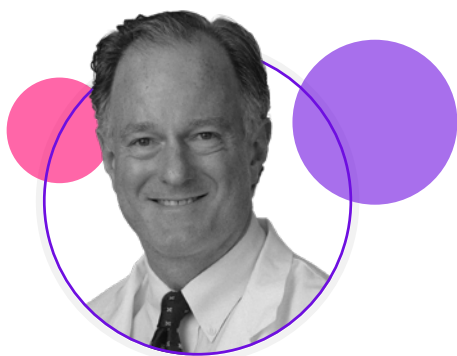




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Q1 Your career has spanned basic science, clinical cardiology, leadership roles, and scientific publishing. Looking back, what first drew you to academic medicine and cardiovascular research?

In college, I almost went to graduate school to study physical chemistry because I was fascinated by that kind of work. However, I knew I wanted to do research whilst maintaining a human element. That led me to pursue an MD-PhD programme in the USA, where you begin medical school, complete a PhD midway through, and then return to finish medical school.

I chose cardiology for two reasons. First, if you want to pursue a physician-scientist career path, which I am deeply passionate about, you have to be both a great doctor and a successful scientist. Patients are putting their lives in your hands, while scientific success demands strong research, funding, and publications. Unless you can work 30 hours a day, those two worlds need to be closely connected. Clinical cardiology and cardiovascular science are exceptionally well aligned, and I have always found that interface inspiring.

When I see patients, I often tell them that we are studying the disease they have and trying to understand what is happening to them. That connection between research and patient care is something I have valued throughout my career and plan to continue valuing.

The second reason is that cardiology allows you to walk into a room, speak with a patient, examine them, and often come away with at least some understanding of what may be happening. I enjoy that direct human interaction. There is something uniquely rewarding about sitting down with a patient and developing a thoughtful list of possibilities based on that conversation and examination.

Q2 You have spent decades investigating the mechanisms of cardiac remodelling. How has the research landscape changed since you first entered the field, and what changes have been most impactful?

One of the most remarkable developments has been the transformation of cardiovascular care. In the 1950s, which is before my time, if someone experienced a myocardial infarction, they were often administered morphine and confined to a bed for weeks, while clinicians waited to see whether their heart would heal. At that time, in-hospital mortality rates were around 30%. Today, mortality following myocardial infarction is closer to 3%, thanks to the many advances we have made in cardiovascular medicine.

As a result of that success, many more patients survive acute cardiovascular events and go on to live with chronic conditions, particularly heart failure. I would argue that heart failure will define much of the future of cardiovascular medicine. Whereas previous generations focused

on atherosclerosis, thrombotic disease, and arrhythmias, many patients today are living longer with injured hearts and developing heart failure.

When I do my rounds in the coronary care unit now, at least half of the patients have heart failure. That was not the case 20 years ago. Importantly, this is a marker of success, because these patients are alive and often able to live with that condition for many years with appropriate treatment.

A particularly important challenge is heart failure with preserved ejection fraction, which is now more common than heart failure with reduced ejection fraction. Whereas we have numerous therapies for the latter, treatment options for heart failure with preserved ejection fraction remain limited. This is one reason why I believe heart failure research will continue to shape the future of cardiovascular science.

“**Obesity and cardiometabolic stress are transforming the global disease landscape**”

At the same time, obesity and cardiometabolic stress are transforming the global disease landscape. Our species has never encountered this situation before on such a scale, and I believe understanding and addressing these changes will define much of the next era of cardiovascular research and medicine.

Q3 You have witnessed significant changes in both research and publishing over the course of your career. What shifts have most influenced the way you think about scientific discovery today?

One of the largest shifts has been the emergence of

cardiometabolic disease and the rapid development of therapies such as glucagon-like peptide-1 receptor agonists and sodium-glucose cotransporter 2 inhibitors. These treatments are having an extraordinary impact, particularly in the context of obesity and heart failure.

As cardiologists, we are somewhat spoiled, because many of our therapies both improve symptoms and extend life. With some of these newer therapies, we are seeing substantial improvements in quality of life and weight reduction, but the long-term mortality benefits remain an area of active investigation.

The speed with which these therapies have entered clinical practice is remarkable. Time will tell how they ultimately affect humanity as a whole, but they represent one of the most significant developments in cardiovascular medicine in recent years and illustrate how rapidly the scientific landscape can evolve.

Q4 The title of your fireside chat asks whether AI is a friend or a foe. At this point in time, do you see AI as more of an opportunity or a threat to scientific publishing, and why?

I think it is both friend and foe. AI can be frightening, but it can also be incredibly powerful and positive. It is already changing many aspects of our lives and will continue to do so. Human oversight remains vitally important because AI can



“**Maintaining scientific integrity therefore requires careful communication alongside rigorous editorial standards**”

hallucinate, fabricate information, and produce inaccurate outputs.

