Celebrating 20 years of *Nature Neuroscience*

Our May issue marks *Nature Neuroscience's* 20th anniversary. We reflect here on how the journal has evolved and what's to come.

This is an exciting time for neuroscience. Worldwide initiatives have promoted investment in research, with new technologies being developed at a rapid pace. This has spurred basic discoveries and provided insights into all areas of neuroscience. Several consortia and team science initiatives are working collaboratively to generate large datasets across multiple modalities and scales. This has created a wealth of data which can be mined and integrated and can provide insights for further hypothesis testing.

As we look back over the past 20 years, we can take stock at how privileged our journal has been. We've received over 50,000 submissions and published almost 4,000 articles. As the publishing landscape has changed, so have we, implementing changes to meet the needs of our authors and readers and championing policies to encourage transparent reporting and reproducibility. These have been rolled out at every stage, from initial editorial consideration to peer review and postpublication.

Over five years ago, we introduced guidelines and a reporting checklist to improve reporting of methods, data collection, and analyses in our pages[1]. Full transparency surrounding methodology, as well as explicit declarations of what has not been done, are necessary and benefit both reviewers and readers. This reporting summary has since been expanded to include technique-specific modules, including one for MRI research[2]. Prior to peer review we also ask that authors, where possible, replace bar plots with dot-plots or box-and-whisker plots to provide a clearer representation of the data points and distribution, and we require a data availability statement.

Innovations have also been introduced into our peer review process. Inspired by efforts at other journals, we introduced a consultative dimension to peer review. We routinely aim to identify any referee requests that we may overrule on editorial grounds. At our editorial discretion, if some discrepancies between referee reports are identified, these anonymous reports are shared with all of the referees before a decision is issued. They are then given the chance to weigh-in on their peers' concerns and can update their reports to comment on these issues. The aim is to provide a prioritized list of requests, and identify any that are out of scope, to guide the revision, or to provide a clear rationale for rejecting the manuscript. Additionally, although a code availability statement is required, we now request that custom code be shared as well, and may ask reviewers to assess whether the code is accessible, executable, and accurately reproduces key findings in the paper[3].

We have also introduced new article formats. In our first ten years we introduced Technical Reports and Resources. We've recently published Viewpoints, which seek to identify major topics of contention where several individuals with opposing views can provide their input[4]. A moderator provides a series of open questions to these experts, additional questions are posed, and a set of key themes for future research emerges. We have also published several pieces focused on data quality and sharing for a particular technique. These are typically authored by several researchers, with the goal of providing guidance on experimental design, data acquisition, and data sharing, alongside ways to mitigate sources of error, reduce variability, and improve data quality. If some consensus can be reached, these are detailed with best practices and future directions.

Our journal was the first Nature journal to publish with full online content, and we have continued to develop our web presence. Integrated supplementary information, which displays supplementary figures alongside main figures, has improved the visibility of additional data and provides a fuller picture of the paper's important findings. Articles are also promoted through various online channels, and particularly via our Twitter account (https://twitter.com/natureneuro), where we highlight recent content, along with key data, schematics, and recent coverage in the popular media.

To commemorate the past 20 years, we will be reflecting back on what we have published, revisiting key articles and topics each month with Historical News and Views beginning with our June 2018 issue. In particular, what did it mean for the field when a particular original study was published? Did it resolve an unanswered question? Was a new line of inquiry launched which we can still appreciate today? Were commonly-held assumptions overturned? And, looking forward, what's to come in this field? These are somewhat lofty goals for a short piece, but a lot can and should be learned by taking a close look at seminal papers.

We anticipate these papers will continue to inform new research directions. Moving forward, we are excited at the prospect of what's to come. Alongside our original Articles and Brief Communications, we welcome Technical Reports describing new tools and analysis pipelines for interrogating cells and circuits at the molecular, cellular, and systems levels. Genetics and genomics studies have provided a window into the diversity of cell types and the heterogeneity of disease. These studies, alongside work focused on (but not limited to) connectomics and multimodal population-based cohorts, often result in Resources, a format that describes large datasets of broad community interest which we champion. Neuroscience continues to be increasingly interdisciplinary as we appreciate the interactions between systems. Translational studies identifying biomarkers, tracking longitudinal cohorts, and providing insight into pathogenesis and novel therapies are transforming our understanding and treatment of disease. We're also at the cusp of important innovations in artificial intelligence, machine learning, and network science, and recognize that these fields will continue to mature with insights gained from basic neuroscience.

To all of our authors, reviewers and readers: thank you. We look forward to receiving your work and championing burgeoning areas of interest. Despite the rapid evolution and growth of the field, reflecting back on our first editorial[5], it's important to realize that our primary goal remains the same: to publish a select number of papers of broad interest and significance to the field, across all areas of neuroscience. We need to remain agile, keep evolving and serve our whole community. To quote that 1998 editorial: "neuroscience still has a 'frontier' feel to it. The vast complexity of the brain represents the ultimate challenge"—a challenge we welcome and embrace. ❐

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References

1. *Nat. Neurosci.* **16**, 1 (2013).
2. *Nat. Neurosci.* **20**, 298 (2017).
3. *Nat. Neurosci.* **20**, 761 (2017).
4. *Nat. Neurosci.* **19**, 1537 (2016).
5. *Nat. Neurosci.* **1**, 1–2 (1998).