



RRIDs, an emerging standard in journal publishing, and the tools that make RRIDs a reality

Sept 2019

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UCSD & SciCrunch Inc (COI)

Why RRIDs?



AMERICAN
SOCIETY FOR
MICROBIOLOGY



AN OPEN ACCESS JOURNAL PUBLISHED BY
THE AMERICAN SOCIETY FOR MICROBIOLOGY

mBio. 2019 Jul-Aug; 10(4): e01942-19.

Published online 2019 Aug 27. doi: [10.1128/mBio.01942-19](https://doi.org/10.1128/mBio.01942-19)

PMCID: PMC6712400

PMID: [31455655](https://pubmed.ncbi.nlm.nih.gov/31455655/)

Interaction of the Ankyrin H Core Effector of *Legionella* with the Host LARP7 Component of the 7SK snRNP Complex

Juanita Von Dwingelo,^{#a} Ivy Yeuk Wah Chung,^{#b} Christopher T. Price,^a Lei Li,^b Snake Jones,^a Miroslaw Cygler,^{✉b,c} and Yousef Abu Kwaik^{✉a,d}

Scot P. Ouellette, Editor

Scot P. Ouellette, University of Nebraska Medical Center;

Confocal laser scanning microscopy. Processing of transfected cells for confocal microscopy was performed as we described previously. Briefly, monolayers were permeabilized and fixed using 100% methanol held at –20°C for 5 min and were then blocked and labeled with mouse-anti-FLAG (Sigma) (1/200 dilution in 3% bovine serum albumin [BSA]–phosphate-buffered saline [PBS]) and rabbit-anti-Myc (Proteintech) (1/200 dilution in 3% BSA–PBS). Cells were counterlabeled with Alexa Fluor 488 anti-mouse antibody (Invitrogen) (1/4,000 dilution in 3% BSA–PBS), Alexa-Fluor 555 anti-rabbit antibody

Search term: "mouse anti flag" ×Product Category: Antibodies ×**Compare Products:** Select up to 4 products.

17 matches found for mouse anti flag

[Advanced Search](#) | [Structure Search](#)

ANTI-FLAG® M2 Affinity Gel

1 Product Result | Match Criteria: Property, Description, Product Name

Synonym: Anti-ddddk, Anti-dykddddk, Monoclonal ANTI-FLAG® M2 antibody produced in mouse

Product #	Clonality	Application	Species Reactivity
<input type="checkbox"/> A2220	M2, monoclonal	IP, affinity chromatography	confocal microscopy was used and fixed using 100% mouse-anti-FLAG (Sigma) in [PBS] and rabbit-anti-Myc with Alexa Fluor 488 anti-rabbit or 555 anti-rabbit antibody

No identifier for reagents = Not Reproducible

How did RRIDs start?

NIF, INCF, members of the NIH, and about 25 major journal Editors in Chief, began to talk about research resource reproducibility

- 2012: 1st meeting at the Commander's Palace @Society for Neuroscience (sponsored by INCF)
- 2013: 2nd meeting at NIH (sponsored by NIDA)
- 2014: Pilot project started; 25 journals would ask authors to provide RRIDs for 3 months
 - 2 journals started on time
 - we are currently in 5th year of a 3 month pilot

What does it look like?

[Neuron](#). 2019 Aug 7; 103(3): 395–411.e5.
doi: [10.1016/j.neuron.2019.05.019](https://doi.org/10.1016/j.neuron.2019.05.019)

Open Source Brain: A Collaborative Platform for Simulating, and Developing Standard

Padraig Gleeson,¹ Matteo Cantarelli,^{1,2} Boris Marin,^{1,3} Alvaro Sanchez-Vives,¹ Daniel R. Ringach,⁴ Michael L. Hines,⁵ Eugenio Piasini,^{1,4} Justas Birgiolas,⁵ Robert C. Cannon,⁶ Andrew P. Davison,⁸ Salvador Dura-Bernal,⁹ András Ecker,¹⁰ Frederic Lanore,¹ Stephen D. Larson,¹² William W. Lytton,¹³ Subhashini Sivagnanam,¹³ Sergio Solinas,^{15,16} Rokas Stankovicius,¹⁷ and R. Angus Silver^{1,18,*}

