zhiqiang, Zheng Yuhuan, Qian Jianfei, Li Hailan, Lu Yong, Xu Jingda, Hong Bangxing, Zhang Mingjun, Lin Pei, et al.

Title: p38 MAPK in Myeloma Cells Regulates Osteoclast and Osteoblast Activity and Induces Bone Destruction

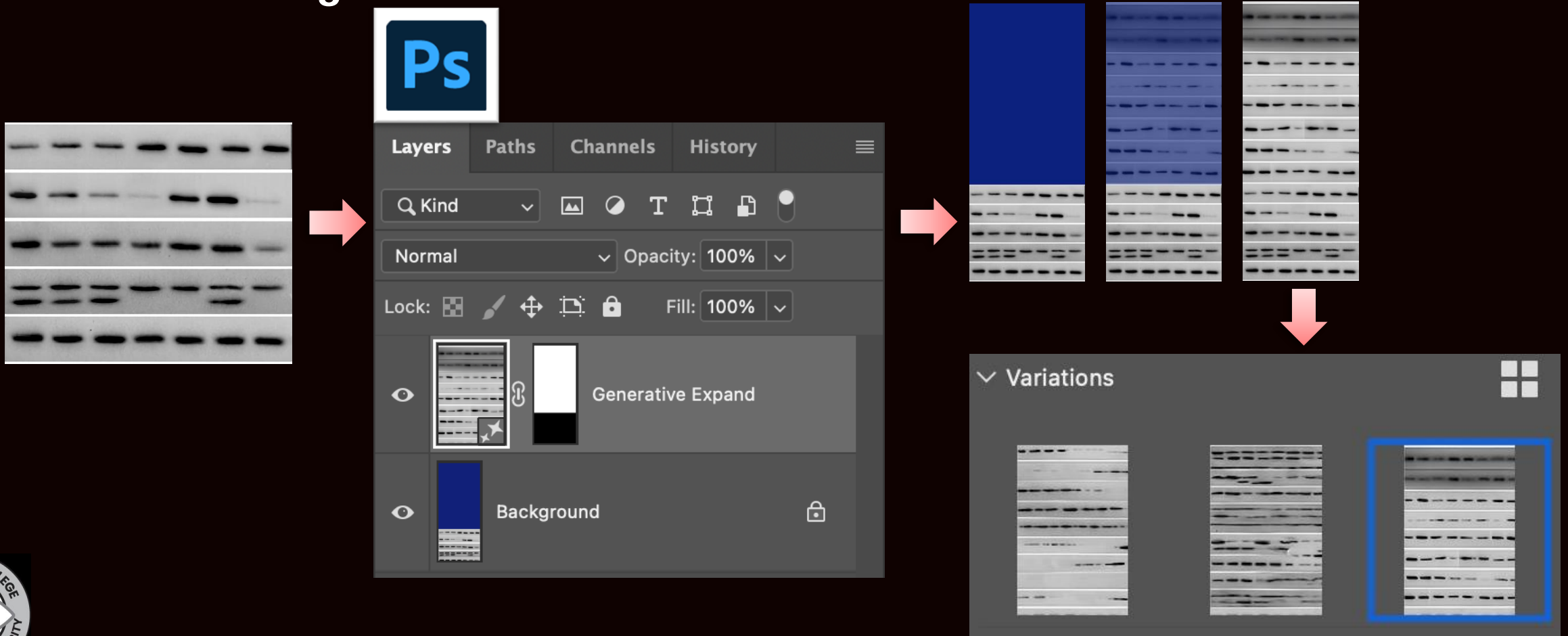
Published: Dec 2012

Figure 3. Myeloma cell p38 activity leads to production of DKK-1 and MCP-1 in myeloma-bearing mice. Levels of circulating (A) DKK-1 or (B) MCP-1 in serum at 0 week (0w) and 8 weeks (8w). (C) Immunohistochemical staining for DKK-1 (upper panels) and MCP-1 (lower panels) expression in established myeloma cells in mice injected with vector- or p38 shRNA-ARP-1 cells at 8 weeks after tumor inoculation. (D) Immunohistochemical staining for DKK-1 (upper panels) and