

ADDRESSING THE REPRODUCIBILITY GAP

Irreproducibility of structured experiments could be a more widespread issue than originally thought.

To help address this important issue, Sigma-Aldrich and the AAAS co-sponsored the second annual State of Translational Research Report to survey researchers' attitudes and practices related to experimental irreproducibility.

Key highlights include:

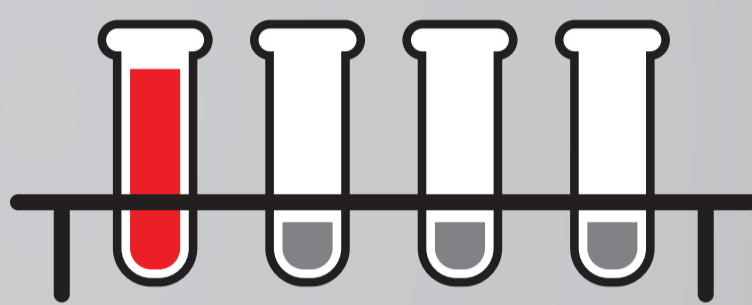


MINI, MIDI OR MAJOR?

Over 60% of scientists described the lack of experimental reproducibility as a major barrier.

COPY ME IF YOU CAN!

Less than 1 in 4 researchers have been able to reproduce published work from other labs. However, more than 3 in 4 were able to reproduce their own lab's work.



COMMON CULPRITS

- Poor controls
- Desire to publish
- Insufficient sample sizes
- Failure to understand or follow published protocols

TROUBLESOME TOOLS

- Animal models
- Antibodies
- Cell lines

EMPLOY BETTER POLICIES

Nearly 3 in 4 researchers had not read one of the three leading papers on irreproducibility

REVERSING THE TIDE



98%

of all researchers are

- ✓ performing more rigorous quality controls
- ✓ increasing sample sizes
- ✓ ensuring thorough documentation

4 HIGH-IMPACT FIXES FOR IRREPRODUCIBILITY

1
VALIDATING REAGENTS' PURITY AND IDENTIFY BEFORE FIRST USE

2
BALANCING GENDERS OR SPLITTING LITTERMATES IN ANIMAL STUDIES

3
UTILIZING THE ICLAC* DATABASE OF MISIDENTIFIED CELL LINES

4
UTILIZING RECOMMENDED INTERVALS TO TEST FOR MYCOPLASMA



Click here to learn more and be part of the change. Educate and advocate for improved reproducibility.

* ICLAC – International Cell Line Authentication Committee