https://doi.org/10.1038/s41593-023-01319-2

Reflections from the former Chief Editors of *Nature Neuroscience*

To mark the 25th anniversary of *Nature Neuroscience*, *Shari Wiseman* spoke with each of the past Chief Editors of the journal: *Charles Jennings* (1998–2003), *Sandra Aamodt* (2003–2008), *Kalyani Narasimhan* (2008–2014), *Meredith LeMasurier* (2014–2016), and *Kevin Da Silva* (2016–2021). They shared their memories and insights about the journal's early days, scientific publishing, and the field of neuroscience.

How did you get started as an editor?

CJ: I did my PhD in London, then moved to the USA, did postdocs at Harvard and MIT, and then was wondering what to do next. And I guess it was assumed I would move through to a faculty kind of position. But *Nature* contacted me and said, would I be interested? They wanted a biology editor in their Washington DC office. So, they were expanding from being a British journal to being an international journal. And so, I was the systems neuroscience editor for *Nature* for several years.

SA: After getting a close-up view of what professors really did all day, which was to sit in their office and write reports or grant applications, I decided that that probably wasn't what I wanted to do with the rest of my life. But I was much less clear on what I did want to do. My other main skill was writing. I had been taught to write by my high school journalism teacher. And so, when I first started thinking about an alternative career, I settled on science journalism. And I had filled out the application for the UC Santa Cruz Science journalism master's degree. It was sitting on my desk, sealed and ready to be dropped in the mail that day, when another postdoc who shared an office with me called out from his computer, "Hey, I found you a job. They're launching this new journal *Nature Neuroscience*, and they're looking for somebody exactly like you." I said, "Don't be ridiculous. I've already decided and it's gonna be science journalism." And then I went back and looked at the ad again, probably something like 20 times a day for the next week. And finally, on the day that the application was due, I thought, "Well it can't hurt to interview. I can just see what happens," so, I put together my application and I faxed it. We were still faxing. I did get called for an interview, and the more I talked to Charles [Jennings] about what that job was like, the more interested I got.

KN: It's one of those things where life leads you down a path where you don't expect it at the time, but it works out really, really well. I knew soon after I finished my PhD that I was not cut out for an academic career. And one of the things that was extraordinarily frustrating to me was being forced to focus on a very narrow problem for a long period of time, which is what I think you need to do to be a successful PI, to put your sights on it like the eye of Sauron. I went in to do a PhD in neuroscience because I wanted to see how the brain works, not because I wanted to spend the rest of my life focusing on hippocampal or cerebellar plasticity or something like that. I was doing my postdoc and then I saw an ad that said they were launching a new journal. I had no idea what editing was, but I thought, "this sounds at least somewhat cool because you get to read different papers," and I applied and, much to my shock, I got the job.

KDS: In grad school, I loved science, but I didn't love having a narrow focus on one topic. I was working on Alzheimer's disease, but I was always having different tables of contents come through my inbox and saying to colleagues, "Oh, did you see that?" I was kind of that journal club kid that everyone hated, and then I realized I can turn journal club into a job. I started as an editor at *Nature Medicine* and I loved it. When you walk into these positions you never know if you'll be able to feel confident about a decision on a manuscript if it's not directly related to what you studied. But I quickly learned that I was capable of gathering the evidence I needed to make those decisions. And I loved learning about areas that I had no concept of before.

How did the idea to launch *Nature Neuroscience* originate?

CJ: They had launched *Nature Genetics*, *Nature Structural and Molecular Biology*, and *Nature Medicine* and those were all successful journals or looking promising, and so the publisher decided that neuroscience was a potential next launch. I said I'd be interested, and so I was asked to help with the planning and the decision-making process. We started by doing a big survey of the neuroscience community: Will anybody send us any papers? Do they think there are too many damn journals already? It was absolutely clear from the response that there was a lot of enthusiasm, and that made me enthusiastic as well. I was very enthusiastic about our vision that this is a truly integrated discipline, and all of these different people have something to say to each other and learn from each other, and that there ought to be a high profile journal where it can all come together. We kind of take that for granted now, but it wasn't obvious back in 1997.

What did you do to get the journal ready to launch?