► Author information ► Article notes ► Copyright and License Information

Associated Data

► [Supplementary Materials](#)

Summary

Computational models are powerful tools for exploring the brain. In neuroscience, data-driven models of neural circuits that span multiple scales are increasingly being used to

STAR★Methods

Go to:

Key Resources Table

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Software and Algorithms		
OSB user management web interface	This paper	https://github.com/OpenSourceBrain/redmine
OSB visualization/simulation frontend	This paper	https://github.com/openworm/org.gepetto
NeuroML	Cannon et al., 2014	https://www.neuroml.org ; RRID: SCR_003083
PyNN	Davison et al., 2009	http://neurallensensemble.org/PyNN ; RRID: SCR_002715
NEURON	Carnevale and Hines, 2006	https://www.neuron.yale.edu ; RRID: SCR_005393
NetPyNE	Dura-Bernal et al., 2019	http://netpyne.org , RRID: SCR_014758
NEST	Gewaltig and Diesmann, 2007	https://www.nest-simulator.org ; RRID: SCR_002963
Brian	Goodman and Brette, 2008	http://briansimulator.org ; RRID: SCR_002998

Google Scholar

RRID:SCR_002823

About 130 results (0.04 sec)



FSL (RRID:SCR_002823)

<http://www.fmrib.ox.ac.uk/fsl/>



Vividness of visual imago

RRID:nlx_158570

2 results (0.02 sec)



[HTML] PyMICE: A Python library for analysis of Intelli

JM Dzik, A Puścian, Z Mijakowska... - Behavior research ..., 2018

... 2016) for the library (**RRID:nlx_158570**) is provided in any published PyMICE. Discussion ... PyMICE: 1.1.0 release. [computer software] 10.5281/zenodo.200648. Dzik, JM, & Łęski, S (2017a). PyMICE do

☆ 99 Cited by 1 Related articles All 6 versions

Autophosphorylation of αCaMKII affects social inter

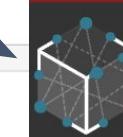
Z Harda, JM Dzik, M Nalberczak-Skóra... - Genes, Brain and ..., 20

... the frequency of immediate IVIs in all IVIs. The analyses have been custom Python® scripts using PyMICE library (**RRID:nlx_158570**). analysis. To test the differences between the genotypes t-test ...

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RRID:SCR_005031

8 results (0.05 sec)



OpenNEURO



[HTML] Neural responses to naturalistic clips of behaving animals in two different task contexts

SA Nastase, YO Halchenko, AC Connolly... - Frontiers in ..., 2018 - frontiersin.org

... data distribution (<http://datalad.org>; Halchenko et al., 2017; RRID:SCR_003932, RRID:SCR_003931) from their original location at <http://datasets.datalad.org/?dir=/labs/haxby/> attention, as well as from OpenNeuro at <https://openneuro.org/datasets/ds000233> (RRID ...

☆ 99 Cited by 4 Related articles All 12 versions

[HTML] Sharing brain mapping statistical results with the neuroimaging data model

C Maumet, T Auer, A Bowring, G Chen, S Das... - Scientific data, 2016 - nature.com

... Those packs describe the results of fMRI analyses performed at the subject (232 packs) and group (12 packs) levels on six datasets downloaded from OpenfMRI (**RRID:SCR_005031**) 40,41 ([Data Citation 1: OpenfMRI ds000005] version 1.1.0, [Data Citation 2: OpenfMRI ...

☆ 99 Cited by 17 Related articles All 23 versions

Exploring the impact of analysis software on task fMRI results

A Bowring, C Maumet, TE Nichols - Human brain mapping, 2019 - Wiley Online Library

... We choose three publications with data that have been made publicly available on the OpenfMRI database (**RRID:SCR_005031**, <http://openfmri.org>; [Poldrack et al., 2013]), recently relaunched as OpenNeuro (<http://openneuro.org>), and attempt to recreate the main figure from ...

