



RRIDS: A WAY TO TRACK RESOURCES THROUGH THE LITERATURE

...LIKE ORCID FOR CORE FACILITIES?



Anita Bandrowski, PhD

UCSD Dept. Neurosci

RRIDs lead: <https://scicrunch.org/resources>

COI: Co-Founder and CEO of SciCrunch Inc



RRIDS: A WAY TO TRACK RESOURCES THROUGH THE

Official 501(c)(3) non-profit as of
February 2024!



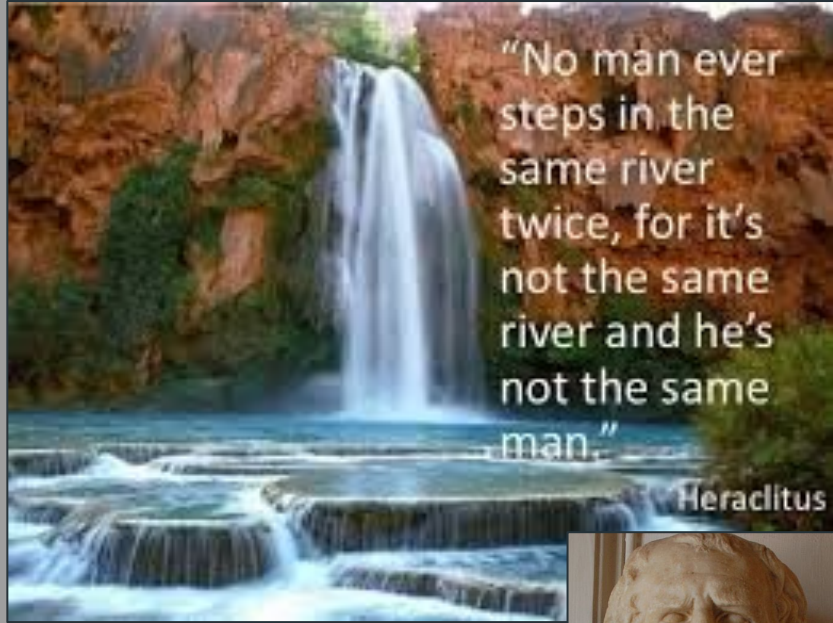
Anita Bandrowski, PhD

UCSD Dept. Neurosci

RRIDs lead: <https://scicrunch.org/resources>

COI: Co-Founder and CEO of SciCrunch Inc

WHAT IS THE INTERNET, WHY RRIDS?



- Internet, like a river, is not persistent
- Scientific literature is persistent
- How can we bridge these worlds?
- RRIDs are persistent unique identifiers for things that can change such as key biological resources, cores and Instruments





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: PMC67

PMID: [314](#)

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 Cy](#),
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

How are key
resources
described?

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-dykdddk, Monoclonal ANTI-FLAG[®] M2 antibody produced in mouse

Product #	Clonality	Application	Species Reactivity
<input type="checkbox"/> A2220	M2, monoclonal	IP, affinity chromatography	

No Identifier
=
Not Findable

for confocal microscopy was
utilized and fixed using 100%
mouse-anti-FLAG (Sigma)
aline [PBS]) and rabbit-anti-Myc
with Alexa Fluor 488 anti-
fluor 555 anti-rabbit antibody

Cell



Volume 187, Issue 3, 1 February 2024, Pages 692-711.e26

Article

DNA-guided transcription factor cooperativity shapes face and limb

mes

Seungsoc

Maram B

Tomek Sv

Show mo

Key resources table

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
Mouse monoclonal TWIST1 (WT, ChIP, CUT&RUN)	Abcam	Cat# ab50887; RRID:AB_883294 ↗
Mouse monoclonal ALX4 (WB, CUT&RUN)	Novus Bio	Cat# NBP2-45490; RRID:AB_3073567 ↗
Rabbit monoclonal V5 tag (WB, IP)	Abcam	Cat# ab206566; RRID:AB_2819155 ↗
Mouse monoclonal Flag tag (WB)	Sigma	Cat# F1804; RRID:AB_262044 ↗
Donkey polyclonal anti-rabbit IgG (H+L) HRP (WB)	Jackson ImmunoResearch	Cat# 711-035-152; RRID:AB_10015282 ↗

Identifier
Links to
information
'raft'



Antibody Name ?

Monoclonal ANTI-FLAG® M2 antibody pro

RRID:AB_262044



Antibody Information ?

URL: http://antibodyregistry.org/AB_262044

Proper Citation: (Sigma-Aldrich Cat# F1804, RRID:AB_262044)

Target Antigen: FLAG

Host Organism: mouse

Clonality: monoclonal

Comments: Applications: immunoblotting, immunoprecipitation, immunohistochemistry, info: Independent validation by the NYU Lagone was performed for: IHC. This antibody v...[more]

[Expand All](#)



Usage and Citation Metrics ?

We found 1508 mentions in open access literature.

[View full usage report](#)

Most recent articles:

Graca Marques J, et al. (2024) The Chromatin Remodeler CHD4 Sustains Ewing



Ratings and Alerts ?

[Report Information](#)

- ENCODE PROJECT External validation for lot: SLBK1346V is available under ENCODE ID: ENCAB697XQW - ENCODE <https://www.encodeproject.org/antibodies/ENCAB697XQW>

No alerts have been found for Monoclonal ANTI-FLAG® M2 antibody produced in mouse.

[View More at BIOMED RESOURCE WATCH](#)

HOW ARE CORES AND INSTRUMENTS ACKNOWLEDGED?



HOW ARE CORES AND INSTRUMENTS ACKNOWLEDGED?



Resource Name



Nonhuman Primate Reagent Resource

RRID:SCR_012986 [Login to claim ownership](#)

Materials and Methods

Go to:

Animal inoculation and cART treatment

Eight Indian-origin adult rhesus macaques, housed according to the standards of the American Association for Accreditation of Laboratory Animal Care, were inoculated with SIVmac251 (20ng SIV *p27*, i.v. supplied by Ron Desrosiers, Harvard Medical School) and depleted of CD8⁺ cells by treatment with the monoclonal anti-CD8 antibody cM-T807 (supplied by Keith Reimann, National Cell Culture Center) on 6, 8, and 12 days post-inoculation (dpi) as previously described to accelerate disease progression ([Ratai et al., 2010](#); [Schmitz et al., 1999](#); [Williams et al., 2005](#)). Four of the monkeys also received cART consisting of daily Racivir (RCV, 10mg/kg, supplied by Raymond Schinazi) and (R)-9-(2-phosphonylmethoxypropyl) adenine (PMPA, 20 mg/kg, Gilead Sciences, Foster City, CA), nucleoside and nucleotide analogs, respectively, neither of which penetrates the CNS ([Haworth et al., 1998](#); [Schinazi et al., 1992](#)) (Table 1). The drugs were given orally for 4 weeks beginning on 28 dpi. Terminal CSF samples were analyzed for the presence of RCV metabolites to test for CNS penetration of this drug ([Williams et al., 2005](#)).

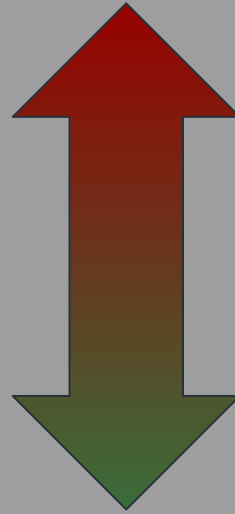
Reagent ID
& former core
director
acknowledged;

Core name was
never National Cell
Culture Center,
director changed 6
years ago; reagent
in freezer for 20
year

HOW ARE CORES AND INSTRUMENTS ACKNOWLEDGED?

- Cores can be acknowledged by:

- Name of staff member
- Core PI name
- Name of core
- URL
- Grant #
- RRID



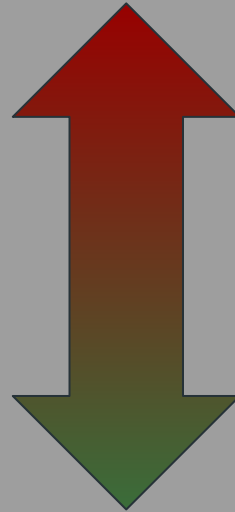
Less reliable

More reliable

HOW ARE CORES AND INSTRUMENTS ACKNOWLEDGED?

- Cores can be acknowledged by:

- Name of staff member
- Core PI name
- Name of core
- URL
- Grant #
- RRID



More time

Less time

Research networking and the role of the medical librarian

Robyn Reed, AHIP; Matthew J. Eyer; Megan M. Young; Sarah K. Bronson

See end of article for authors' affiliations.

Medical librarians work collaboratively across institutions. One area where librarians can provide key expertise is in the management of Research Information Management Systems (RIMS). At Penn State, the RIMS implementation team, consisting of librarians and marketing staff from the College of Medicine, expanded their own RIMS systems, the CoM RIMS, to include the Penn State RIMS instance. The goal of this commentary is to provide a perspective from Penn State to address questions related to RIMS from other institutions.

“... The efforts of the CoM RIMS team collaborating with the director of the biomedical core facilities have improved internal return-on-investment analyses while publicly demonstrating applications from research core usage on the RIMS. As uptake of RRID usage increases, reporting on the impact of individual core facilities may be simplified to searches employing only RRIDs.”

Keywords: Research networking; collaboration; biomedical research

Strain Detail Sheet



Strain Name: STOCK Tg(Sox9-EGFP)EB209Gsat/Mmucd
Stock Number: 011019-UCD
Citation ID: RRID:MMRRC_011019-UCD
Major Collection: [GENSAT](#)

COPY RRID CITATION TO CLIPBOARD ?

RRIDs are reflected at many databases and catalogs

These plasmids were created by your colleague in an article in which the plasmids were described, future publications.

For your **Materials & Methods** section:

CelTag Plasmid was a gift from David Engelke
 RRID:Addgene_66562)

Search for...

Search Clear

Purified anti-AKT1 Antibody

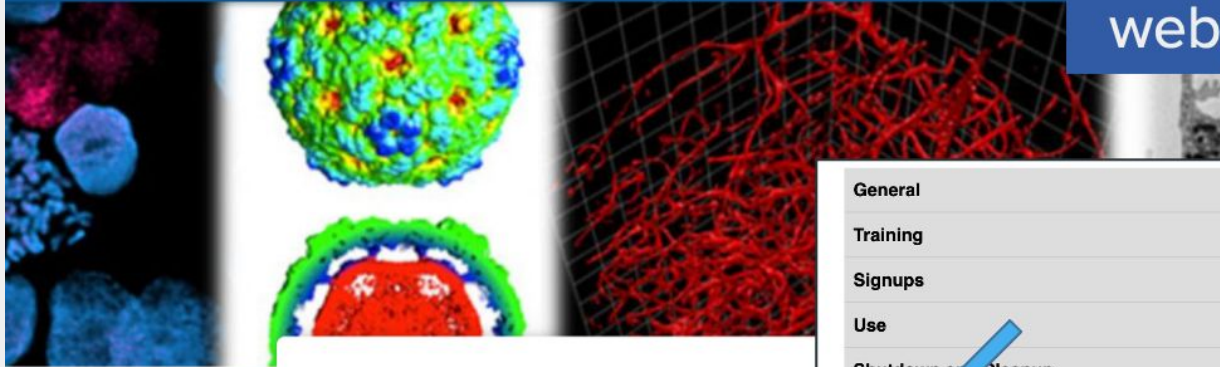
RRID AB_2566355 (BioLegend Cat. No. 680302)

Antigen Details

Structure 480 amino acids with a predicted molecular weight of approximately 55 kDa.
Distribution Cytoplasm, nucleus, cell membrane, phosphorylation on T182, T242, S473, and S479. Localization to the cell membrane where it is targeted for

