

Peking University in Beijing who co-led one of the studies¹. “It’s weird.”

His team thinks that India’s immunity profile is part of the explanation. In 2021, the country saw an explosive wave of cases caused by the Delta variant, which shares a key mutation with BA.5. Cao suspects that previous Delta infections provide added protection against BA.5, leaving an opening for BA.2.75.

Cao and his team found that several people who had had Delta infections after vaccination produced antibodies that were more potent against BA.5 than against BA.2.75. “My guess is that BA.2.75 probably won’t prevail that much outside India”, especially in countries that weren’t hit hard by Delta, Cao adds.

Other researchers say the small number of Delta infections after vaccination in Cao and his colleagues’ study means the hypothesis should be treated with caution. Moreover, Wenseleers has found tentative signs that BA.2.75 might be spreading a little faster than BA.5 in some countries, including in Australia, the United Kingdom and the United States.

He predicts that BA.2.75 will continue to grow globally, particularly in Asia and Oceania. But there are also signs that another Omicron sublineage that’s growing in Europe and North America, called BA.4.6, is just as transmissible as BA.2.75. “We might end up with an eclectic mix of Omicron descendants, with different ones reaching dominance in different parts of the world,” Wenseleers says.

No hospitalization surge

So far, India isn’t seeing a significant rise in hospitalizations from its Centaurus wave, says Jameel, who gives credit to the combined effects of high rates of vaccination and of previous infection. “This hybrid immunity is going to largely protect and keep people out of hospitals,” he adds.

Wenseleers and others expect the same pattern to be repeated elsewhere – whether the next variant is BA.2.75 or something else. “Higher and higher population immunity leads to less and less severe consequences for most people,” he says.

If BA.2.75 doesn’t spread widely now, it could in several months’ time, as it picks up new immune-evading mutations and as protection caused by BA.5 infection wanes, says Cao. Some BA.2.75 sequences include a mutation found in BA.5, called L452R, that could augment the variant’s ability to reinfect people, he adds. “This is what makes it scary.”

1. Cao, Y. et al. Preprint at bioRxiv <https://doi.org/10.1101/2022.07.18.500332> (2022).
2. Sheward, D. J. et al. Preprint at bioRxiv <https://doi.org/10.1101/2022.07.19.500716> (2022).
3. Wang, Q. et al. Preprint at bioRxiv <https://doi.org/10.1101/2022.07.31.502235> (2022).
4. Wang, X. et al. Preprint at bioRxiv <https://doi.org/10.1101/2022.08.04.502716> (2022).
5. Saito, A. et al. Preprint at bioRxiv <https://doi.org/10.1101/2022.08.07.503115> (2022).

Q&A



What makes an undercover science sleuth tick?

David Bimler, also known as Smut Clyde, scours the scientific literature for bogus articles.

For years, a research-integrity sleuth who goes by the pseudonym Smut Clyde has been uncovering evidence of research misconduct. Alongside other science detectives, he has flagged hundreds of articles that are potentially products of paper mills: companies that churn out fake scientific articles.

Clyde is just one of a host of researchers who do this sleuthing, often as an aside from their main jobs in academia. Some choose to put their name to the allegations they make, but others prefer to do their work pseudonymously. Until now.

Earlier this year, Clyde’s e-mail address appeared on a preprint article describing a paper mill that has apparently produced more than 800 suspicious-looking chemistry papers (D. Bimler Preprint at Research Square <https://doi.org/hrzg; 2022>). The author of the preprint is named as David Bimler, a psychologist formerly based at Massey University in Palmerston North, New Zealand.

After confirming that Clyde and Bimler are one and the same, *Nature* spoke to the man himself about paper mills, pseudonyms and Internet sleuthing.

What is it about paper mills and fake science that inspires you to do this work?

I remember realizing this phenomenon existed, and it was a novelty. It became a fascination. It has the same kind of intellectual appeal as solving crosswords or jigsaw puzzles. Every time a new coherent picture of a paper mill appears, it’s like putting together the pieces of a jigsaw. It’s also a way of contributing to science. Getting published with well-founded science is certainly a positive contribution, and getting rid of junk science is also a contribution.

Why use a pseudonym?

I like the mystique. I do feel that science criticism should stand on its own two feet and not depend on the credentials and qualifications of the person who the questions come from. So being anonymous is quite helpful for that.

Why ‘Smut Clyde’?

It comes from a ‘porn name’ generator, which uses the name of the first pet you had and the street you live on to generate a fake name. The other anonymous sleuths have been ridiculing me. They are refusing to believe that I’m really called David Bimler.

Tell us about your latest paper-mill discovery.

It is quite an atypical one. The paper mill has published, I imagine, about 1,000 papers, all claiming that metal–organic framework (MOF) compounds have applications such as killing cancer cells or stopping inflammation. MOFs do have some marvellous physical properties, but the idea that they might have medical properties is extremely far-fetched, and yet these journals have accepted hundreds of papers about them.

What first raised your suspicions?

I was browsing through PubPeer (the post-publication peer-review site) to see what other people had highlighted as unusual. I must credit Sylvain Bernès, a Mexican crystallographer who had queried a few of them. I noticed a couple of papers in short succession that cropped up on the radar and reminded me of one another. Then it was fairly easy to hunt around in the same journals to find more examples. A snowball effect happened, especially when I found out that they were also using bogus reference sections to save time on the production line.

Bogus reference sections?

The papers were recycling references, including references that had nothing to do with the citations that they corresponded to. I could search for papers that had cited these irrelevant references, and that became an incredibly productive way of finding more papers associated with the paper mill.

What’s next for you?

There are a few more things I’m looking at – there is no shortage of paper mills out there. It would be nice to find some way of moving up to the next level by streamlining my investigations. That’s more of an ambition.

Interview by Holly Else

This interview has been edited for length and clarity.