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Biology, Warsaw, Poland

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PyMICE

pypi package 1.2.1

build passing

License GPL v3

DOI [10.5281/zenodo.884419](https://doi.org/10.5281/zenodo.884419)

PyMICE is a Python® library for mice behavioural data analysis.

The library can be used for loading and analysing of data obtained from IntelliCage™

and the recommended bibliography entry format:

*Dzik J. M., Łęski S., Puścian A. (September 5, 2017) “PyMICE”
computer software (v. 1.2.1; RRID:nlx_158570)
doi: [10.5281/zenodo.884419](https://doi.org/10.5281/zenodo.884419)*



Invitrogen

Catalog # 459250

PGK1 Monoclonal Antibody (22C5D8)

250 µg

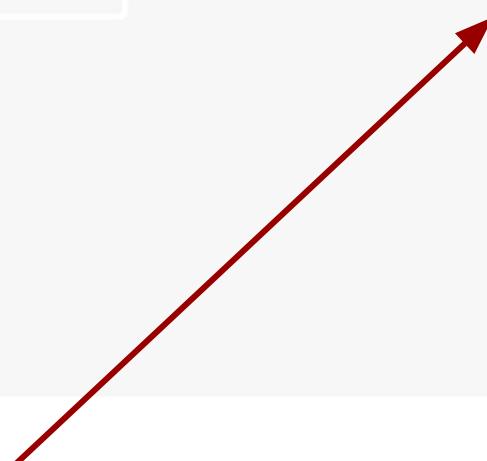
40 Published Figures

123 References

[View all \(10\) PGK1 antibodies](#)

Cite PGK1 Monoclonal Antibody (22C5D8)

The following antibody was used in this experiment: PGK1 Monoclonal Antibody (22C5D8) from catalog # 459250, RRID AB_2532235.


[Click to Copy](#)

