

HOW TO GROW A HEALTHY LAB

A SPECIAL ISSUE ON HOW TO MAKE LAB GROUPS PRODUCTIVE, RIGOROUS AND HAPPY.

f you find a bad apple, check the barrel. Research-integrity specialists say that focusing too much on individual bad actors deflects attention from the environments that promote bad behaviour. The idea applies just as much to researchers who are unproductive, frustrated or unhappy — they could be indicative of deeper problems.

A healthy research environment is fundamental to good science: it helps people to produce their best work, and feel satisfied in doing so. But the matter is rarely discussed. That's partly because a lab's 'health' is complex and difficult to assess — the product of a mix of factors, such as inclusivity, communication, career pressures and training. And academics often feel ill-equipped to tackle these matters.

In this issue, we explore how the working environment shapes research quality and morale — and what people can do to strengthen

the research enterprise. A survey of more than 3,000 researchers on page 294 reveals that lab heads view their labs' practices more positively than do trainees. Roughly 40% of junior scientists say that their labs sometimes cut corners to achieve a desired end.

Some institutions are taking steps to improve lab health. In a World View on page 281, Catherine Winchester describes how her institute created the post of research-integrity officer to champion best practices. In a Comment on page 299, researchers at the University of California, Berkeley, explore how clear expectations in the university's College of Chemistry might prevent graduate students from falling through the cracks. And on page 297, experts at the National Center for Professional & Research Ethics at the University of Illinois at Urbana–Champaign outline pitfalls that can plunge researchers into scandals.

Advice is at hand. On page 302, scientists share their top tips for improving research culture. And on page 457, five leadership specialists share lessons from their respective fields.

Improving the culture of a lab group or research institution is no small task. But both institutions and individuals can take concrete steps that get to the core of the matter — and everyone can benefit from that.