Cellosaurus 1-5c-4 (CVCL_2260)

Cell line name	1-5c-4
Synonyms	Clone 1-5c-4; Clone 1-5c-4 WKD of Chang Conjunctival Epithelial Cell Line
Accession	CVCL_2260
Resource Identification Initiative	To cite this cell line use: 1-5c-4 (RRID:CVCL_2260)
Comments	Problematic cell line: Contaminated. Shown to be a HeLa Transformant: NCBI_TaxID; 333761; Human papillomavirus Omics: Transcriptome analysis.
Disease	Human papillomavirus-related endocervical adenocarcinoma
Species of origin	Homo sapiens (Human) (NCBI Taxonomy: 9606)

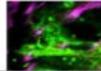


- General Information and Resources >
- Animal-Based Studies >
- Biochemical and Biophysical Studies >

Advanced Light Microscopy

The Advanced Light Microscopy core at Penn State C and training for fluorescence imaging of molecules, c

The **Confocal, Super-Resolution STED and Deconvolution microscopes** are useful in 3D imaging of any biological systems and spatial



Importantly, RRIDs are reflected on the Core webpages: Citation info

General >

Training >

Signups >

Use >

Shutdown and Cleanup >

Citation >

All publications, press releases or other documents that result from the utilization of any Penn State College of Medicine Institutional Research Resources including funding, **RRIDs**, services or support are required to credit the core facility and associated RRID for each core used. **Use** of an instruments in the Advanced Light Microscopy core should include the following:

"The Advanced Light Microscopy core (**RRID:SCR_022526**) services and instruments used in this project were funded, in part, by the Pennsylvania State University College of Medicine via the Office of the Vice Dean of Research and Graduate Students and the Pennsylvania Department of Health using Tobacco Settlement Funds (CURE). The content is solely the responsibility of the authors and does not necessarily represent the official views of the University or College of Medicine. The Pennsylvania Department of Health specifically disclaims responsibility for any analyses, interpretations or conclusions."

Safety >

Emergency >

Core directors use RRIDs in their email signature

July 2016

eLife joins the Resource Identification Initiative

Thursday, July 7, 2016 - 09:05

To promote reproducibility in scientific research, **Research Resource Identifiers, encouraging a description of the research resources within the article**

Resources used in experimental work are often a barrier to replicating the results. That is why we have the **Resource Identification Initiative (#RII)**, a community-led project that aims to improve reproducibility in biomedical and life science research by using unique Research Resource Identifiers (RRIDs) for research resources.

RRIDs must be machine-readable, free to generate, and unique. We encourage authors and publishers and journals.

Who does this?

2000+ journals have RRID containing papers
>5000 journals indexed in Pubmed



Aug 2016

Journals Books Meeting Abstracts Endocrine News Advertise

Home > Instructions to Authors > Endocrinology Instructions to Authors

Antibody Table

It is the policy of *Endocrinology* to require authors using antibodies for immunohistochemistry, immunocytochemistry, western blots, immunoblots, immunoneutralization, or related methodology, to submit an Antibody table. This table should be numbered to indicate its position in the sequence of tables in the article (e.g. Table 1). In the Methods section, include appropriate positive or negative controls, antibody validation, lot number, and catalog number. Beginning in September 2016, authors should also ascertain whether the antibody has a **Research Resource Identifier (RRID)** by consulting the **Antibody Registry** and including the RRID, if available, in the **Methods section** and/or the **Antibody table** of the article.

Feb 2014

RRIDs

JNeurosci encourages use of Research Resource Identifiers (RRIDs) through the Resource Identification Initiative. RRIDs used in the course of scientific research address concerns of reproducibility by providing a unique, machine-readable identifier that can be used to link readers to external resources and enable search engines to return all papers that use a given resource.

To find an RRID: visit <https://scicrunch.org/resources> and enter your search term(s).

- Antibodies: searching for the catalog number usually narrows the search to only a few relevant results.
- Cell Lines: searching for the catalog number of an established cell line is usually best, searching for cell lines by name is often less effective.
- Organisms: you can include PubMed IDs (PMIDs) in your search or filter your search results by PMIDs.
- Software tools: usually the name of the tool (MATLAB or ImageJ) or the institution where it is housed.

Search help is available at: rii-help@scicrunch.org.

Once you have located an RRID, insert "RRID:" plus the identifier in the appropriate location in the Methods section of your article.

- Antibodies: "Sections were stained with a rabbit polyclonal antibody against ERK1 (Abgent Cat# A6302, RRID:AB_627422). RRID:AB_627422" (Abgent Cat# A6302, RRID:AB_627422). RRID:AB_627422" (Abgent Cat# A6302, RRID:AB_627422).

HOME ARTICLES TOPICS ALERTS FOR AUTHOR

FOR AUTHORS

Jun 2016

PDF Information for Authors

eNeuro, an open-access journal from the Society for Neuroscience, publishes high-quality, peer-reviewed research focused solely on the field of neuroscience. *eNeuro* embodies a scientific vision that offers a new experience for authors and readers, all in support of SN's mission to advance understanding of the brain and nervous system.

Explore

Oct 2016

Cell Press STAR Methods

Cell Press is pleased to introduce a new format for reporting methods that replaces the current Methods format (Structured, Transparent, Accessible Reporting) will be introduced in 2017. The format will improve rigor and reproducibility of methods reporting.

Text Format

The Methods and Results sections of your paper should be written in a clear, concise, and unambiguous style. There is no length limit for the Methods and Results sections.

- CONTACT FOR CORRECTIONS
- EXPERIMENTAL PROCEDURES
- METHOD DETAILS
- QUANTIFICATION AND STATISTICAL ANALYSIS
- DATA AND SOFTWARE AVAILABILITY
- ADDITIONAL RESOURCES

METHODS AND RESOURCES

KEY RESOURCES TABLE

Reagent or Resource	Source	Identifier
Antibodies		
Rabbit monoclonal anti-SMALL1	Abnova	N/A
Rabbit monoclonal anti-SEK1	Cell Signalling	Cat. #7076, RRID: AB_1234567
Rabbit monoclonal anti-phospho-S6 (S240/S244)	Cell Signalling	Cat. #3034, RRID: AB_381654
Rabbit monoclonal anti-Phospho-SEK1 (T303/S305)	Cell Signalling	Cat. #9334, RRID: AB_7330201
Mouse monoclonal anti-Phospho-SEK1 (T303/S305)	Cell Signalling	Cat. #9336, RRID: AB_7303173
EMSA Tag 1-EXPRESS 303 Protein Labeling Mix	Sigma (gift prior to commercial release)	N/A
Official Commercial Assays		
EMSA Tag 1-EXPRESS 303 Protein Labeling Mix	Perkin-Elmer	NEG272014MC
SUNSET assay	Karstedt	N/A
Neto1 LysoBio NT Kit	Invitrogen	84471200
Stratified Data		
Raw and analyzed data	this paper	GE0: 0265473
Human reference genome (NCBI build 37) (GRCh37)	http://www.ncbi.nlm.nih.gov/projects/genome/assembly/grch/human/	
Experimental Models: Cell Lines		
Bacterial strain: DH5a T101	Invitrogen	12267-016
Cell line: U2-OS/Par2 Luciferase	John Hogenesch lab	N/A
Cell line: 293 T cells	ATCC	CRL-11268
Cell line: Phoenix Retroviral Packaging Line	National Gene Vector Biotechnology	N/A
Experimental Models: Organisms/Strains		
Mouse line: C57BL/6	Jackson Labs	01234, RRID: MGI_1433033
Mouse line: B6.129-129-Amhr1 ^{tm1.1} /J	Jackson Labs	006497, RRID: MGI_1433033, C57BL/6, 129/SvEv
Recombinant DNA		
SMALL1 cDNA	SGEMT Archive	Clone 2081551
pRR1, pRR2, etc.	Addgene	Plasmid #11910
ARR171-Flag-C26A19S-WTR	Chen et al., 2013	N/A
pRR1-Flag2 Luciferase lentiviral vector	Tyler Jacks' lab	N/A
Sequence-Based Reagents		
See Table S1		
FASTQ files: SRR1149581	NCBI SRA	SRX1149581
FASTQ files: SRR1149582	NCBI SRA	SRX1149582
FASTQ files: SRR1149583	NCBI SRA	SRX1149583
FASTQ files: SRR1149584	NCBI SRA	SRX1149584
FASTQ files: SRR1149585	NCBI SRA	SRX1149585
FASTQ files: SRR1149586	NCBI SRA	SRX1149586
FASTQ files: SRR1149587	NCBI SRA	SRX1149587
FASTQ files: SRR1149588	NCBI SRA	SRX1149588
FASTQ files: SRR1149589	NCBI SRA	SRX1149589
FASTQ files: SRR1149590	NCBI SRA	SRX1149590
FASTQ files: SRR1149591	NCBI SRA	SRX1149591
FASTQ files: SRR1149592	NCBI SRA	SRX1149592
FASTQ files: SRR1149593	NCBI SRA	SRX1149593
FASTQ files: SRR1149594	NCBI SRA	SRX1149594
FASTQ files: SRR1149595	NCBI SRA	SRX1149595
FASTQ files: SRR1149596	NCBI SRA	SRX1149596
FASTQ files: SRR1149597	NCBI SRA	SRX1149597
FASTQ files: SRR1149598	NCBI SRA	SRX1149598
FASTQ files: SRR1149599	NCBI SRA	SRX1149599
FASTQ files: SRR1149600	NCBI SRA	SRX1149600

Table Format

RRID AUTHOR'S WORKFLOW



<https://scicrunch.org/resources>
or rrid.site

SEARCH FOR RESOURCES

RRID Portal

Home / Community Resources

SEARCH Type in a keyword to search

vermont core

Vermont University Vermont Advanced Computing Core Facility

Cite this (Vermont University Vermont Advanced Computing Core Facility, RRID:SCR_017762)

URL: <http://www.uvm.edu/~vacc/>

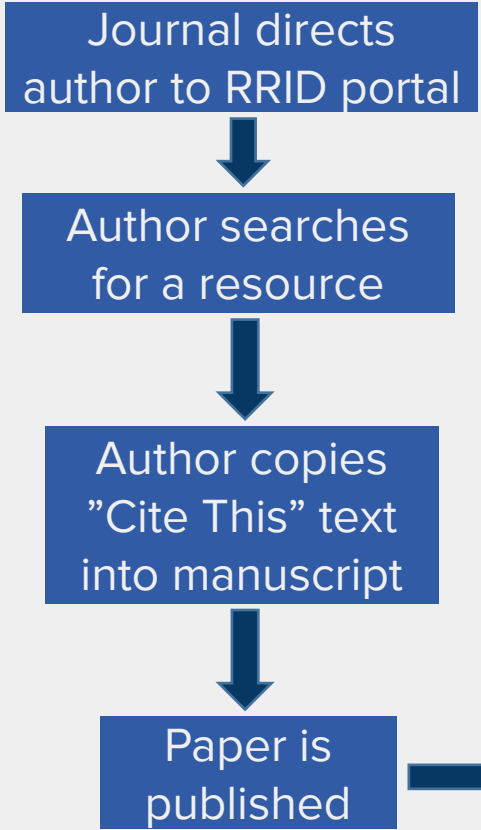
Resource Type: Resource, service resource, core facility, ...

