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Collectively establishing more solid foundations for bionanoscience by annotating and replicating the scientific literature

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COLLECTIVELY ESTABLISHING MORE SOLID FOUNDATIONS FOR BIONANOSCIENCE BY ANNOTATING AND REPLICATING THE SCIENTIFIC LITERATURE

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Spoonful of Caution with NANO HYPE

Andrew Maynard speaks about addressing the environmental effects of emerging nanotechnologies.

Hype around nanotubes creates unrealistic hopes

SIR — In your News story ‘Stem-cell claim gets cold reception’ (*Nature* 452, 132; 2008), you report on an announcement that nanotubes have been used to reprogramme adult human cells. As you say, the result was met with scepticism because it was proclaimed at an investors’ meeting, rather than in a peer-reviewed publication. There are also questions about the nanotechnological aspects of the work.

Nano hype

Is Nano a Bubble?

ARE FLAWS IN PEER REVIEW SOMEONE ELSE’S PROBLEM?

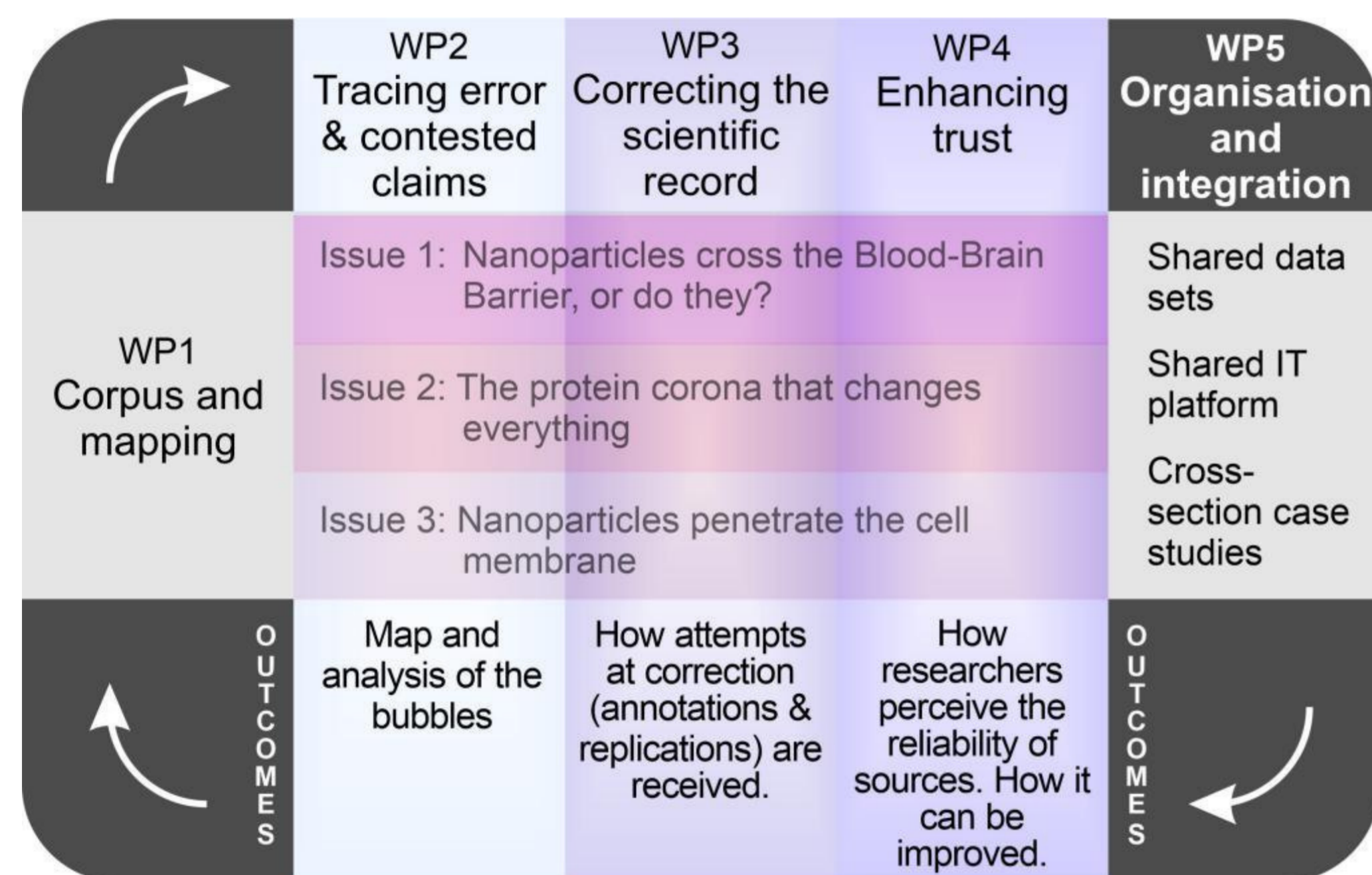
By Philip Moriarty On April 8, 2013



BIG TUSSLE OVER TINY PARTICLES

In peer-reviewed papers and on blogs, researchers argue over the existence of STRIPED COATINGS on nanoparticles
 LAUREN K. WOLF, C&EN WASHINGTON

Minimum information reporting in bio-nano experimental literature (2018)



ABOUT NANO BUBBLES

The project focuses on how, when and why science fails to correct itself. To understand how the correction of science works or fails, the NanoBubbles project combines approaches from the natural sciences, engineering (natural language processing) and humanities and social sciences (linguistics, sociology, philosophy and history of science).