CJ: I wrote letters to everybody whom I had gotten to know over the years as an editor of *Nature*, both encouraging them to send papers and getting them enlisted as reviewers. We spent a lot of time on designing the journal, the physical design. It was really important back then because anybody with visually driven stories who really takes pride in the quality of their images doesn't want to see them wrecked by being printed on low quality paper and squeezed into a small size. We spent a lot of time debating the quality of paper stock, the layout, the choice of fonts. At that time you could make those decisions as an editor, and we were sort of building it up on the fly.

Nature had a roundabout entry into the digital world. Around the time I started in 1993–1994, they made the completely ill-judged decision that instead of going online with a web-based format, to make a

Nature CD-ROM. But by the time *Nature Neuroscience* launched in 1998, online journals were a well-established thing, and so we launched online from the get-go.

SA: I have vivid memories with that first issue of listening to Charles work the phone and say: "You know, this journal would be a good place for your paper, and I think I might be able to squeeze your paper into our first issue if you can get it back to me by the end of the week." He said that to basically all ten of the people that we published in the first issue because we had not given ourselves enough lead time, and we were really scrambling to get enough material to fill it.

KN: I remember going on the first day. I think Charles was moving house at that time, so he wasn't even in the office when I started. So Sandra Aamodt, who had started a month before I did, said: "Well, I'm not really sure what we're all supposed to be doing, but here's a stack of manuscripts, start reading." And it was great.

What were the mechanics of the job like in the early days?

SA: I was the copy editor for the entire first year of *Nature Neuroscience*. We did go from using fax to using e-mail at some point in the first few years. Let me tell you, when you fax somebody's rejection letter to their department fax machine, it's kind of a different psychological experience for everyone than when you send it to their e-mail privately.

In the very beginning when there were only the three of us [SA, CJ, and KN], we didn't really have the opportunity to specialize very much. People would grab the papers that looked most interesting to them, which were usually the ones that were in their subject area. And then over time it became more formalized that this person was our cognitive editor and this person was our electrophysiology editor, and so on.

Was there a strategy for the kind of content you wanted to attract early on?

CJ: We tried to cover the spectrum from molecular to cognitive neuroscience and everything between, in every issue, and to have a balance between them. We wanted to attract the very best papers in all of those fields, but we tried not to cultivate favorite authors. We wanted to be seen as fair-minded and not nepotistic.

What were the hot or emerging areas of neuroscience when you were at the journal? How has the field changed?

CJ: Functional neuroimaging was really taking off, and we had quite a lot of conversations with leaders in that field who would complain about people publishing just-so stories in which you put somebody in the brain scanner and have them do some cool tasks, something lights up, and then you tell a story around it. It sounds ridiculous these days, because there are very high standards of statistical rigor in that field now. And so we tried hard to raise the standards and made a very active effort to cultivate a network of referees who were known and respected for their experimental rigor in that field.

Back when we launched in 1998, everybody paid lip service to the idea that we care about brain disorders. But I think there was almost a universal feeling among neuroscientists that we don't know enough yet and we need more basic research in order to address the mystery of brain disease, and to some extent that was self-serving, right? Now, I think there's a lot more awareness of the importance of translational applications, but we didn't publish very much translational work in the early days.

We also paid attention to computational neuroscience, at a time when there was not much interaction between molecular and developmental neuroscientists and theoreticians. None of us editors were computational experts, but I think we all realized that theory was important, that you could never hope to understand the brain without computational models, and that modelers and experimentalists needed to talk to each other in order to make progress. We wanted to be a forum for that discussion, and I was very pleased to learn recently (from SW) that one of our most highly cited papers from the early years was Rao and Ballard's article on predictive coding[1], which was a pure modeling study.

SA: Long-term potentiation (LTP) and synaptic plasticity in all its forms was a really big hot growth area. When I first started people were doing single-neuron recordings. And if you could do it in an awake animal, you were a god. By the time I left the journal, people were manipulating individual neurons in behaving animals, and it was just starting to get to the point where reviewers would ask for that. Now it would be rare not to have in vivo data or not to have some kind of genetic manipulation in systems neuroscience studies, but none of that was true when I started.