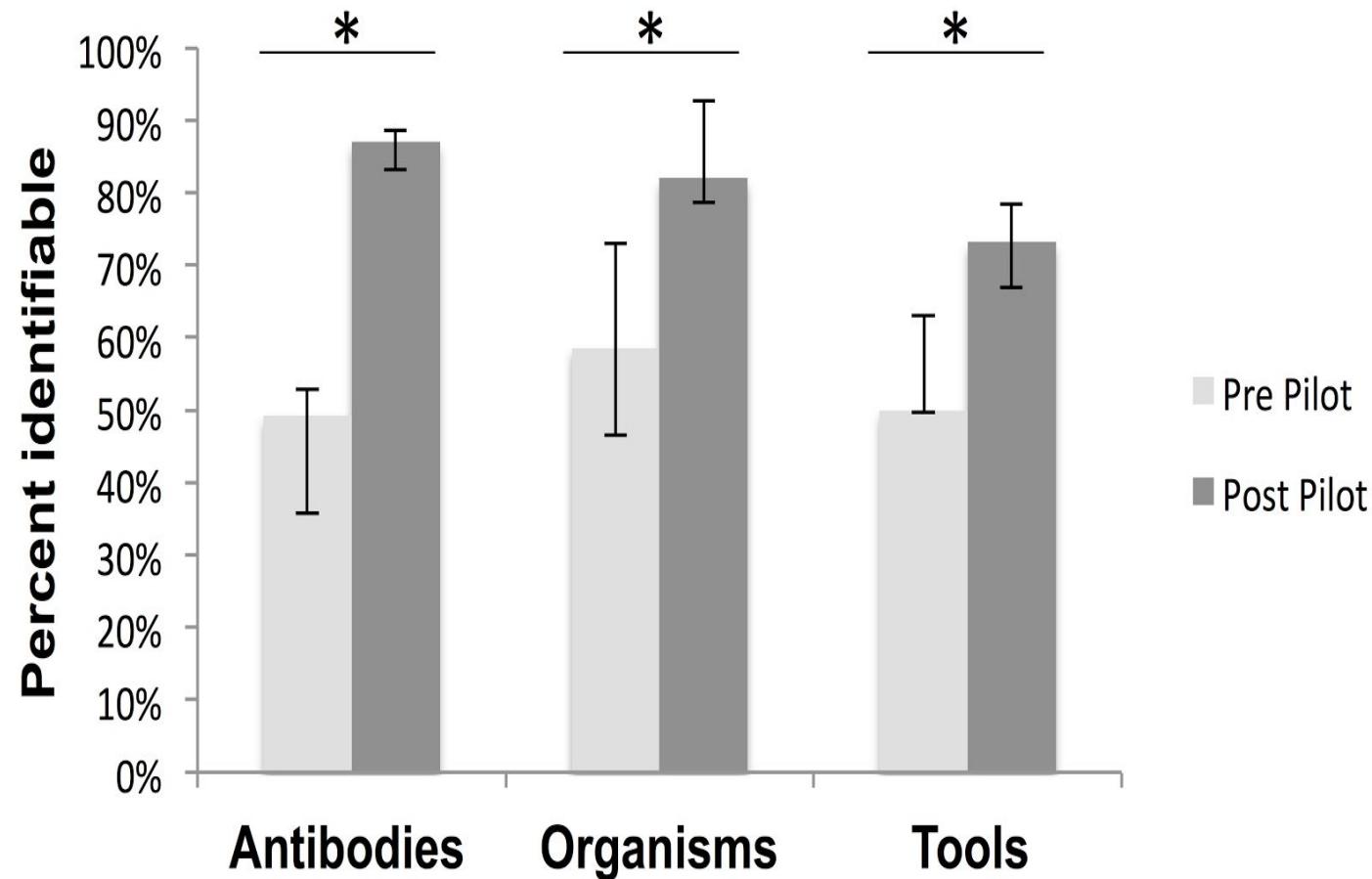
Datasheet

[Create Citation](#) [Questions & Answers](#) [Tech Support](#)[What is a shared list?](#) [Performance Guarantee](#)

Why bother?



RRIDs = Better papers



Without RRIDs
authors are not
good at
identifying
resources used

RRIDs are part of the JATS v1.2

**Journal Publishing Tag Library
NISO JATS Version 1.2 (ANSI/NISO Z39.96-2019)**

May 2019

***National Center for Biotechnology Information (NCBI)
National Library of Medicine (NLM)***

RRIDs are part of the JATS v1.2

Journal Publishing Tag Library NISO JATS Version 1.2 (ANSI/NISO Z39.96-2019)

```
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    vocab="Research Resource Identifier"
    >RRID:IMSR_HAR:5669</resource-id>
</resource-wrap>
<resource-wrap>...</resource-wrap>
```



OpenNeuro (RRID:SCR_005031)

<http://openneuro.org>.

Open platform for analyzing and sharing neuroimaging data from human brain imaging research studies. Brain Imaging Data Structure (BIDS) compliant database. Formerly known as OpenfMRI.
Data archives to hold magnetic resonance imaging data. Platform for sharing MRI, MEG, EEG, iEEG, and ECoG data.



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ANALYTICS

DATA

DATA LICENSES

SOURCE

Keywords

neuroinformatics, database, storing, dataset, neuroimaging, data, MRI, MEG, EEG, iEEG, ECoG

Resource ID

SCR_005031

Alternate IDs

nlx_144048

Website Status

Last checked up

Parent Organization

BRAIN Initiative , Stanford University; Stanford; California , Stanford Center for Reproducible Neuroscience

Abbreviation(s)

OpenNeuro, OpenfMRI

Species

human

Resource Type

Resource, database, service resource, storage service resource, image repository, data repository, data or information resource



OpenNeuro (RRID:SCR)

<http://openneuro.org>

Open platform for analyzing and sharing
Data archives to hold magnetic resonance

[INFORMATION](#) [RELATIONSHIPS](#)

Keywords

neuroinformatics, database, storing, dataset,
neuroimaging, data, MRI, MEG, EEG, iEEG,
ECOG

Parent Organization

BRAIN Initiative , Stanford University; Stanfor
California , Stanford Center for Reproducible
Neuroscience

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wn as OpenfMRI.

e resource, storage
ository, data
on resource



RRID Portal

OpenNeuro (RRID:SCR_00503)

<http://openneuro.org>.

