

Paris-Saclay Summit – Prof. Patrick Cramer: "Too often, our good ideas are developed abroad"

As the President of the Max Planck Society, the prestigious German institution with 39 Nobel Prizes, Prof. Patrick Cramer calls for better funding for European research to compete with China and the United States.

Interview conducted by Guerric Poncet

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At the helm of the Max Planck Society (MPG), Germany's equivalent to France's CNRS, biochemist Patrick Cramer, 55, is a product of European research. Educated at universities in Stuttgart, Heidelberg, Grenoble, Bristol, Cambridge, and Stanford, this cycling enthusiast who listens to both classical and rock music directly contributed to the work that earned Roger Kornberg the Nobel Prize in Chemistry. His crucial research on RNA and the transcription mechanism—how the body develops and regenerates—has earned him multiple prestigious awards, including the Louis-Jeantet Prize in 2021.

****Le Point:** What has been the most defining moment in your research career?**

****Prof. Patrick Cramer:**** It dates back to my time at Stanford. One night, I was alone at the synchrotron and managed to answer a question that several teams had been trying to solve for decades: how is DNA information translated into genes, giving rise to biological and physical traits? This reaction is central to life—it enables organisms to grow and mount immune responses. That night, I realized I was on the right track and knew I would be the first in the world to observe this reaction. I walked out of the building just in time to see the sunrise over California, and in that moment, I understood my life had changed.

****You experienced the Covid-19 pandemic as a researcher. How do you perceive the relationship between scientists and society?***

From the start of the pandemic, our lab decided to study the coronavirus replication process using the same tools we had developed for genome research—and it worked. I began being invited to TV shows. I was considered a vaccination expert, which I'm not, but personally, I believe vaccination is important, and I said so. I became the target of incredible hate campaigns, receiving hundreds of messages weekly from people insulting me. I realized then that social media algorithms thrive on polarization, and I eventually decided to ignore them.

****Do you think you made a difference?***

It was a challenging time to be a scientist. But after the pandemic, polls showed an increase in public trust in science. Researchers delivered virus detection tests, vaccines, and new drugs in record time, which resonated with public opinion. On the other hand, the percentage of people distrustful of science also grew, indicating that public opinion has become polarized—those who were undecided chose a side.

****A Nobel Prize powerhouse***

The Max Planck Society employs 24,600 people, including 6,600 salaried researchers and 3,400 doctoral candidates across 84 institutes covering all major areas of fundamental research. Since the early 20th century, it has claimed 39 Nobel Prizes, including those awarded to Albert Einstein, Konrad Lorenz, Emmanuelle Charpentier, and two Fields Medals.

****Do you believe serendipity — making discoveries by chance or while looking for something else — plays a central role in science?***

When I was a researcher in Grenoble, I was analyzing protein crystals. Normally, they're very stable and ordered structures, like rock crystals. But one Friday afternoon, I observed them shrinking! It was completely unexpected and allowed me to solve the question of their structure, which was only possible by observing them in their shrunken state. So yes, I believe in serendipity, but as Louis Pasteur said, "Chance favors only the prepared mind." You must be open to accidental discoveries while maintaining a sharp mind.

****What is the relationship between the Max Planck Society and CNRS?***

CNRS is our top scientific partner globally. European cooperation is crucial because Europe must excel to be a strong partner for other powers like the United States or China.

****Should we collaborate with China or avoid certain partnerships?***

Asia is the most dynamic region in the world. We must maintain our strong transatlantic partnership while exploring opportunities with China, South Korea, Singapore, India, and Japan.

****Are you concerned about scientific espionage?***

There are espionage activities from Russia and China, but they are minor compared to the 1,500 Chinese scientists working loyally in our labs. We are celebrating 50 years of cooperation with China, a partnership initiated under Mao! These researchers contribute ideas and return to China as professors. However, we occasionally block exchanges on a case-by-case basis, leaving decisions to domain experts rather than administrators or politicians. We prohibit collaborations that could lead to military or surveillance applications.

****Will Mandarin become the language of science in the future?***

Today, nearly all scientific publications are in English. Will that change? I don't know, but I can already tell you it won't change for German or French!

****Are you concerned about U.S. political developments?***

We all know how Donald Trump operates. His first administration was anti-science; we recorded 346 decisions hostile to research between 2016 and 2020! And it's likely to worsen with his second term. It will be a challenging period for American science, but we must continue engaging with them.

****What is the priority for Europe?***

Better funding for research. The U.S. invests 3.5% of its GDP in research, compared to an average of 2.1% in Europe and 2.5% in China, which is rapidly increasing. Germany is at 3% but could rise to 3.5%, while some European countries are below 1%, which is unacceptable. We also need to create an ecosystem where brilliant ideas can grow within well-funded European companies rather than being sold off cheaply and developed abroad.

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