Core provides access to **Advanced Computing Core Facility, RRID:SCR_017762**

Tools

SciCrunch: Registry (9) | Cite This | View Source Information

RRID portal includes:
Antibodies >2.5M
Organisms >800K (~30 centers)
Cell lines >150K
Plasmids (Addgene) >100K
Stats tools, Core fac. etc 23K



RRID:IMSR_JAX:000664

About 901 results (0.07 sec)

Did you mean: RRID:IMSR JAX:000664

Natural whisker-guided behavior by head ...

NJ Sofroniew, JD Cohen, AK Lee... - Journal of ..., 2014 - Soc Neuroscience

★ 97 Cited by 83 Related articles All 11 versions Web of Science: 52

α2δ-4 is required for the molecular and structural organization of rod ...

photoreceptor synapses

V Kerov, JG Laird, M Joiner, S Knecht... - Journal of ..., 2018 - Soc Neuroscience

☆ 97 Cited by 14 Related articles All 7 versions Web of Science: 11

[HTML] Inhibition of Dpp8/9 activates the Nlrp1b inflammasome

MC Okondo, SD Rao, CY Taabazuig, AJ Chui... - Cell chemical ..., 2018 - Elsevier

... BALB/cJ, The Jackson Laboratory, Cat#000651; RRID:IMSR_JAX:000651.

C57BL/6J, The Jackson Laboratory, Cat#000664; **RRID:IMSR_JAX:000664**.

NOD/ShiLzJ, The Jackson Laboratory, Cat#001976; RRID:IMSR_JAX:001976 ...

☆ 97 Cited by 39 Related articles All 7 versions Web of Science: 24

S1PR3 mediates itch and pain via distinct TRP channel-dependent pa

RZ Hill, T Morita, RB Brem... - Journal of Neuroscience, 2018 - Soc Neuroscience

☆ 97 Cited by 9 Related articles All 10 versions Web of Science: 7

Paper becomes data

EACH RRID HAS A DEDICATED WEBPAGE

N2T.NET/RRID:SCR_022526



Resource Name [?](#)
Penn State Hershey College of Medicine Light Microscopy Imaging Core Facility [↗](#) [□](#)
RRID:SCR_022526 [Login to claim ownership](#)

Resource Information [?](#)
URL: <https://research.med.psu.edu/core-facilities/light-microscopy-imaging-core-facility/>
Proper Citation: Penn State Hershey College of Medicine Light Microscopy Imaging Core Facility (RRID:SCR_022526)
Description: Provides consultation and training in ultra high resolution imaging of cells and tissues in fixed or live states. Provides expertise in quantitative image analysis and consultations on microscopy related research projects.
Abbreviations: Penn State COM
Synonyms: The Light Microscopy Imaging Core (Penn State COM)
Resource Type: service resource, core facility, access service resource
Keywords: USEdit, ABRF, ultra high resolution imaging of cells and tissues, fixed or live

Usage and Citation Metrics [?](#)
We found 10 mentions in open access literature.
[View full usage report](#)
Most recent articles:
Hattori T, et al. (2024) ER stress elicits non-canonical CASP8 (caspase 8) activation on autophagosomal membranes to induce apoptosis. *Autophagy*. 20(2), 349. (PMID:37733908)
Kazzaz SA, et al. (2024) Phosphorylation of aryl hydrocarbon receptor interacting protein by TBK1 negatively regulates IRF7 and the type I interferon response. *The Journal of biological chemistry*, 300(1), 105525. (PMID:38043800)
Lambert GS, et al. (2024) Comparative analysis of retroviral Gag-host cell interactions: focus on the nuclear interactome. *bioRxiv*: the preprint server for biology. (PMID:38293010)
Check [Google Scholar](#) for all resource mentions.

Ratings and Alerts [?](#) [Report Information](#) [?](#)
No rating or validation information has been found for Penn State Hershey College of Medicine Light Microscopy Imaging Core Facility.
No alerts have been found for Penn State Hershey College of Medicine Light Microscopy Imaging Core Facility.

Collaborator Network [?](#)
A list of researchers who have used the resource in their research tool
Find mentions based on [Electron](#) [DNA TESTING](#)
City:
[Search](#)
[Q Search using your location](#)

Data and Source Information [?](#)
Source: [SciCrunch Registry](#)

[PDF REPORT](#) [HOW TO CITE](#)

[Contact help](#) [?](#)

Basic metadata:
other IDs
old/alt URLs

Relationships to
other resources
Institutions ROR!

Citations of
resource

Ratings
and alerts

Well used
helpdesk



Total cores:
2,855
Last 4 years:
1,727
1.2 per day
Cited cores: 605

 All Mentions (10 mentions) [Download Mentions] ?

First Previous **1** Next Last Page of 1 (1 ~ 10 of 10)

Hattori T, et al. (2024) ER stress elicits non-canonical CASP8 (caspase 8) activation on autophagosomal membranes to induce autophagy. *Journal of Cell Biology* , 230 (1) , 105525. (PMID:38043800)
-- ; e (RRID:SCR_022526) and Genome Sciences Core (RRID [Verified RRID ☺])

Kazzaz SA, et al. (2024) Phosphorylation of aryl hydrocarbon receptor interacting protein by TBK1 negatively regulates IRF3 signaling. *Journal of Cellular Biochemistry* , 300 (1) , 105525. (PMID:38043800)

-- ; Advanced Light Microscopy Core (RRID:SCR_022526), Flow Cytometry Core (RRID:SCR [Verified RRID ☺])

Lambert GS, et al. (2024) Comparative analysis of retroviral Gag-host cell interactions: focus on the nuclear interactome. *Journal of Cellular Biochemistry* , 300 (1) , 105525. (PMID:38043800)

-- ; core (RRID:SCR_022526) services and instruments used [Verified RRID ☺]

Ye Y, et al. (2024) Identification of membrane curvature sensing motifs essential for VPS37A phagophore recruitment and autophagosome maturation. *Journal of Cellular Biochemistry* , 300 (1) , 105525. (PMID:38491121)

-- image quantification. The NMR (RRID:SCR_022526) and Advanced Light Microscopy [Verified RRID ☺]

Saha K, et al. (2023) Alpha-tocopherylquinone-mediated activation of the Aryl Hydrocarbon Receptor regulates the production of reactive oxygen species and promotes inflammation. *Mucosal Immunology* , 16 (6) , 826. (PMID:37716509)

--

Kaddis Maldonado R, et al. (2023) The Rous sarcoma virus Gag Polyprotein Forms Biomolecular Condensates Driven by Its Nucleation Domain. *Journal of Cellular Biochemistry* , 124 (16) , 168182. (PMID:37328094)

-- Advanced Light Microscopy Core (RRID:SCR_022526). The Advanced Light Microscopy [Verified RRID ☺]

Pandya Shesh B, et al. (2023) Uptake of H-ferritin by Glioblastoma stem cells and its impact on their invasion capacity. *Journal of Cellular Biochemistry* , 124 (16) , 168182. (PMID:37328094)

-- Advanced Light Microscopy core (RRID:SCR_022526) services and instruments used [Verified RRID ☺]

Chang J, et al. (2023) HIV-1 Gag co-localizes with euchromatin histone marks at the nuclear periphery. *Journal of Virology* , 97 (1) , 105525. (PMID:38043800)

-- Advanced Light Microscopy Core (RRID:SCR_022526), which is funded, in part, by [Verified RRID ☺]



RRIDs are
visible in
papers,
sometimes
linked;
Brings trust in
citations

INSTRUMENTS HAVE MORE CONSISTENT TEXT MINING RESULTS

All Mentions (1085 mentions) [Download Mentions] ?

First Previous 1 2 3 4 5 6 Next Last Page 1 of 11 (1 ~ 100 of 1085)

Huang LC, et al. (2024) BRCA1 and ELK-1 regulate neural progenitor cell fate in the optic tectum in response to visual experience in *Academy of Sciences of the United States of America* , 121 (3) , e2316542121. (PMID:38198524)

-- ; CSARIA II, BD Biosciences, USA; RRID:SCR_018934). [Verified RRID]

Bennett NK, et al. (2024) Systems-level analyses dissociate genetic regulators of reactive oxygen species and energy production. *Proceedings of the National Academy of Sciences of the United States of America* , 121 (3) , e2307904121. (PMID:38207075)

-- ; ted on either a **BD FACSAria II** (RRID:SCR_018934) or a **BD FACSAria Fusion** (facil [Verified RRID])

Kinoshita S, et al. (2020) *Nature Communications* , 11 (1) , 2792. (PMID:38380)

-- as performed

Evans MK, et al. (2020) Ybx1 fine-tunes PRC2 activities to control embryonic brain development. *Nature communications* , 11 (1) , 2792. (PMID:38380)

-- After three washes in cold PBS, cells were resuspended in PBS and analyzed by **BD FACSAria**™ Fusion

Adaku N, et al. (2020) *Journal of Immunology* , 204 (1) , 100. (RRID:SCR_018934)

-- (RRID:SCR_018934)

Zhang H, et al. (2020) An IL-27-Driven Transcriptional Network Identifies Regulators of IL-10 Expression across T Helper Cell Subsets. *Immunity* , 52 (1) , 100. (RRID:SCR_018934)

-- For RNA-seq and qPCR analysis of IL-10 producing and non-producing T helper cells, naive CD4+CD45RO- mice using **BD FACSAria** sorter and were activated with irradiated splenocytes depleted of CD4 T cells (a

Sarratha L, et al. (2020) *Journal of Cellular Biochemistry* , 121 (1) , 100. (RRID:SCR_018934)

-- ; a II Cell

Tanno H, et al. (2020) A facile technology for the high-throughput sequencing of the paired VH:VL and TCRβ:TCRα gene rearrangements. *Journal of Cellular Biochemistry* , 121 (1) , 100. (RRID:SCR_018934)

-- Cells were washed and analyzed with **BD FACSAria** and FlowJo v10 software.

Sutton MS, et al. (2020) *Journal of Cellular Biochemistry* , 121 (1) , 100. (RRID:SCR_018934)

-- sciences

Bennett NK, et al. (2020) *Redox Biology* , 28 (1) , 101344. (PMID:37904)

-- ; ted on e

Xie K, et al. (2020) Activation leads to a significant shift in the intracellular redox homeostasis of neutrophil-like cells. *Redox biology* , 28 (1) , 101344. (PMID:37904)

-- 2.4 Monoclonal cultures of roGFP2 expressing PLB-985 cells were generated using a fluorescence-activated cell sorter (FACS, **BD FACSAria** III, BD Biosciences, Franklin Lakes, NJ, USA) and analyzed using the

respective software BD FACSDiva (version 8.0.1, BD, Franklin lakes, USA).

Tsukamoto S, et al. (2020) *The EMBO Journal* , 39 (17) , e105696. (PMID:32792)

-- II cell so

Cinque L, et al. (2020) Mit/TFE factors control ER-phagy via transcriptional regulation of FAM134B. *The EMBO journal* , 39 (17) , e105696. (PMID:32792)

-- Cells were collected in PBS, and the fluorescence was analyzed with **BD FACSAria**.