MCP-1 (lower panels) expression in established primary myeloma cells in SCID-hu mice treated without (vehicle) or with the p38-specific inhibitor SD-169 at 8 weeks after tumor injection. Scale bar, 20 μ M. Scale bar for insets: 100 μ M. (E) Representative radiographs showing reduced osteolytic bone lesions in the femurs of ARP-1-bearing mice (5 per group) treated with antibodies against MCP-1 and/or DKK-1 compared with control IgG. Representative results of three independent experiments are shown. ** P $\leq$ 0.01; *** P $\leq$ 0.001.

Fabrication of unique images

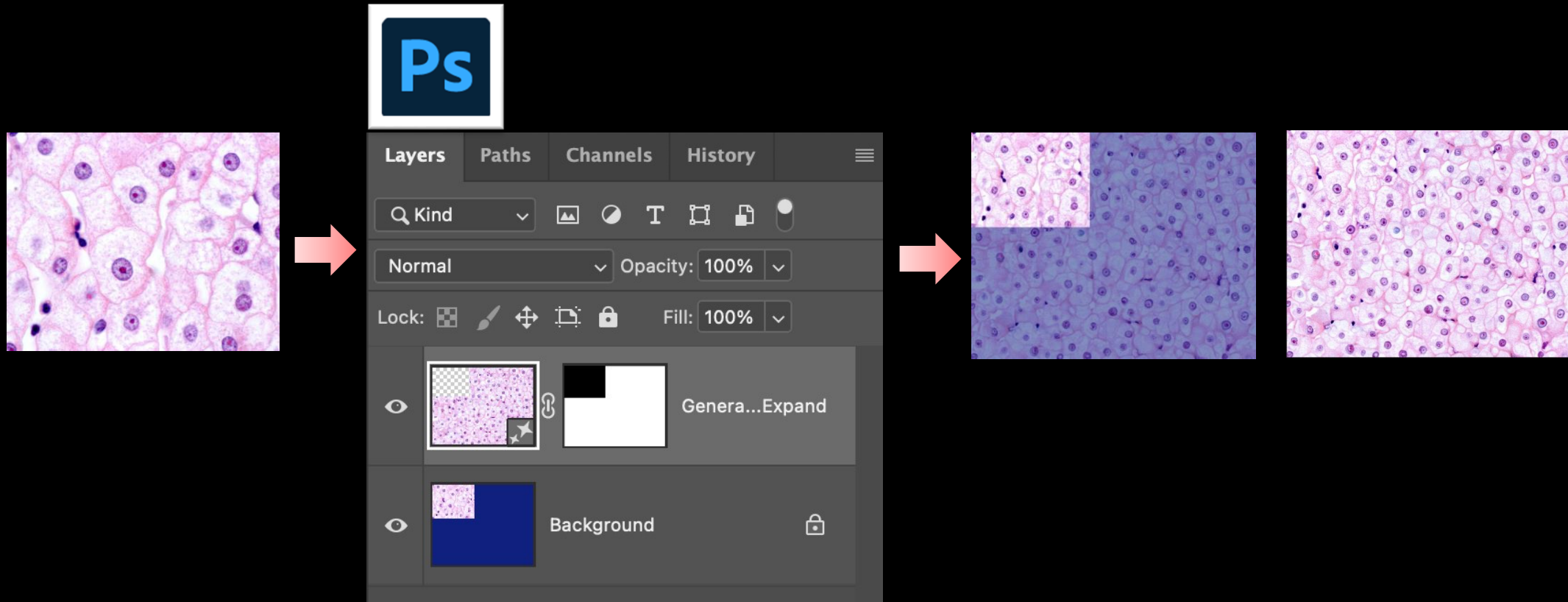
- New function in Photoshop: Generative expand
- Powerful AI tool: Expand images with generative content

Western blotting:



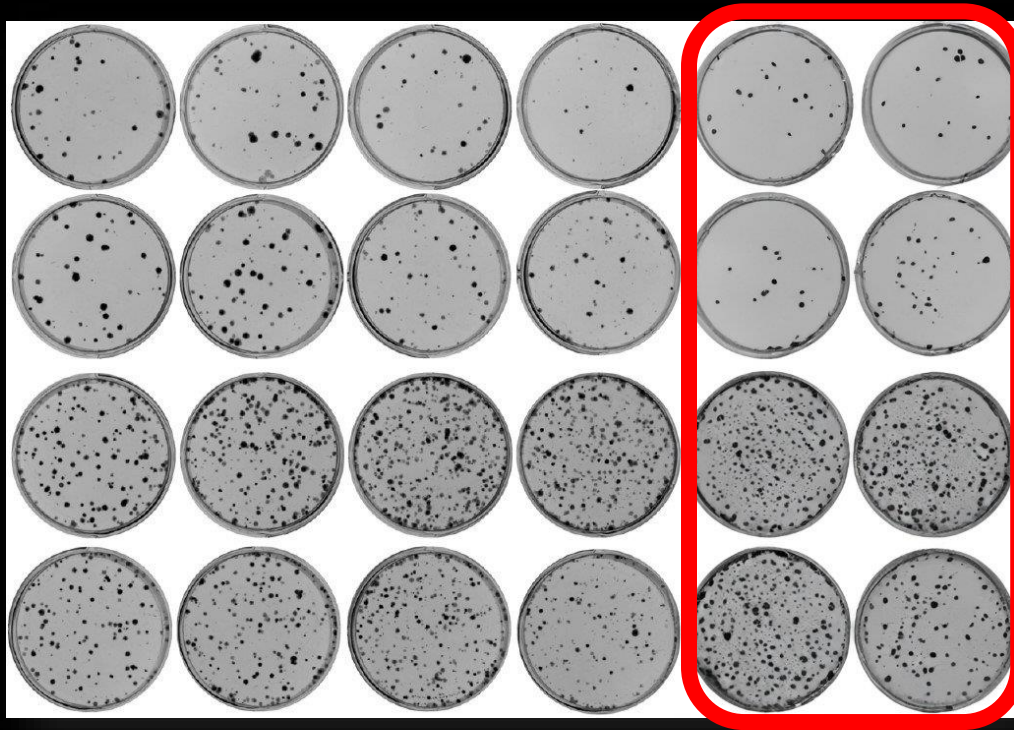
Generative expansion: Fabrication of unique images

Microscopy:



Fabrication of data – generative expansion

AI generated images



Publishers accept correction of data manipulation in manuscripts

Reply to PubPeer post:

Author shares information from the editorial office.

Home / Publications

Prohibitin 1 (PHB1) controls growth and development and regulates proliferation and apoptosis in *Schistosoma japonicum*

The FASEB Journal (2020) - 4 Comments

pubmed: 32627884 doi: 10.1096/fj.201902787rrr issn: 0892-6638 issn: 1530-6860

Wen-Jun Cheng, Meng-Jie Gu, Feng Ye, Yao-Dan Zhang, Qin-Ping Zhong, Hui-Fen Dong, Rong Liu, Hong Jiang

#3 Rong Liu commented November 2023

Author Response

#1 Progress:

Dr. Liu:

Thank you for bringing this to our attention. We have determined that your original message was logged in the article history but was not delivered to the Publications Office inbox (Journals@faseb.org) due to the attachment size. We apologize for this glitch. Please direct further correspondence to us, not to Dr. Wold.

Earlier this year, we began to send all accepted articles to the Wiley Image Check team before publication, to identify and correct any duplication or manipulation of immunoblot and microphoto images. As part of that policy, we have sent your files to Image Check to rule out any additional problems before we consider the erratum.

We will share the report with you when we receive it, and then we can consider next steps. If no further concerns are found, we will need a publication-quality file of the revised Figure 2 in pdf, tiff, eps, or ppt format.