Open platform for analyzing and sharing neuroimaging

Data archives to hold magnetic resonance imaging da



INFORMATION RELATIONSHIPS REFERENCE

Keywords

neuroinformatics, database, storing, dataset, neuroimaging, data, MRI, MEG, EEG, iEEG, ECoG

Parent Organization

BRAIN Initiative , Stanford University; Stanford; California , Stanford Center for Reproducible Neuroscience

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First Previous 1 2 3 Next Last

Fast, Accurate, and Stable Feature Selection Using Neural Networks.

PubMed

Deraeve J Neuroinformatics 2018

ned from the OpenfMRI database ([RRID:SCR_005031](#)). Its accession number is ds000

Show abstract

PMID:29564729

See all resources this publication mentions

Sharing brain mapping statistical results with the neuroimaging data model.

PubMed

Maumet C Scientific data 2016

OpenfMRI ([SCR_005031](#))40,41 ([Da

ces

RI.

e

How many journals use RRIDs?

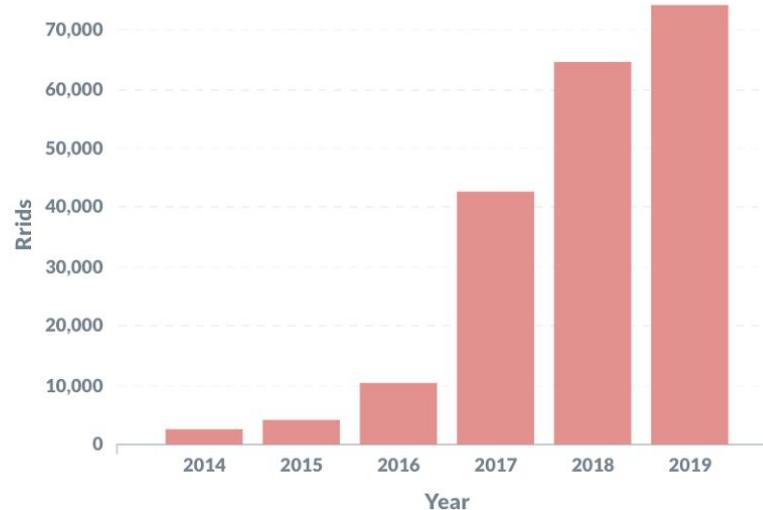
1.0k

Distinct journals

190.1k

Count of distinct RRIDs in ...

Number of RRIDs by year (curator found RRIDs are included)

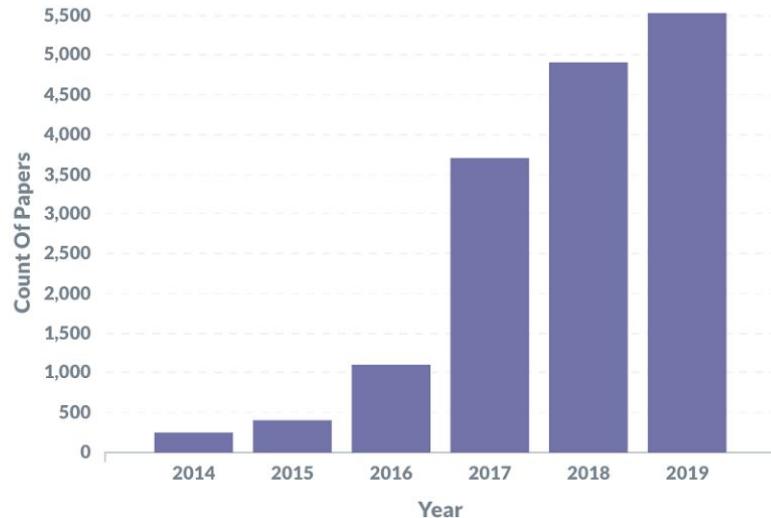
**17.8k**

Distinct DOIs (url_doi_pmrid)