Of 2317 instruments 667 have citations;

Did authors use funded instrument? Core RRID + instrument citation

RRIDS: PIDS FOR KEY BIOLOGICAL RESOURCES

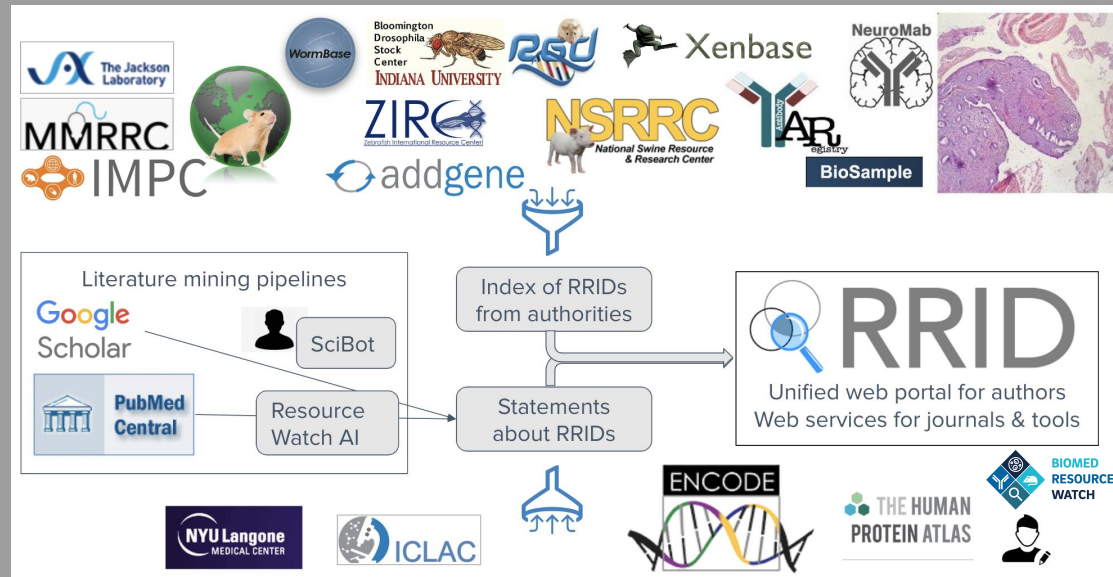


Millipore/Sigma Cat# MAB3026, [RRID:AB_2178887](#) (lot#)
(Company Name) (Catalog number), (RRID Identifier from authority)

What does it do: The Resource Identification Initiative is designed to help researchers sufficiently cite the key resources used to produce the scientific findings reported in the biomedical literature.

What problem does it solve: Resources reported in the biomedical literature often lack sufficient detail to enable reproducibility or reuse. This has been called out as a serious enough problem by the NIH to introduce new guidelines for Rigor and Transparency for almost all awards in starting in May of 2016.

Who are the users: Publishers/journals, research resource companies (producing e.g. antibody, mouse and cell lines)



WHAT IF THERE IS NO RRID FOR YOUR RESOURCE?

<https://scicrunch.org/resources>

Getting Started

The Resource Identification Portal was created in support of the [Resource ID](#) discovery, and reuse. The portal offers a central location for obtaining and exchanging identifiers for referencing a research resource. This portal relies on the good work of Cellosaurus. These community databases are the source for RRIDs of their type. When you cite it using the RRID, if you created a new resource, we link you to the place where examples are shown below, which are linked to metadata about each resource.

Antibody: [RRID:AB_90755](#)

Plasmid: [RRID:Addgene_44362](#)

Organism: [RRID:MMRRC_026409-UCD](#)

Cell Line: [RRID:CVCL_1074](#)

Tool: [RRID:SCR_003070](#)

Biosamples: [RRID:SAMN19842595](#)

To ensure they are recognizable, unique, and traceable, identifiers are prefixed with the registry that provided it (e.g. "AB" for the Antibody Registry, "CVCL" for the Cell Line Registry, "SCR" for the SciCrunch registry of tools).

Can't find your resource?

[Add a Resource](#)

Add a resource

[New Search](#)

[Home](#) / [Tools](#) / [Add a resource](#)

What is a Resource?

RRID contributes to the SciCrunch Registry, the [antibodyregistry.org](#), Cellosaurus database and a large number of model organism databases.

To submit your information for a new research resource, you must first select the type of resource. You will most likely be taken to a site outside of the RRID portal because the RRID is based on identifiers that

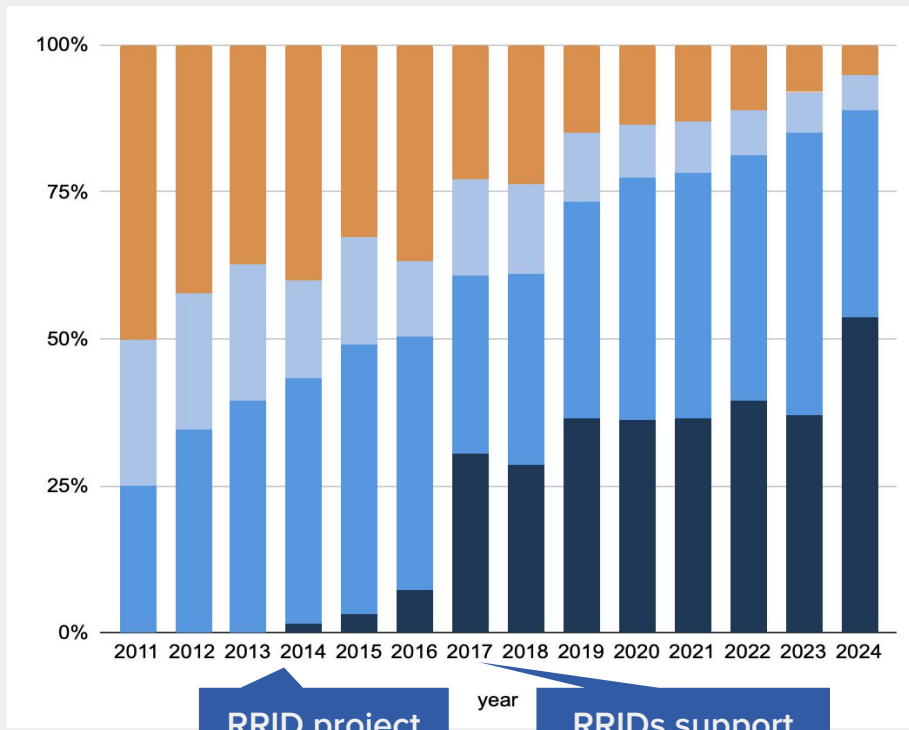
Choose a resource type

Resource Type	Select
Antibody	>
Cell Lines	>
Core Facility	>
Organism	>
Plasmid	>
Resource	>



No need to be logged in

Percentage of references per category when MMRRC mice were used



n > 24100 papers

RRID project starts

RRIDs support from MMRRC

Nickname provided, mouse could not be found

Sripada A, et al. (2021) Sprouty2 positively regulates T cell function by inhibiting CSK and LCK kinases. PLoS biology , 19 (3) , e3001063. (PMID:34824365) -- m The Jackson's Laboratory) and **Spry2^{fl}** (MMRRC, mutant)

Name provided, RRID found

cells international , 2020 , 8878412. (PMID:32733573) -- 5xFAD mice (**B6S⁺JL-Tg(APP^SSwF⁺ILon,-PSEN1[?]M146L[?]L286V)**)6782) in accordance with the laboratory guidelines.

Catalog number provided

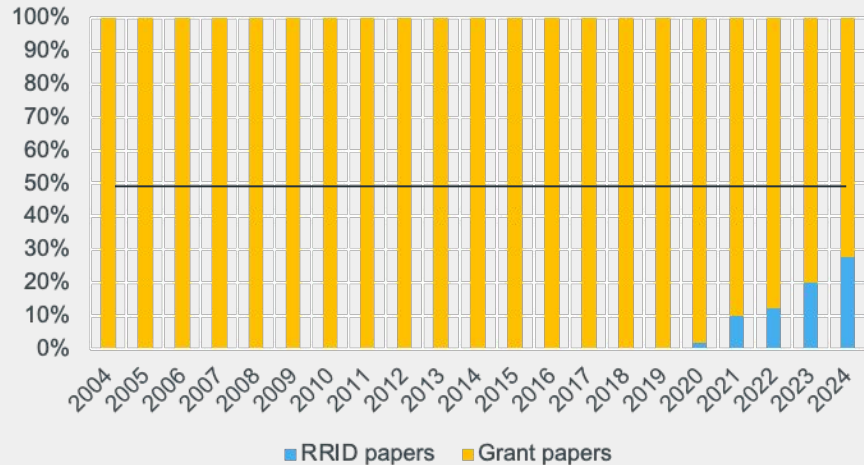
Pan JX, et al. (2021) Osteoblastic Swedish mutant APP expedites brain disease progression in mice. PLoS biology , 19 (3) , e3001063. (PMID:34824365) -- ed from The Jackson Laboratory (**MMRRC stock #34 840-JAX**)25 weeks of age

RRID provided

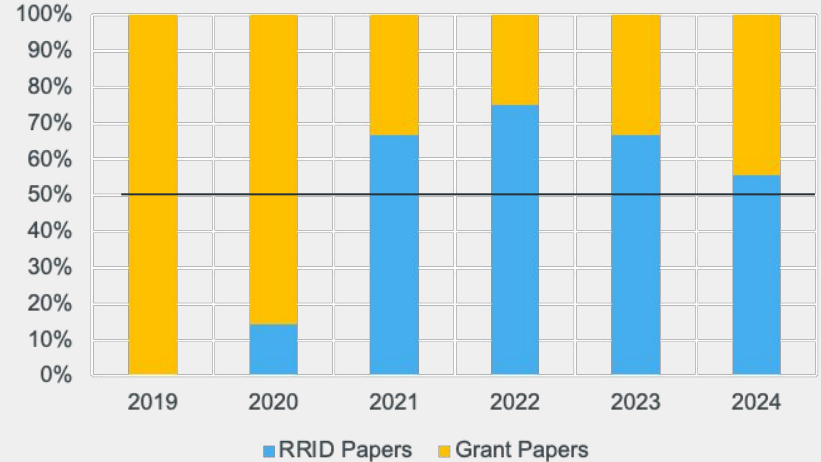
Liu L, et al. (2020) Preparing Viable Hippocampal Slices from Adult Mice. PLoS ONE , 15 (12) , e0240000. (PMID:33000000) -- xFAD mice (**RRID:MMRRC_034840-JAX**, Jackson Labs) (C57BL/6J background)

HOW MANY RRID CITATIONS DO WE GET FOR CORES?

UNC Microscopy Core Facility



UCSC Microscopy Core Facility



Ideal case for these graphs is 50%



WE WANT YOU!

To put RRIDs into your next paper!

When reviewing ask for RRIDs
Review papers (*and grants*) for methods!