Phrase search in full text article

- Full text search in Dimensions
- Enables fast examination of large volumes of articles
- Identification of suspect papers
- A basis for further investigation

The screenshot displays the Dimensions database interface. The top navigation bar includes the Dimensions logo, a search bar with 'Heliyon' entered, and user information. The left sidebar contains filters such as Publication Year, Researcher, Research Categories, Publication Type, Source Title, Journal List, and Open Access. The main content area shows search results for 'Heliyon', including a summary of publications (31,277) and datasets (123). Below this, a list of publications is shown, with the first entry being 'The effect of CXCL12 on survival outcomes of patients with viral hepatitis-associated hepatocellular carcinoma after hepatectomy' by Yan Lu, Fei Xing, and Songlin Peng. The right sidebar features analytical views, including a line chart showing the number of publications over time (2015-2024) and a list of researchers associated with the search results.

Dimensions Heliyon

FILTERS FAVORITES

- PUBLICATION YEAR
- RESEARCHER
- RESEARCH CATEGORIES
- PUBLICATION TYPE
- SOURCE TITLE
- Heliyon 31,366
- JOURNAL LIST
- OPEN ACCESS

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Heliyon

Publications 31,277
SNIP 1.240 SJR 0.609

Datasets 123

PUBLICATIONS 31,366
selected filter not applicable

DATASETS 123
selected filter not applicable

GRANTS selected filter not applicable

PATENTS selected filter not applicable

CLINICAL TRIALS selected filter not applicable

POLICY DOCUMENTS selected filter not applicable

ANALYTICAL VIEWS

RESEARCH CATEGORIES

- 32 Biomedical and Clinical Sciences 10,096
- 40 Engineering 5,917
- 31 Biological Sciences 4,676
- 30 Agricultural, Veterinary and Food Sciences 3,780
- 3202 Clinical Sciences 3,410

OVERVIEW

Citations 207 K Citations (Mean) 6.58

20,000
10,000
0

2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

Publications (total)

RESEARCHERS

- Karem Hasan Alzoubi 16
University of Sharjah, United Arab Emirates
- Gideon Adamu Shallangwa 16
Ahmadu Bello University, Nigeria
- Suchart Siengchin 14
King Mongkut's University of Technology North Bangkok, Thailand
- Adamu Uzairu 13
Ahmadu Bello University, Nigeria
- Yetenayet Bekele Tola 12
Jimma University, Ethiopia

THE EFFECT OF CXCL12 ON SURVIVAL OUTCOMES OF PATIENTS WITH VIRAL HEPATITIS-ASSOCIATED HEPATOCELLULAR CARCINOMA AFTER HEPATECTOMY
Yan Lu, Fei Xing, Songlin Peng
2024, Heliyon - Article

Background: The CXCL12-CXCR4/CXCR7 axis is garnering growing attention. But the comprehension of its function in the progression of HCC remains controversial. The purpose of this study was to investig... [more](#)

[Altmetric](#) 1 [View PDF](#) [Add to Library](#) [Summarize](#)

Enhancing NILM classification via robust principal component analysis dimension reduction
Arbel Yaniv, Yuval Beck
2024, Heliyon - Article