17.3k

Distinct PMIDs (url_doi_pmrid)

Chart of papers with RRID annotations by year



List journals with RRIDs

Issn	Journal	Rrids
2211-1247	Cell Reports	20,786
2050-084X	eLife	20,125
0092-8674	Cell	12,620
0021-9967	Journal of Comparative Neurology	11,812
0270-6474	The Journal of Neuroscience	10,788
0896-6273	Neuron	10,088
1074-7613	Immunity	9,862
1097-2765	Molecular Cell	9,480
1534-5807	Developmental Cell	7,377
1934-5909	Cell Stem Cell	6,576
1535-6108	Cancer Cell	6,078

Occurrences of RRID by DOI/journal/date

Rrid	Tags	Doi	Journal	Scicrunch Date
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.celrep.2019.09.019	Cell Reports	2019-10
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.celrep.2019.09.041	Cell Reports	2019-10
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.stem.2019.08.018	Cell Stem Cell	2019-10
RRID:AB_2147781	["RRIDCUR:Missing", "RRID:AB_2147781"]	10.1038/s41586-019-1601-9	Nature	2019-09-25
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.devcel.2019.08.006	Developmental Cell	2019-09
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.molcel.2019.07.036	Molecular Cell	2019-09
RRID:AB_2147781	["RRID:AB_2147781"]	10.1371/journal.pone.0216167	PLOS ONE	2019-08-13
RRID:AB_2147781	["RRID:AB_2147781"]	10.7554/eLife.47097	eLife	2019-08-08
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.devcel.2019.07.014	Developmental Cell	2019-08
RRID:AB_2147781	["RRID:AB_2147781"]	10.1016/j.celrep.2019.06.091	Cell Reports	2019-07
RRID:AB_2147781	["RRID:AB_2147781", "RRIDCUR:Missing"]	10.1096/fj.201900519R	The FASEB Journal	2019-06-17

Do RRIDs impact reproducibility?



Contaminated cell lines are used in studies

FEATURE

Line of attack

Jill Neimark*

Science 27 Feb 2015:
Vol. 347, Issue 6225, pp. 938-940
DOI: 10.1126/science.347.6225.938



Article

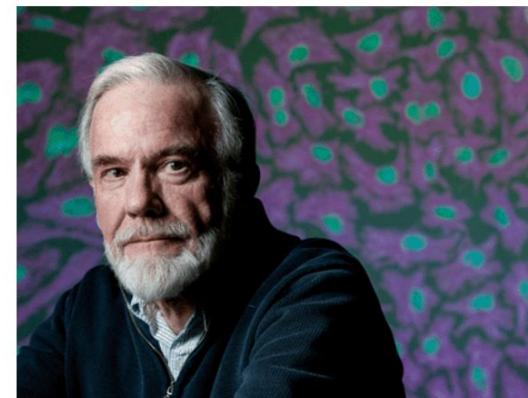
Figures & Data

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PDF

"I call myself a corrector," says University of Colorado geneticist Christopher Korch. What Korch passionately wants to correct is the contamination of laboratory cell cultures, a problem that has bedeviled biomedical research for more than half a century. Over the past 15 years, he has published on 78 widely used cell lines that turned out to be overgrown with other cells. Thyroid lines were actually composed of melanoma



Many widely studied cell lines continue to be overrun by HeLa cancer cells (displayed behind Korch).