KN: The whole field of epigenetics and behavior was one that started during my tenure. The papers there were super-interesting when they first were being submitted and I'm really happy we ended up publishing them (some classic examples[2–4]). They opened up a completely new field. There were the papers on epigenetics and maternal behavior, and then the whole host of papers looking at epigenetic changes in addiction or depression. I still think we've scratched just the surface of that field. I'm looking forward to the next 25 years to see where we progress.

If you look at the whole area of addiction research or even psychiatric diseases in general, certainly there's a lot more appreciation of the genetics underlying these diseases in the last 25 years.

There's more appreciation of the sophistication of behavior. It's not quite like the old, "I'm gonna take these mice, and put them in a forced swim test, and then that's going to be the end of that." There is a lot more appreciation of what each behavior could mean and what the factors are that could influence them.

Are there any papers the journal published during your time there that you're especially proud of?

SA: The one that pops to mind is something I was really excited about at the time, a paper about the origins of Parkinson's disease[5]. It was a mouse paper that seemed to indicate that industrial pollution could be causing Parkinson's disease.

KDS: The DeepLabCut paper[6]. It felt like it came out of left field, although there was a lot more of this happening than I think we were all aware of, but this one just came up and was so 'easy'. 'Easy' in terms of easy to implement, easy to understand why it is important and it has been adopted so widely. I think because it was released open source and it has a great user interface. It just changed the field overnight.

The skull channels paper[7]. It was so beautifully done and it was truly like "let's start with an observation." It was just a tour de force anatomy paper, along with some functional work.

How were you able to shape the journal or shape the field as Chief Editor?

ML: I tried to instill a mindset of being a champion for papers, and not a gate-keeper.

I encouraged the team to take risks on papers they believed in and to have confidence in their decisions.

KDS: I really wanted to champion Technical Reports and Resources. I think technology drives innovation, and we were seeing that in real time across the entire field, from sequencing all the way through systems neuroscience. That was an opportunity to show the community that technological developments can be very important, even without a new biological finding, and should appear in a prominent place. On the Resource side, sequencing was kind of cracking open and there was so much to be learned about genetics at the single-cell level. When you can create a dataset that can be reused it has a lot of value, and we were very keen on ensuring that the data could be accessed. And we showed that the Resource format could include other data types, like connectomics. These kinds of papers that are descriptive, which used to be a bad word for editors, are actually really important.

What was the best part of the job for you?

CJ: Almost every aspect of it was fun, apart from dealing with appeals! It's an incredibly varied job — reading papers and referee reports, talking to world experts in different fields, visiting their labs, running an editorial team, learning from each other, and bonding over war stories about the vagaries of authors and referees.

KN: There was never a dull moment, you learned a lot of science. Yes, you read a lot of papers and you interact with a lot of very smart people as authors and referees. But in many ways it's your team that sort of makes or breaks your experience. I've learnt probably as much from other editors on the team as I have from authors. When you go in every day with a group of people who are also intellectually driven and who are willing to argue the merits of a paper with you, it's fun.

ML: It's an amazing job for so many reasons. You really are on the front lines, dealing with authors and the community, and you really can speak for them and advocate on the level of individual papers.

KDS: I really enjoyed being close to the science and talking to scientists. I think continuous learning is the thing that I'm most kind of keen on doing with my career. At *Nature Neuroscience*, I had this incredibly privileged position where I got to see all the science, all at once. I was constantly learning and integrating — it's such a rare opportunity. I also recognized once I left how hard it is to keep on top of science when you don't have that mechanism to constantly see it. Also, as I think the experience with COVID-19 helped the public to see, science is iterative and evolving. It's never static and it's always changing, and I love that.

SW: During these conversations, it was of course striking to hear how much has changed (for example, the reliance on fax machines and the importance of good paper stock), but also to notice throughlines that have been part of *Nature Neuroscience* since the journal's inception. The excitement we take in publishing new discoveries and technologies, our commitment to representing the breadth of the field, and our emphasis on excellence and rigor are woven into the fabric of *Nature Neuroscience* and have remained constant even as editors have cycled in and out. I and the current editorial team look forward to the opportunity to continue bringing our readers the best of the field in the years to come.

Interviewed by Shari Wiseman

Published online: 8 May 2023

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