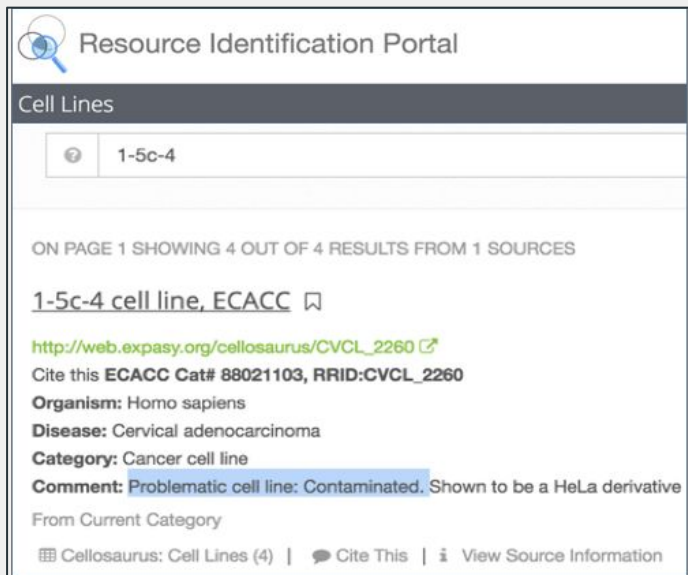
Cores: Register

...and tell us about your good or bad
antibodies or other tools

Journal editors, RRIDs.org has drafts for
your instructions to authors

Comments / Thoughts:
abandrowski@ucsd.edu

Using IDentifiers for resources makes better (reproducible) papers



Resource Identification Portal

Cell Lines

1-5c-4

ON PAGE 1 SHOWING 4 OUT OF 4 RESULTS FROM 1 SOURCES

1-5c-4 cell line, ECACC

http://web.expasy.org/cellosaurus/CVCL_2260

Cite this **ECACC Cat# 88021103, RRID:CVCL_2260**

Organism: Homo sapiens

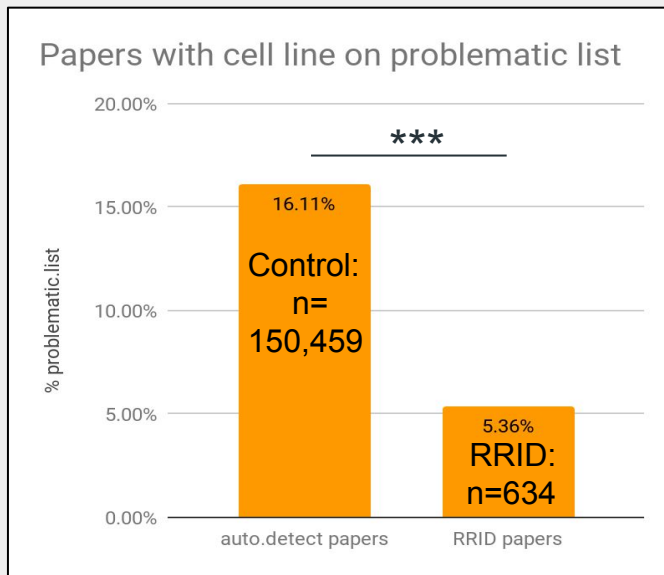
Disease: Cervical adenocarcinoma

Category: Cancer cell line

Comment: Problematic cell line: Contaminated. Shown to be a HeLa derivative

From Current Category

Cellosaurus: Cell Lines (4) | Cite This | View Source Information





Authors see warning about cell lines = 66% decrease in naughty cell lines


Babic et al, eLife, 2019



Using IDentifiers for resources makes better (reproducible) papers

 Antibody Name ⓘ

Anti-Choline Acetyltransferase Antibody
RRID:AB_2079751 

 Antibody Information ⓘ

URL: http://antibodyregistry.org/AB_2079751


Proper Citation: (Sigma-Aldrich Cat# AB144P (also AB144P, AB144P-1ML, AB144P-1M))

Target Antigen: Choline Acetyltransferase

Host Organism: Mouse

Clonality: Monoclonal


Comments: [Expand All](#)

 Usage

We found 4 records for this antibody.

[View full usage](#)

Most recent records:

 Ratings and Alerts ⓘ Report Information ⓘ

- Mouse colon PACT whole wall technique staining in Submucosal plexus in Soma shows few or none. Mouse colon PACT whole wall technique staining in Submucosal plexus in Fibers shows few or none. Mouse colon PACT whole wall technique staining in Myenteric plexus in Soma shows moderate immunostaining. Mouse colon PACT whole wall technique staining in Myenteric plexus in Fibers shows weak immunostaining. Mouse colon Whole mount technique staining in Submucosal plexus in Soma shows weak immunostaining. Mouse colon Whole mount technique staining in Submucosal plexus in Fibers shows moderate immunostaining. Mouse colon Whole mount technique staining in Myenteric plexus in Soma shows moderate immunostaining. Mouse colon Whole mount technique staining in Myenteric plexus in Fibers shows weak immunostaining. - Wang et al. (2021) via SPARC <https://sparc.science/resources/7Mlidjv3RIVrQ11hpBC8PK>

No alerts have been found for Anti-Choline Acetyltransferase Antibody.

[View More at BIOMED RESOURCE WATCH](#)

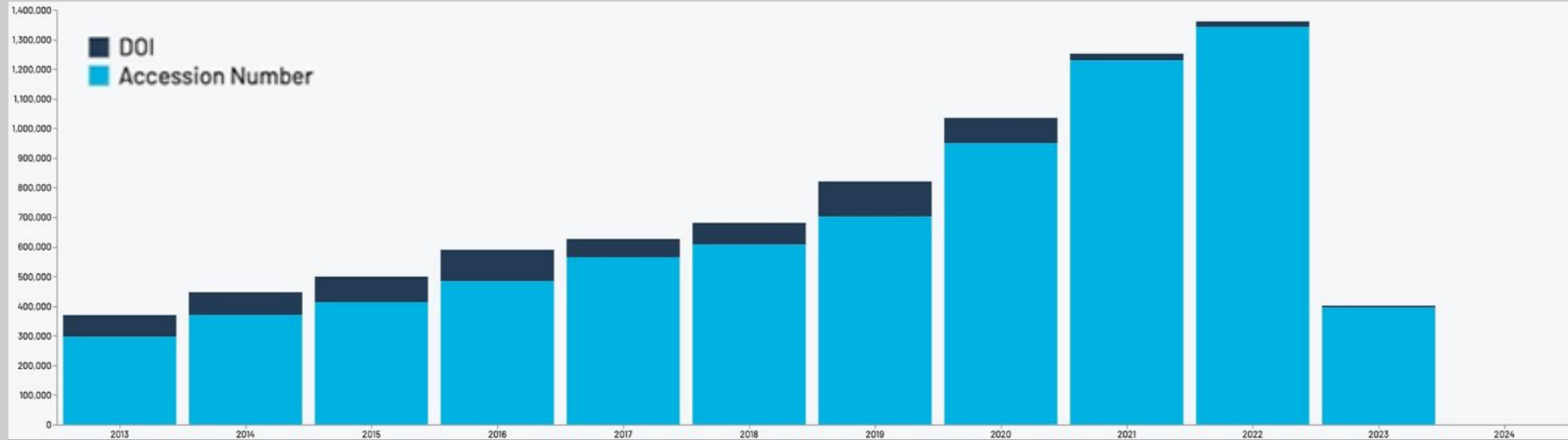
Antibody reports come from:
ENCODE
psyENCODE
YCharOS
Core facilities (10+ universities)

****Software tools** with reported problems

*****Animals** that don't recapitulate a disease



Fig 1. The Data Citation Corpus dashboard.



Puebla I, Ascoli GA, Blume J, Chodacki J, Finnell J, et al. (2024) Ten simple rules for recognizing data and software contributions in hiring, promotion, and tenure. *PLOS Computational Biology* 20(8): e1012296. <https://doi.org/10.1371/journal.pcbi.1012296>
<https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1012296>



So why is the reagent problem not solved?

Making papers better requires staff time





What does it do: SciScore is an automated and multifaceted tool based on AI and deep learning technology, that evaluates manuscripts for adherence to several key reporting criteria for rigor and reproducibility introduced over the years by funding agencies and journals. Using criteria from various reporting standards (e.g. the NIH, MDAR, and ARRIVE), SciScore generates three reports and a score for every submission.

What problem does it solve: SciScore helps ensure key resources like antibodies, cell lines, and organisms, are described in enough detail (e.g. vendor names, catalogue numbers, RRIDs, etc.), so that other researchers can try to replicate a studies findings.

Who are the users: These materials assist researchers, peer reviewers and editors, in improving the quality and reliability of scientific research by automatically reporting detected criteria of interest for future review.

Funding: SBIR R44MH119094 & sustained by partners

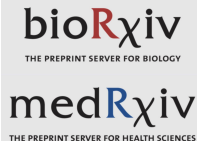
	1	2	3	4	5
Ethics					
Institutional Review Board Statement	x				
Consent Statement	x				
Institutional Animal Care and Use Committee Statement	x	x			
Field Sample Permit	x				
General Euthanasia and Agent					x
Study Participation					
Inclusion and Exclusion Criteria	x	x	x		x
Attrition		x	x		x
Sex as a biological variable	x	x	x	x	x
Subject Demographics					
Age		x	x		
Weight		x			
Randomization					
Randomization	x	x	x		x
Blinding	x	x	x		x
Power Analysis	x	x	x		x
Replication Information					
Type of replication	x				x
Cell Line Confirmation					
Cell Line Authentication		x			x
Cell Line Contamination Check		x			x
Code Information & Availability					
Code Information & Availability		x			
Data Information & Availability					
Data Information & Availability	x	x			x
Protocol Identifiers					
Clinical Trials		x		x	
Lab Protocols		x			

1. MDAR / 2. ARRIVE / 3. CONSORT / 4. AVMA Guidelines / 5. Landis et al., 2013 (NIH)

Partners



American Heart Association



Rigor & Transparency Index - RTI

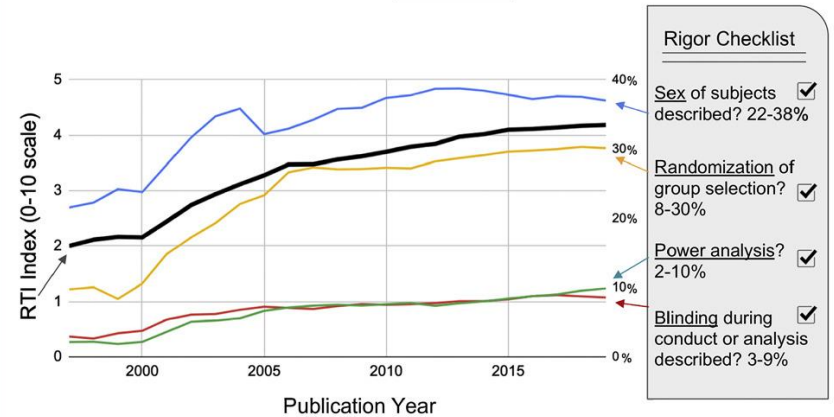
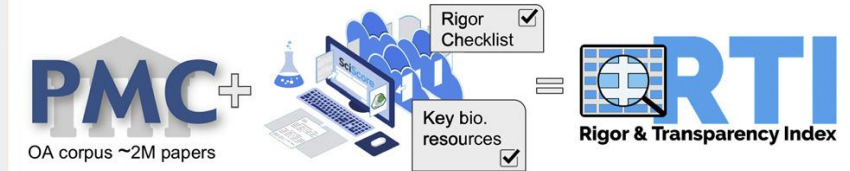
What does it do: The RTI is a new journal metric of quality for assessing biological and medical science methods, based on the degree to which journal articles were addressing reproducibility guidelines.

What problem does it solve: How can we score the science published in journals itself as opposed to counting tweets or citations?

What are the users: It can be used as a selection criterion for authors who want to be associated with more reproducible journals, or by editors to assess the reproducibility of their journal, or by publishers as benchmarking for their their journal portfolio.