HOW TO KNOW IF AN ARTICLE IS GOOD AND RELIABLE?

We need to read critically but this is difficult, takes time, and each of us may not be a specialist of the techniques involved in the study.



What if for most articles you want to read, you could at the same time read the opinion and analysis of others?

- We will annotate / peer review 100s of articles and make those available via



- We will encourage and train others to do the same.
- Would you like us to do a “PubPeer-athon” workshop in your institution? Suggest articles for us to review? Any other ideas that would help bring a culture where critical thinking and sharing of critiques is welcome and seen as an important part of the work of a researcher?

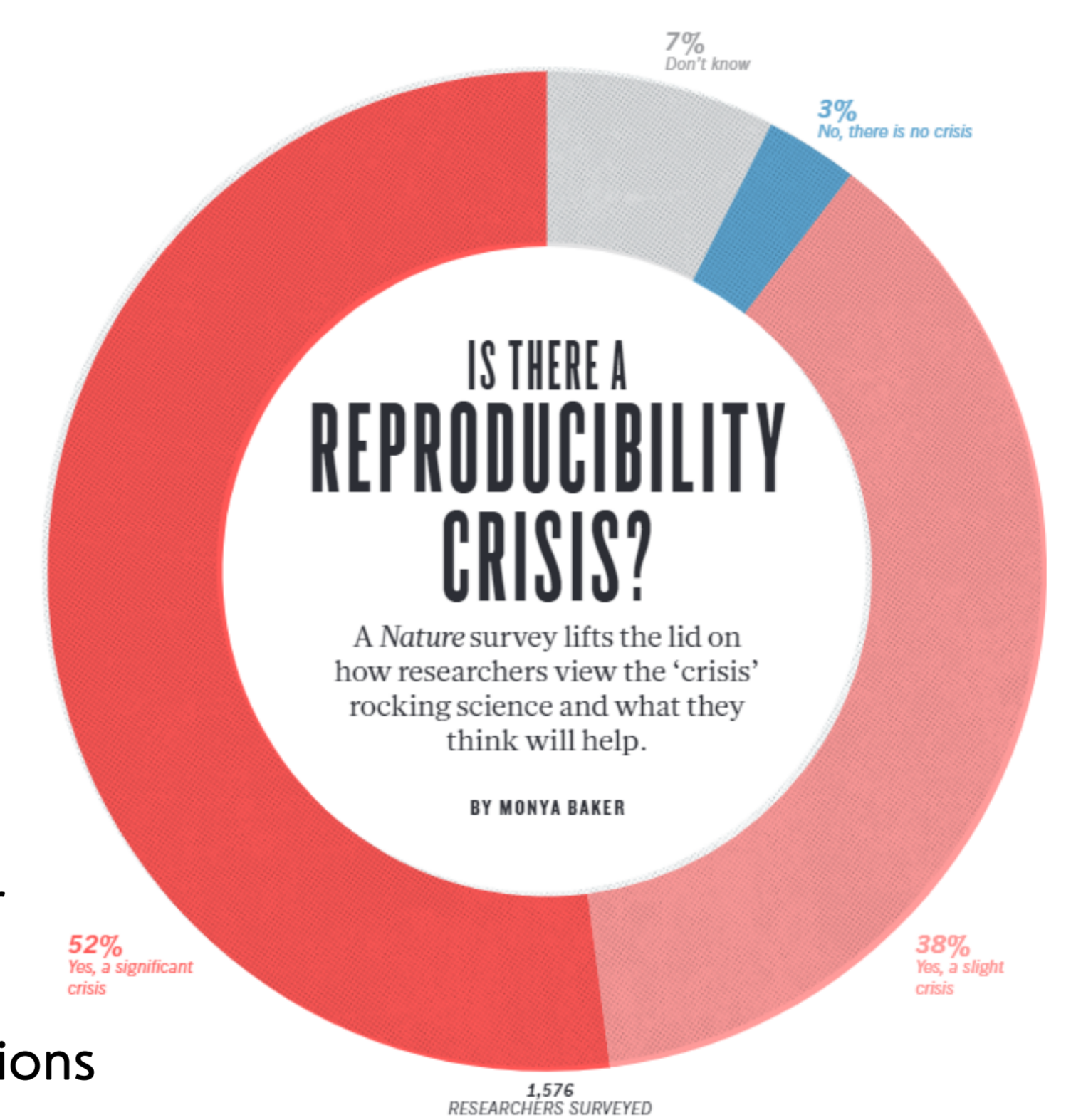
HOW DO WE KNOW IF AN ARTICLE IS REPRODUCIBLE?

The only way is to attempt a replication. This has not yet been done in any systematic way in bionano. We aim to do that. The focus will be imaging/sensing inside cells with nanoparticles.

We will partner with the community to:

- **Identify** the articles/experiments that will be replicated
- **Publish and optimize** the protocols prior to the experiments being conducted
- **Organise** synthesis, materials characterizations and biological investigations in multiple sites
- **Share** the data and the data analysis

You can be involved at all stages of this process! Express your interest now.



JOIN US!

- [NANOBUBBLES.HYPOTHESES.ORG/](https://nanobubbles.hypotheses.org/)
- [@_NANO_BUBBLES](https://twitter.com/_NANO_BUBBLES)
- JOIN OUR NEWSLETTER!



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