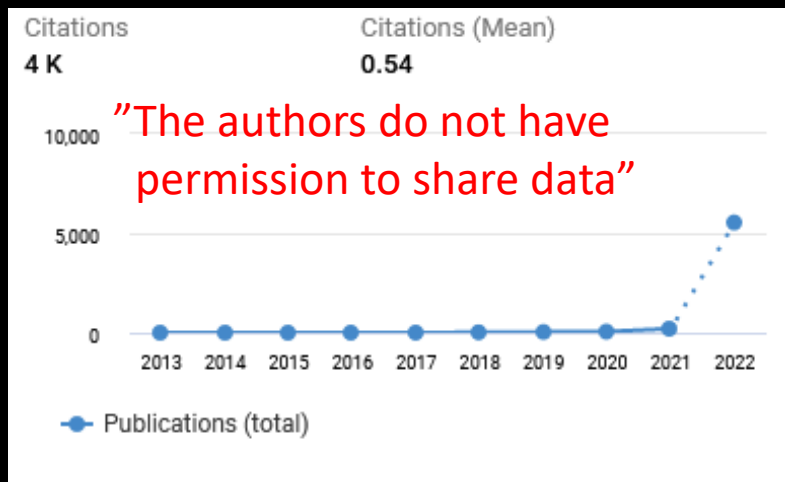
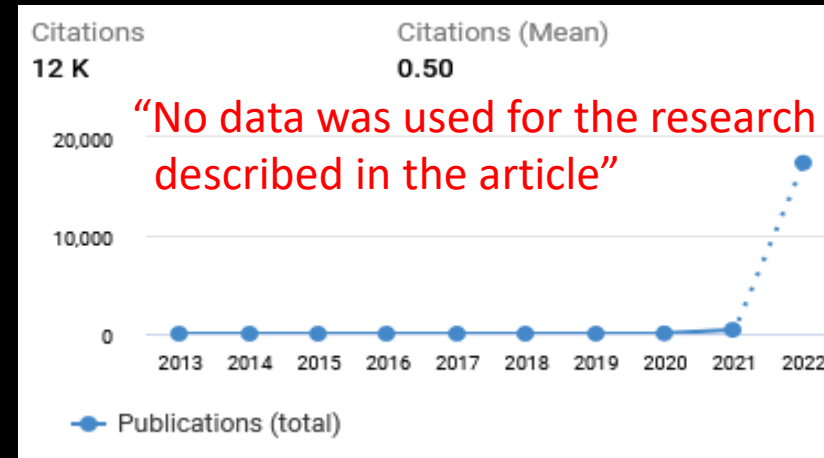
Non-intrusive load monitoring (NILM) techniques estimate the consumption of individual appliances in a household or facility, based on aggregated reading from a centralized meter. Usually, NILM techni... [more](#)

[View PDF](#) [Add to Library](#) [Summarize](#)

Effects of extraction parameters on the yield of oils from non-edible seeds of Bauhinia variegata and Pachira glabra

Phrase search in article meta data

Data availability statements – nonsensical phrases:



(Dimensions, desember 2022/mars 2023)

- Started reporting journals in 2022
- >300 expression of concerns
 - Nonsensical phrases
 - Papermill friendly
 - Unethical editorial practices
 - Obvious flawed data



National publishing committee
Expert committees

Delisted journals: 68
Journals on hold: 44

NORWEGIAN REGISTER FOR SCIENTIFIC JOURNALS, SERIES AND PUBLISHERS

- Journals not used by Norwegian scientists: easy to delist
- Journals popular among Norwegian scientists: more challenging to delist



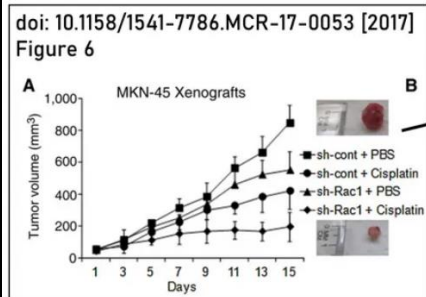
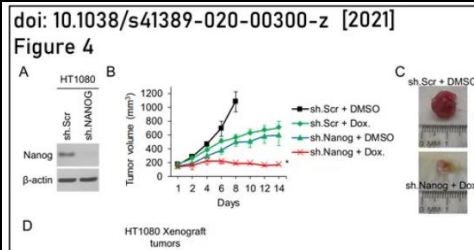
Consequences of irresponsibility

The New York Times

Feb. 15, 2024

A Columbia Surgeon's Study Was Pulled. He Kept Publishing Flawed Data.

The quiet withdrawal of a 2021 cancer study by Dr. Sam Yoon highlights scientific publishers' lack of transparency around data problems.



2015: First expression of concern sent
2021: One article retracted (no explanation)
2023: 26 articles flagged by Sholto David
2024: 4 articles retracted (NYT article)

Consequences for clinical research and patient safety



Status 2024: Retracted articles: 12
Articles with expression of concern: 4
Convicted of gross abuse of patients

Summary and further thoughts

- Today's academic publishing system is dysfunctional
- A comprehensive clean-up in academic literature is necessary
- More journals should be run by public non-for-profit institutions
- Alternatives for papers should be considered (microPublication)
- **We need an independent international research integrity organization (as WADA in sports)**