PHOTO: ©
JOANNA B
PINNEO

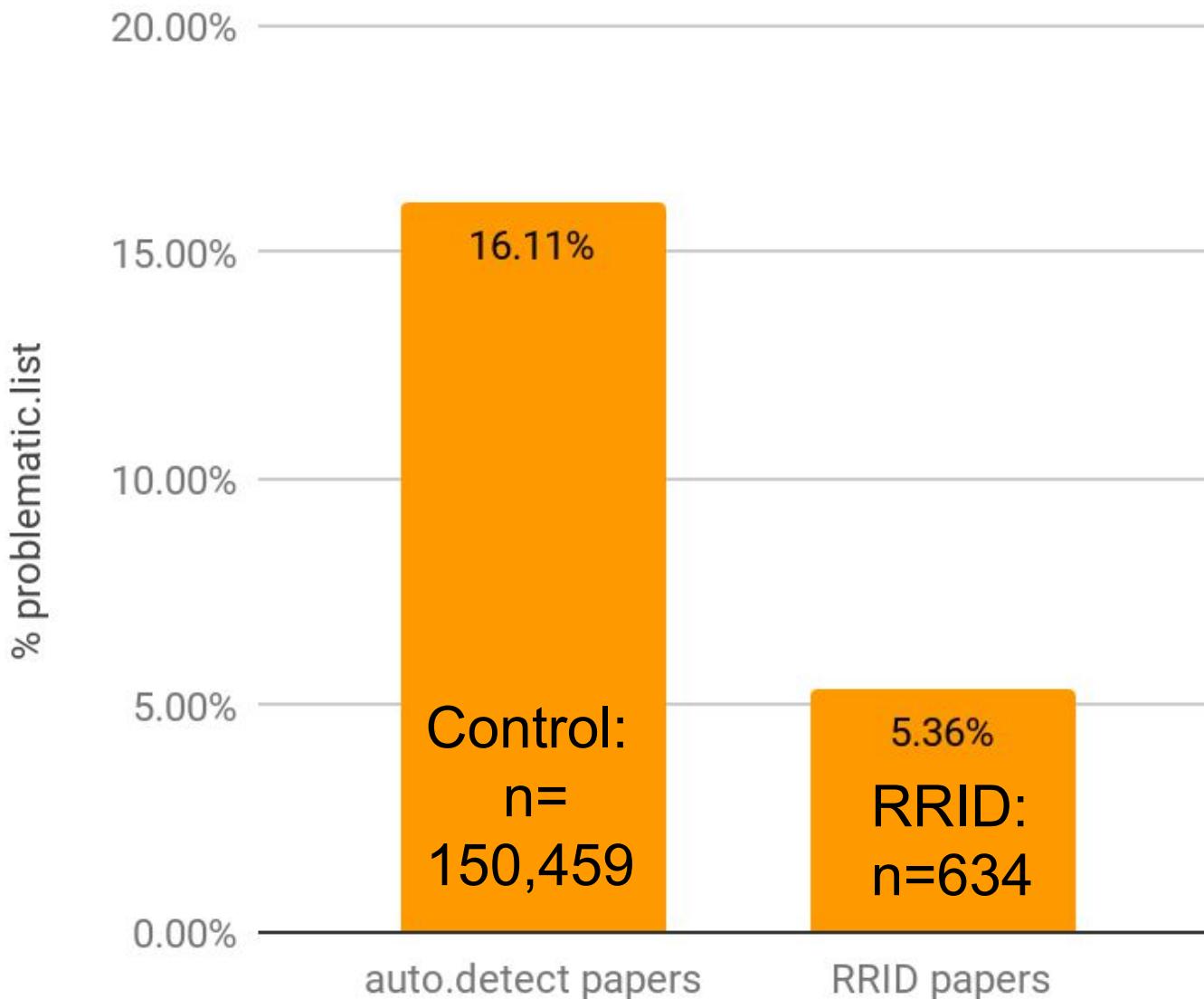


There is a **naughty list** of cell lines available

but
Authors don't look at it!

What if we could put the
“naughty list” in front of authors
before they publish?

How many papers contain at least one cell line on the ICLAC problematic list?



RRIDs are associated
with a 66% reduction
of use of **naughty** cell
lines

Future Directions



Introducing SciScore.com



SciScore checks methods sections for properly cited tools as well as NIH rigor criteria, and provisions a score: 1-10

Thank you!
but consider...

- Can there be an uber tool repository?
- Piggyback on the RRID system to improve citation of tools?