At the same time, there are significant opportunities. AI will transform how we interact with knowledge. The traditional research paper and PDF format have existed for centuries and are, in many ways, quite old-fashioned. I believe AI will facilitate more dynamic, living documents that readers can interact with, and that will be a very positive and ultimately inevitable development.

Q5 How do you think AI will transform the way researchers write, review, and disseminate scientific manuscripts over the next 5 years?

I come from the era of PubMed searches, where researchers would search authors or topics and manually identify relevant papers. AI has the potential to substantially improve and accelerate that process.

Although AI can be misleading if used improperly, it can also help researchers navigate the enormous volume of scientific information being produced. There are thousands of journals publishing vast amounts of content, and managing that information overload is a major challenge.

Over the next several years, I think AI will help researchers interface more effectively with scientific literature, identify relevant information more quickly, and gain access to knowledge in ways that were previously impossible.

Q6 Many journals are grappling with AI-generated text and images. What principles do you think should guide editors when determining acceptable uses of AI in manuscript preparation?

My assumption is that virtually every manuscript submitted today has been touched by AI in some way, even if only to improve language and writing quality.

Ultimately, the publication process depends, critically, on honesty. We can perform image analyses, plagiarism checks, and other forms of screening, but we cannot police every aspect of manuscript preparation.

Scientific publishing rests on a foundation of truthfulness. Editors must assume authors are acting honestly when they disclose their use of AI, while continuing to use available tools to monitor for misconduct where possible.

Q7 One concern often raised is that AI could accelerate the spread of misinformation or low-quality science. How can journals safeguard scientific integrity while still embracing innovation?

This issue extends beyond journal publishing alone. Many social media platforms have incentives to promote content that generates engagement, and extreme or sensational information often attracts attention. As a result, misinformation can spread very rapidly.

I believe society as a whole must address these challenges. Journal editors and scientific professionals have an important role in voicing concerns and promoting evidence-based thinking, but the responsibility ultimately extends beyond the publishing world.

The COVID-19 pandemic highlighted this challenge. For example, studies demonstrated that vaccine-associated myocarditis can occur, but it is extraordinarily rare. Unfortunately, some people focus only on the existence of a risk while ignoring the broader context and comparative risks associated with COVID-19 infection itself.

As scientists, we strive to communicate with precision and nuance. Sometimes the public hears only the alarming portion of a message, even when the science is being presented accurately. Maintaining scientific integrity therefore requires careful communication alongside rigorous editorial standards.

Q8 Beyond manuscript writing, where do you see the greatest potential for AI to improve scientific communication and knowledge dissemination?

One of the greatest opportunities lies in helping researchers and clinicians navigate the enormous volume of available information.

Scientific publishing produces a vast and continually expanding body of knowledge. AI has the potential to help users identify

relevant content, synthesise information, and interact with scientific literature in more meaningful ways.

Rather than relying solely on static documents, researchers may increasingly engage with dynamic knowledge platforms that allow more intuitive exploration of scientific findings. I think AI will play a major role in enabling that transition.

Q9 If we were having this conversation again at the European Society of Cardiology (ESC) Congress 2031, what do you think would have changed most dramatically in scientific publishing?

I believe publishing will become more open. The traditional model, where authors pay to publish and readers or institutions also pay to access the content, is increasingly difficult to justify and will likely continue to evolve.

However, open-access publishing presents its own challenges.

High publication fees can create barriers for researchers working in resource-limited settings, potentially increasing rather than reducing disparities in scientific communication. Finding sustainable models that provide broad access while maintaining equity will remain an important challenge.

I also think the concept of the journal itself may evolve. Many readers no longer consume journals issue by issue. Instead, they search online for information relevant to their interests. As AI continues to develop, researchers may rely even less on traditional journal structures and more on intelligent systems that help them identify, evaluate, and interpret scientific evidence.

That said, journals still provide an important quality signal. Publication effectively represents an endorsement of the quality and reliability of that science. Maintaining those standards will remain critically important, even if publishing models change.

Q10 Finally, what advice would you give to early-career researchers who are trying to navigate a publishing environment increasingly shaped by AI?

The foundation remains the same as it has always been: do good science.

That means using robust datasets, applying careful statistical methods, employing multiple complementary models where appropriate, and ensuring that conclusions are supported by strong evidence.

Equally important is learning how to tell a compelling scientific story. A successful paper should have a clear, logical thread running through it, with each major point supported by rigorous data and contributing to an overall conclusion.

Developing those skills requires mentorship. Learning how to conduct high-quality science and communicate it effectively is something that comes through practice and guidance from experienced mentors. Throughout a research career, mentorship remains one of the most valuable resources available.

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