Menke et al, iScience. 2020

<http://dx.doi.org/10.1016/j.isci.2020.101698>



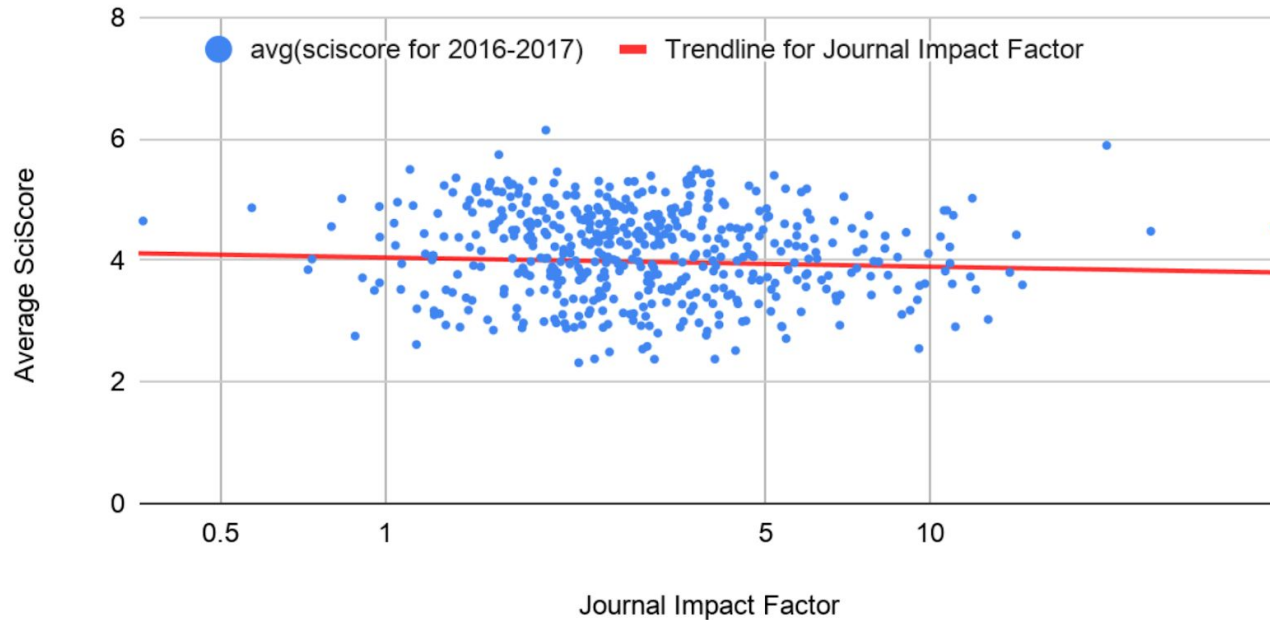
- We evaluated 1,578,964 open access articles for rigor criteria using SciScore.
- We developed a journal quality metric and studied rigor criteria reporting trends.
- There was no correlation between the Rigor & Transparency Index and the Impact Factor.
- The Rigor & Transparency Index may serve as a proxy for methodological quality.

What about the Journal Impact Factor?

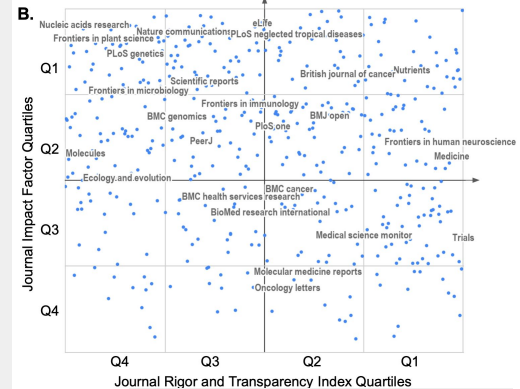
A.

2018 JIF vs. SciScore

X-axis shown through log scale



There is NO relationship



Average journal SciScore between 2016-2017 as a function of the journal impact factor for 2018 (data from published papers from 2016-2017).

Are these scores meaningful?

The screenshot shows the top navigation bar of the Center for Open Science (COS) website. The COS logo is on the left, followed by a menu with items: About COS, Products, Initiatives, Services, Communities, Blog, News, Merchandise, and Contact Us. Below the navigation is a light blue banner with the text "Help support open science today." and a "Donate Now" button. The main banner features a stylized white logo of two overlapping circles and the text "REPRODUCIBILITY PROJECT Cancer Biology". At the bottom of the banner are navigation links: Overview, Contributors & Supporters, Press & News, Get Involved, Papers on eLife, and Data & Code on OSF.

Project Overview

The *Reproducibility Project: Cancer Biology* was an 8-year effort to replicate experiments from high-impact cancer biology papers published between 2010 and 2012. The project was a collaboration between the [Center of Open Science](#) and [Science Exchange](#) with all papers published as part of this project available in a [collection at eLife](#) and all replication data, code, and digital materials for the project available in a [collection on OSF](#).

When preparing replications of **193 experiments** from **53 papers** there were a number of challenges.

2%

experiments with open data

70%

of experiments required asking for key reagents

69%

of experiments needing a key reagent original authors were willing to share

0%

of protocols completely described

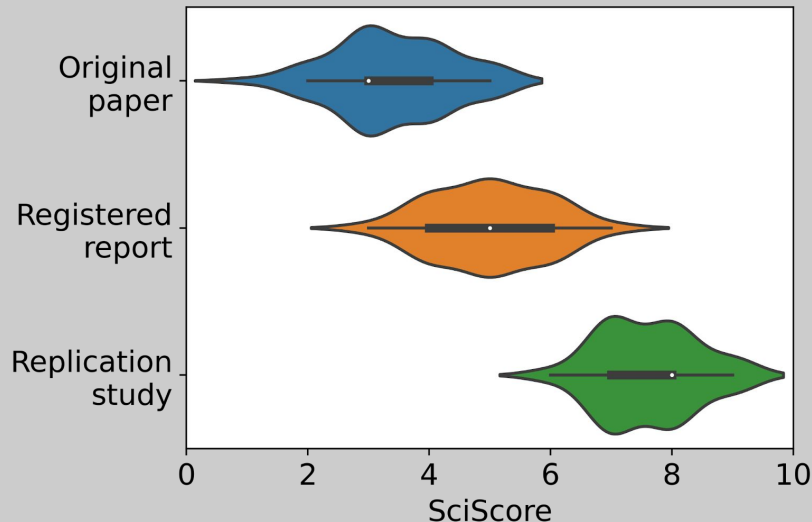
32%

of experiments the original authors were not helpful (or unresponsive)

41%

of experiments the original authors were very helpful

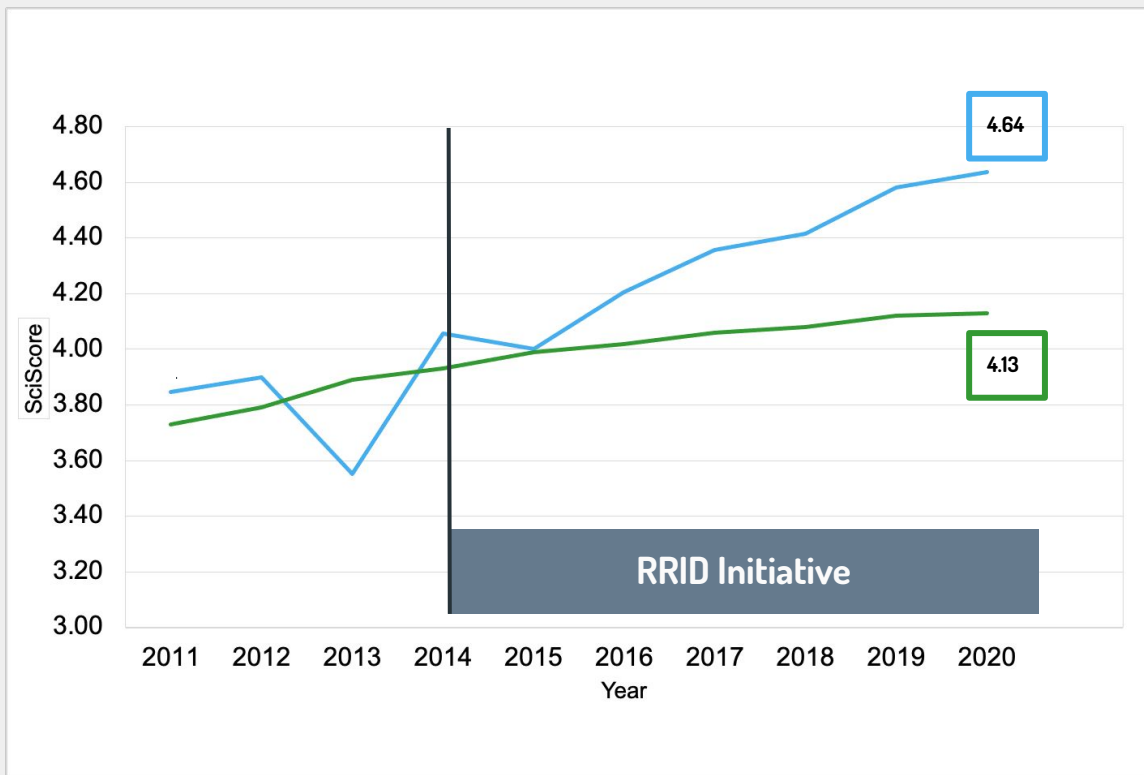
Using work by the Reproducibility Project: Cancer Biology, we determined that replication papers scored significantly higher than the original papers, which according to the project required additional information from authors to begin replication efforts.



Menke et al. JMIR, 2022

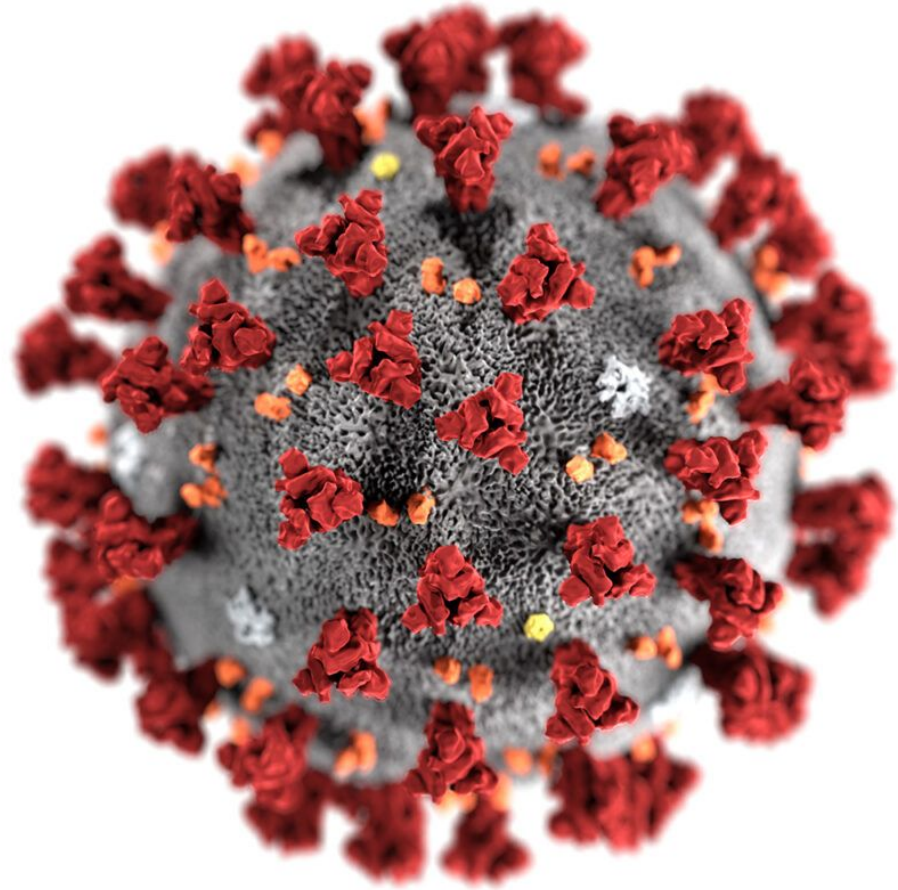
Use of MMRRC mice & with rigor?

