

S6E4 | Fake news in Science

*with **Professor David Smadja**, Head of Hematology at Georges Pompidou European Hospital in Paris.*

*Interviewed by **Pascal Boulanger**, Director of Corporate Communications at Stago*

In an era of instant information, scientific misinformation can spread faster than evidence. In this Meet the Expert discussion, Prof. Smadja examines the impact of fake news on healthcare and research, and shares practical insights on how to distinguish facts from misconceptions.

Professor Smadja, why has fighting medical misinformation become such a central mission in your career?

There is probably a personal dimension to it. The COVID-19 pandemic placed hemostasis at the center of global attention. We entered an entirely new clinical landscape with SARS-CoV-2 infection, studying and treating thrombotic complications during the first phase of the pandemic.

Later, following the rollout of vaccines, we investigated reports of thrombosis occurring after vaccination, particularly with the AstraZeneca vaccine. Our work was based on scientific evidence and had direct clinical implications. Yet despite this, we were sometimes attacked on social media for reporting that mRNA vaccines were not associated with an increased risk of thrombosis. It was striking to see scientists criticized simply for presenting evidence-based findings. That experience had a profound impact on me and on many colleagues in the scientific community.

Another reason this issue matters so much is that we are now seeing the return of diseases that had become rare thanks to vaccination. In the United States, for example, vaccine-preventable diseases are re-emerging. In France, vaccination coverage against human papillomavirus (HPV) remains too low among young people. To me, this is deeply concerning. These experiences have convinced me that combating misinformation is essential.

Why do you think trust in medicine today is declining?

There are several possible explanations. First, trust has declined not only in scientists but also in institutions and experts more broadly. Many people perceive scientists and physicians as part of an elite that speaks mainly to itself. This trend mirrors the broader erosion of trust in public institutions and political leaders.

Science, however, is fundamentally different from politics. Nevertheless, scientific expertise has not been immune to this loss of confidence.

The COVID-19 pandemic also played a significant role. Public debates among doctors and researchers unfolded in full view of society, sometimes giving the impression that no one knew the answers. To some extent, that perception was understandable because we were learning about a new disease in real time.

What we perhaps failed to communicate sufficiently is that uncertainty is a normal part of the scientific process. Scientific knowledge evolves as new evidence becomes available, and we need to do a better job of explaining how that process works.

Do you think scientists today underestimate the influence of social media?

Yes, to some extent. Communication on social media has never traditionally been part of a scientist's role. When the pandemic began in 2020, platforms such as Twitter were primarily used by researchers to exchange information and collaborate with peers rather than communicate with the general public. Most scientists were simply not trained for that environment.

Today, however, much of the public conversation takes place on social media, across a wide range of platforms. If we want to rebuild trust, we need to be present in those spaces and communicate more effectively. We must explain science in accessible language, while also helping people understand how scientific and health institutions function.

At school, children learn about political institutions, but very few people are taught how agencies such as the FDA or European health authorities operate, or how a drug progresses from laboratory research to clinical use and eventual approval. These are important concepts that deserve greater public attention.

Even during medical and scientific training, we receive very little education on how to communicate our work to non-specialists. Yet social media has fundamentally transformed how information is shared. Scientific discussions are no longer confined to experts; they are visible to everyone. As scientists, we need to adapt and learn how to engage with broader audiences clearly and effectively.

What do you think scientists and healthcare professionals can do in their daily work to prevent misinformation?

If I had to summarize it in one word, it would be education. We need education at every level: for young people, for the general public, and even for journalists.

We certainly need more specialized health journalism, but we also need broader media education. People should understand how social media platforms operate, how algorithms influence what they see, and why certain content is promoted. Ultimately, online engagement is part of a business model. Regardless of the platform, commercial incentives play a role in determining which information receives visibility. That is why media literacy and health literacy are equally important. People must be able to evaluate information critically and understand how digital platforms shape their perception of reality. These skills are essential not only for children and teenagers but for society as a whole.

How can patients better assess the reliability of medical information on social media?

The first question should always be: who is providing the information? Scientists certainly have a responsibility to communicate more clearly, but individuals also need tools to evaluate sources. When someone shares medical advice online, it should be possible to identify who they are, what their qualifications are, and what expertise they bring. Transparency is essential.

People should be cautious when information comes from anonymous or unverified accounts. Social media is filled with profiles whose credibility is difficult to assess, making source verification more important than ever.

Institutions also have an important role to play and should communicate far more actively online. Ultimately, improving the visibility of reliable sources and strengthening the presence of trusted institutions on social media are key steps in addressing misinformation.

Is there today any social media platform that could be considered a safe place?

No. I do not believe any social media platform is completely protected from misinformation. Some may argue that LinkedIn is more reliable than other platforms, but no platform is immune. Today, anyone can discuss virtually any topic online. That is why understanding the source of information and the way digital media operate is so important.

The choice of platform should also depend on the audience you want to reach. If the goal is to communicate with the general public, particularly younger generations, platforms such as TikTok, Instagram, and X remain highly relevant because this is where many people now obtain information.

By contrast, if the target audience is primarily healthcare professionals or researchers, LinkedIn is generally more appropriate.

The key point is simple: effective communication requires meeting people where they are. Scientists, physicians, institutions, and companies must be present on the platforms their audience use most.

AI is everywhere today. Is it a risk or an opportunity?

I do not believe we should fight AI or tools such as ChatGPT. Instead, we need to learn how to use them responsibly.

The real challenge is ensuring that AI systems rely on reliable and transparent sources. Users need to understand where the information comes from and be able to assess its quality.

AI is sometimes associated with misinformation because AI-generated content can occasionally be inaccurate or presented without adequate context. That is a legitimate concern. At the same time, AI is an extraordinary technological advancement with enormous potential.

Rather than opposing AI, we should focus on developing and deploying trustworthy systems designed for specific users and specific needs, while ensuring that they

draw on high-quality sources.

Artificial intelligence is already transforming medicine, research, and everyday life. In many respects, this revolution is only beginning. The progress made in just a few years has been remarkable, and AI will continue to evolve rapidly.

As these technologies become more integrated into society, our responsibility is not to resist them, but to ensure that the information they provide is accurate, reliable, and evidence based.

About Professor David Smadja



Professor David Smadja, Head of Hematology at Georges Pompidou European Hospital in Paris, is an internationally recognized expert in thrombosis and hemostasis. He is particularly committed to improving public understanding of science and countering medical misinformation.