Average Sciscore for **MMRRC** compared with average SciScore for **all available publications**

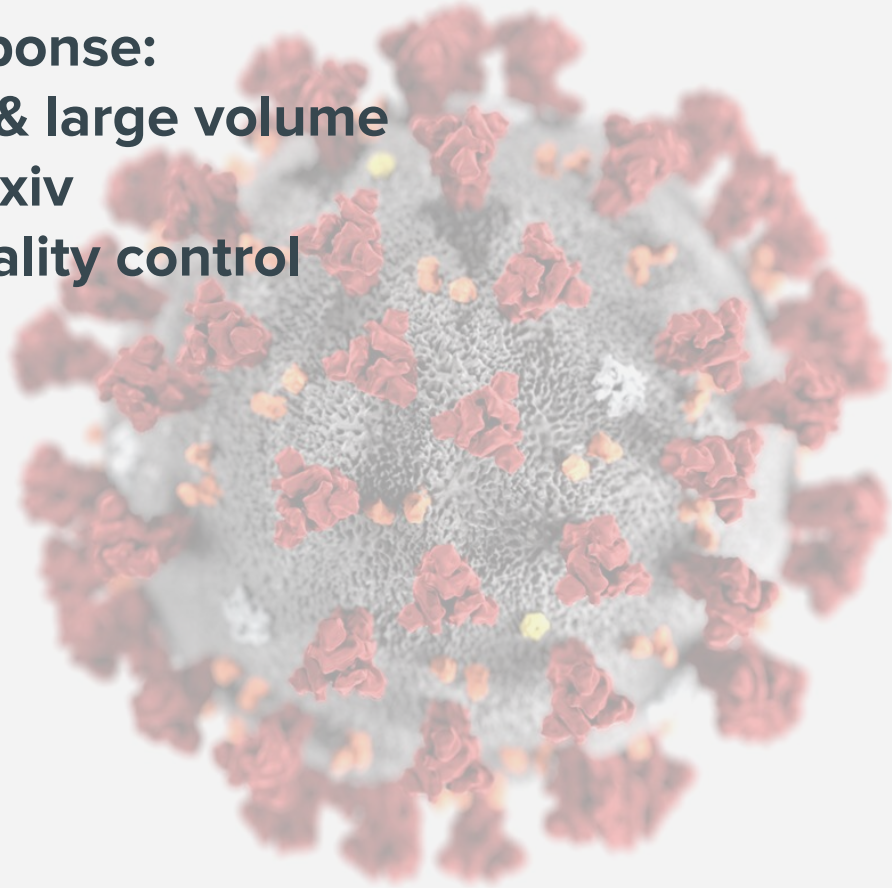


Scores are significantly different
(MMRRC papers 907;
All papers 2.1 mln)

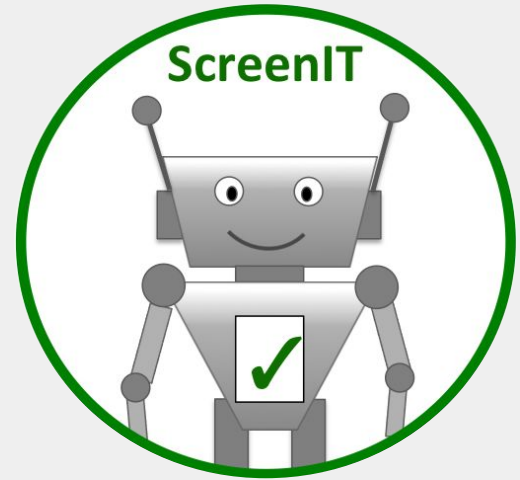
Is the difference meaningful?



Community response:
Publish quickly & large volume
BioRxiv & MedRxiv
Problem: No quality control



ScreenIT



Automated Screening Working Group:
AI-based screening of COVID-19 preprints
for rigor and reproducibility

Who are ScreenIT?

The people behind the tools:



Tracey Weissgerber, Ph.D.
 Expertise: Visualization
 Tools: Barzooka
 QUEST – Quality | Ethics | Open Science | Translation
 Charité – Universitätsmedizin Berlin
 BIH Center for Transforming Biomedical Research
 Germany



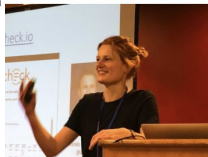
Anita Bandrowski, Ph.D.
 Expertise: Publishing
 Tools: SciScore
 Department of Neuroscience
 The University of California at San Diego
 USA



Shyam Saladi
 Expertise: Code
 Tools: JetFighter
 California Institute of Technology
 USA



René Bernard, Ph.D.
 Coordinator for Value and Open Science
 Exzellenzcluster NeuroCure
 Charité – Universitätsmedizin Berlin
 Germany



Michèle B. Nuijten, Ph.D.
 Expertise: Statistics
 Tools: Stat Check
 Meta-Research Center
 Department of Methodology and Statistics
 Tilburg School of Social and Behavioral Sciences
 Tilburg University
 Netherlands



Martijn Roelandse, Ph.D.
 Expertise: Publishing
 Tools: SciScore
 Netherlands



Nick Brown, Ph.D.
 Expertise: Statistics
 Tools: rSPRITE
 Linnaeus University
 Sweden



Haili Kilicoglu, Ph.D.
 Expertise: Text mining, transparent reporting, stu
 University of Illinois at Urbana-Champaign
 School of Information Sciences
 USA



AG Siegerink, Ph.D.
 Expertise: Tool review
 Dr. Bob Siegerink
 Charité – Centrum für
 Lemielc



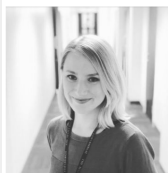
Sean C. Rife, PhD
 Expertise: Chief Research Officer
 Tools: scite.ai
 Associate Professor of Psychology, Murray State University
 Director of Research, scite, Inc.
 USA



Jennifer Byrne, Ph.D.
 Tools: Seek&Blast
 The University of Sydney,
 Faculty of Medicine and Health,
 NSW Health Statewide Biobank,
 Camperdown, New South Wales,
 Australia



Guillaume Cabanac, Ph.D.
 Tools: Seek&Blast
 Computer Science Department
 University of Toulouse
 France



Sarah McCann, PhD
 Expertise: Systematic review and meta-analysis
 QUEST – Quality | Ethics | Open Science | Translation
 Charité – Universitätsmedizin Berlin
 BIH Center for Transforming Biomedical Research
 Germany



Subhashini Sivagnanam
 Tools: OSC
 Expertise: big data provenance
 San Diego Supercomputing Center
 University of California at San Diego,
 USA



Amanda Capes-Davis, Ph.D.
 Tools: Seek&Blast
 CellBank Australia, Children's Medical Research Institute
 The University of Sydney
 Australia



Dr. Alexandra Bannach-Brown
 Institute for Evidence-Based Healthcare,
 Bond University
 Australia



Bertrand Favier, Ph.D.
 Tools: Seek&Blast
 Univ. Grenoble Alpes,
 TIMC-IMAG, team GREPI,
 France



Gerben ter Riet, Ph.D.
 Expertise: transparent reporting, acknowledged
 Amsterdam University of Applied Sciences:
 rd-Holland



Peter Grabitz, M.D.
 Expertise: Scripting
 QUEST – Quality | Ethics | Open Science | Translation
 Charité – Universitätsmedizin Berlin
 Berlin Institute of Health (BIH)
 Germany



Nico Riedel, Ph.D.
 Expertise: Data Scientist, Text and Data Mining
 Tools: Barzooka, ODDP
 QUEST – Quality | Ethics | Open Science | Translation
 BIH Center for Transforming Biomedical Research
 Germany



Benjamin Gregory Carlisle PhD
 Expertise: Scripting
 Tools: Trial registration number screener
 Charité – Universitätsmedizin Berlin, Germany
 Berliner Institut für Gesundheitsforschung (BIG) / Berlin Institute of Health (BIH)
 QUEST
 Germany



Peter Edmann
 Expertise: Scripting
 Tools: SciScore
 SciCrunch Inc
 The University of California at San Diego
 USA

Who are ScreenIT?

Tool	Application
<u>SciScore</u>	Detects compliance with <u>MDAR reproducibility checklist</u> <ul style="list-style-type: none">• 24 rigor criteria verified• 6 classes of reagents verified (is this a valid catalog number?)• Authentication/contamination of cell lines verified• Statistical tests outlined
Jetfighter	Makes authors aware of their use of non-colorblind safe pictures / graphs
Barzooka	Points to misleading graphs of data, e.g., bar graphs of continuous variables
Seek 'n Blastn	Identifies common problems with nucleotide sequences
Trial Registration screener	Verified clinical trial identifiers
ODDpub	Screens for the presence of open data and open code
limitation-recognizer	Recognizes self acknowledged limitation sentences
Scite.ai	Smart citations; looks for unacknowledged use of retracted papers
rtransparent	Identifies and extracts indicators of transparency

Many other tools are strewn throughout the scientific literature; lots of AI experts are joining us

First achievement: Running various tools on covid-19 preprints

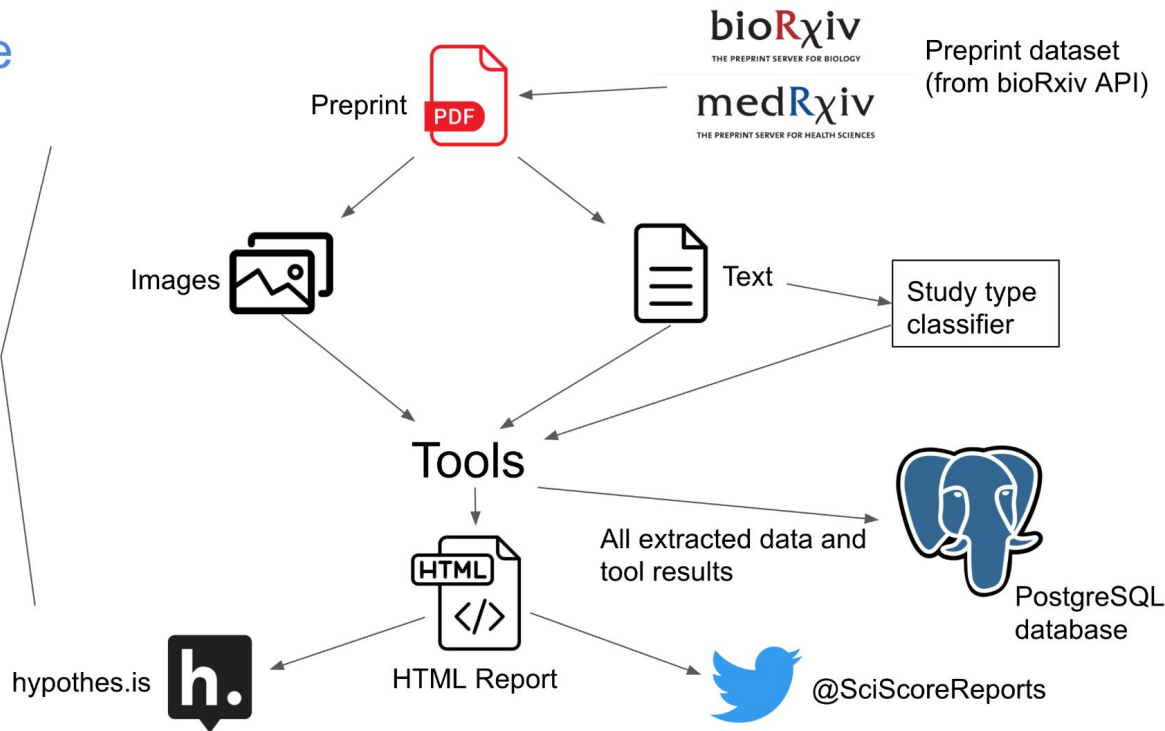


Peter Eckmann
[ORCID:0000-0002-5388-9451](https://orcid.org/0000-0002-5388-9451)
UC High School
Currently undergrad
At UCSD in
Computer Science

Outline




Containerized with Docker; currently running at Charité server



Output shared via social media / hypothesis

SciScore Reports
7,258 Tweets



SciScore Reports
@SciScoreReports

Fast, accurate & secure SciScore is the ultimate scientific article materials review tool. What's your SciScore?
sciscore.org/ASWG Joined May 2020

4 Following 141 Followers

Tweets Tweets & replies Media Likes

SciScore Reports @SciScoreReports · 13h
The paper "A benchmarking study of SARS-CoV-2 whole-genome seq..." (<https://doi.org/10.1101/2020.11.10.375022>) has been reviewed by a set of automated tools; find the results of the analysis here: <https://doi.org/10.1101/2020.11.10.375022>. We detected 9 key resources.

SciScore Reports @SciScoreReports · 13h
The paper "Potent SARS-CoV-2 neutralizing antibodies selected..." (<https://doi.org/10.1101/2020.11.10.375022>) has been reviewed by a set of automated tools; find the results of the analysis here: <https://doi.org/10.1101/2020.11.10.375022>. We detected 1 of 6 rigor criteria and 23 key resources.

SciScore Reports @SciScoreReports · 13h
The paper "Phase 1 Assessment of the Safety and Immunogenicity of an mRNA-Lipid Nanoparticle Vaccine Candidate Against SARS-CoV-2 in Human Volunteers" (<https://doi.org/10.1101/2020.11.09.20228551>) has been reviewed by a set of automated tools; find the results of the analysis here: <https://doi.org/10.1101/2020.11.09.20228551>. We detected 4 of 6 rigor criteria and 2 key resources.

SciScore Reports @SciScoreReports · 13h
The paper "Nafamostat Mesylate" (<https://doi.org/10.1101/2020.11.10.375022>) has been reviewed by a set of automated tools; find the results of the analysis here: <https://doi.org/10.1101/2020.11.10.375022>. We detected 1 of 6 rigor criteria and 3 key resources.

Hypothesis annotation for biorxiv.org
SciScore for 10.1101/2020.11.10.375022: (What is this?)
Please note, not all rigor criteria are appropriate for ...
[hypothesis](https://hypothesis.org/10.1101/2020.11.10.375022)

24K posts
260 followers
>1M views



medRxiv THE PREPRINT SERVER FOR HEALTH SCIENCES

HOME | ABOUT | SUBMIT | NEWS & NOTES | ALERTS | RSS

Search

Advanced Search

Phase 1 Assessment of the Safety and Immunogenicity of an mRNA-Lipid Nanoparticle Vaccine Candidate Against SARS-CoV-2 in Human Volunteers

[Comment on this paper](#)

Posted November 09, 2020

Download PDF Author Declarations Supplementary Material Data Code

COVID-19 SARS-CoV-2 preprints from medRxiv and bioRxiv

Subject Area
Infectious Diseases (except HIV/AIDS)

Subject Areas
All Articles

- Addiction Medicine
- Allergy and Immunology
- Anesthesia
- Cardiovascular Medicine
- Dentistry and Oral Medicine
- Dermatology
- Emergency Medicine
- Endocrinology (including Diabetes Mellitus and Metabolic Diseases)
- Epidemiology
- Forensic Medicine
- Gastroenterology
- Genetic and Genomic Medicine
- Geriatric Medicine

ABSTRACT

There is an urgent need for vaccines to counter the COVID-19 pandemic: due to infections with severe acute respiratory syndrome coronavirus (SARS-CoV-2), Evidence from convalescent sera and preclinical studies has identified the viral Spike (S) protein as a key antigenic target for protective immune responses. We have applied an mRNA-based technology platform, *RNActive*, to develop *CvCoV* which contains sequence optimized mRNA coding for a stabilized form of S protein encapsulated in lipid nanoparticles (LNPs). Following demonstration of protective immune responses against SARS-CoV-2 in animal models we performed a dose-escalation phase 1 study in healthy 18-60 year-old volunteers.

This interim analysis shows that two doses of *CvCoV* ranging from 2 µg to 12 µg per dose, administered 28 days apart were safe. No vaccine-related serious adverse events were reported. There were dose-dependent increases in frequency and severity of solicited systemic adverse events, and to a lesser extent of local reactions, but the majority were mild to moderate and transient in duration. Immune responses when measured as IgG antibodies against S protein or its receptor-binding domain (RBD) by ELISA, and SARS-CoV-2 virus neutralizing antibodies measured by micro-neutralization, displayed dose-dependent increases. Median titers measured in these assays two weeks after the second 12 µg dose were comparable to the median titers observed in convalescent sera from COVID-19 outpatients. Seroneutralization

Copyright The copyright holder for this preprint is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. It is made available under a [CC-BY-ND 4.0 International license](https://creativecommons.org/licenses/by/4.0/).

Tweets referencing this article

SciScore Reports @SciScoreReports · 13h
The paper "Phase 1 Assessment of the Safety and Immunogenicity..." (<https://doi.org/10.1101/2020.11.09.20228551>) has been reviewed by a set of automated tools; find the results of the analysis here: <https://doi.org/10.1101/2020.11.09.20228551>. We detected 4 of 6 rigor criteria and 2 key resources.

Kevin Spekulant blauer Haken (@k48079727) · 11:30AM
"Dieses Finanzinstrument kann nicht leverenkauft werden." Schadel

medRxiv Comment Policy
Comments are moderated for offensive or irrelevant content (can take ~24 hours). Duplicated submissions is unnecessary. Please read our [Comment Policy](#) before commenting.



Public Sign up / Log in

Showing 1 annotation [Show all \(0\)](#)

sciscore 13 hrs ago
Public

SciScore for 10.1101/2020.11.09.20228551: (What is this?)
Please note, not all rigor criteria are appropriate for all manuscripts.

Table 1: Rigor

Institutional Review Board Statement	The study protocol was approved by the appropriate Institutional Review Boards (IRB) and national regulatory authority for each site, and was registered with ClinicalTrials.gov (Identifier: NCT04449276).
Randomization	After assessing safety data for 60 hours, the ISRC and DSMB approved the vaccination of the remaining participants of that dosage group (including placebo subjects and subjects known to be seropositive for SARS-CoV-2, randomized and blinded) and the stratella of the next higher dosage group.
Blinding	METHODS The first-in-human, placebo-controlled, blinded phase 1 trial of CvCoV enrolled healthy adults (18 to 60 years).
Power Analysis	not detected.
Sex as a biological variable	Also excluded were active smokers within the previous year, pregnant or breastfeeding women, study sponsors, and study staff employees or relatives.
Cell Line Authentication	not detected.

Table 2: Resources

Sentences	Antibodies	Resources
The main secondary objectives were the evaluation of the humoral immune response measured by SARS-CoV-2 S protein-specific IgG and RBD IgG (ELISA) antibodies, as well as SARS-CoV-2 virus neutralizing antibodies.	RBD IgG suggested: None	

Experimental Models: Cell Lines

Sentences	Resources
Afterwards, semi-confluent Vero E6 cells (ATCC, Cat 1586) were incubated with the virus serum mixtures at 37°C 5% CO 2 for 3 suggested: None days.	Vero E6

Results from CtrPub: We did not detect open data. We also did not detect open code. Researchers are encouraged to share open data when possible (see [Nature blog](#)).

Results from LimitationRecognizer: An explicit section about the limitations of the techniques employed in this study was not found. We encourage authors to address study limitations.

Results from TrialIdentifier: We found the following clinical trial numbers in your paper:

Identifier	Status	Title
NCT04449276	Recruiting	A Study to Evaluate the Safety, Reactogenicity and Immunogen...

Preprints are not as good as papers when it comes to rigor & transparency

bioRxiv
THE PREPRINT SERVER FOR BIOLOGY

bioRxiv is receiving many new papers on coronavirus SARS-CoV-2. A reminder: these are preliminary reports that have not been peer-reviewed. They should not be regarded as representing practice/health-related behavior, or be reported in news media as established information.

Membrane Nanoparticles Derived from ACE2-rich Cells Block SARS-CoV-2 Infection

Cheng Wang, Shaobo Wang, Yin Chen, Jianqi Zhao, Songling Han, Gaomei Zhao, Jing Kang, Yong Liu, Liting Wang, Xiaoyang Wang, Yang Xu, Song Wang, Yi Huang, Junping Wang, Jinghong Zhao

doi: <https://doi.org/10.1101/2020.08.12.247338>

Now published in *ACS Nano* doi: [10.1021/acsnano.0c06836](https://doi.org/10.1021/acsnano.0c06836)

ABSTRACT

The ongoing COVID-19 epidemic worldwide necessitates the development of novel effective agents against SARS-CoV-2. ACE2, the main receptor of SARS-CoV-2 S1 protein and mediates viral entry into cells. Membrane nanoparticles prepared from ACE2-rich cells are disrupted by SARS-CoV-2. ACE2 is screened to prepare nanoparticle. ACE2 NP contains 265.1 ng mg⁻¹ of ACE2. ACE2 NP is screened in a dose-dependent manner. ACE2 NP is a ligand to host cells. Interestingly, SARS-CoV-2 NP affect the cell metabolism, which is a novel finding. Studies reveal that HEK-293T-hACE2 pseudovirions entry into human proximal tubular cells and block viral infection with a dose-dependent manner. Additionally, this study...

Grant to continue resource portion



IRB	26.28%	
Randomization	11.39%	12.56%
Blinding	2.65%	5.35%
Power	1.36%	2.37%
Sex as biological variable	19.91%	38.25%

Weissgerber et al NatMed 2021

<https://www.nature.com/articles/s41591-020-01203-7>

Reproducibility Challenge

Vox SCIENCE & HEALTH

Too many mice are sacrificed for seriously flawed studies

Updated by Julia Belluz on July 28, 2016, 10:20 a.m. ET [@juliaofortonto](#) julia.belluz@voxmedia.com

Science

Evaluating replicability of laboratory experiments in economics

Colin F. Camerer,^{1*} Anna Dreber,^{2†} Eskil Forsell,^{2†} Teck-Hua Ho,^{3,4†} Jürgen Huber,^{2†} Magnus Johannesson,^{2†} Michael Kirchler,^{5,6†} Johan Almenberg,⁷ Adam Altmeld,² Taizan Chan,⁸ Emma Heikensten,² Felix Holzmeister,² Taisuke Imai,¹ Siri Isaksson,² Gideon Nave,¹ Thomas Pfeiffer,^{9,10} Michael Razen,² Hang Wu¹

TECHNICAL COMMENT

PSYCHOLOGY

Comment on “Estimating the reproducibility of psychological science”

Daniel T. Gilbert,^{1†} Gary King,¹ Stephen Pettigrew,¹ Timothy D. Wilson²

Reforming Science: Methodological and Cultural Reforms

RESEARCH ARTICLE

PSYCHOLOGY

Estimating the reproducibility of psychological science

Open Science Collaboration[†]

Why animal research needs to improve

Many of the studies that use animals to model human diseases are too small and too prone to bias to be trusted, says Malcolm Macleod.

False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant

PERSPECTIVE

JBMR®

Reproducibility of Results in Preclinical Studies: A Perspective From the Bone Field

Stavros C Manolagas¹ and Henry M Kronenberg²

The Economist

World politics | Business & finance | Economics | Science & technology | Culture

Unreliable research

Trouble at the lab

Scientists like to think of science as self-correcting. To an alarming degree, it is not

Oct 19th 2013 | From the print edition

[Like](#) [11k](#) [Tweet](#) [1,227](#)

THE WALL STREET JOURNAL.

OPINION | COMMENTARY

Getting the Bogus Studies Out of Science

Government funding should provide more incentives for replicating research

By ADAM MARCUS And IVAN GRANSKY
Aug. 19, 2015 6:46 p.m. ET

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

Florian Prinz, Thomas Schlange and Khusru Asadullah

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.