



Marking a milestone

As *Nature Reviews Genetics* turns 20 years, the editors embrace the opportunity to pause and reflect on the past, take stock of the present and look to the future. Please join us in celebrating our Anniversary issue.



Acknowledging any birthday — milestone or not — means acknowledging the passage of time. Since the journal first launched in October 2000, its mission has been to act as the premier source of reviews and commentaries for the scientific communities we serve, publishing authoritative, accessible, timely articles of the highest quality. A key goal was to act as a filter that helps readers to interpret, critically evaluate and distil the best research. The primary aims of the journal ultimately remain unchanged. But as we all know, change is inevitable!

The launch of the journal followed mere months after the Human Genome Project (HGP) public consortium announced the assembly of a working draft of the sequence of the human genome. As Richard Gibbs recalls in this issue, parallel transformations in biology and computation that followed over the subsequent two decades placed “the genome at our fingertips”¹. New techniques and technologies yielded unprecedented amounts of biological data that enhanced the pace of discovery. Sequencing became high-throughput, affordable, routine and adapted from genomics to transcriptomics and epigenomics, from bulk to single cells, and from static snapshots to temporal trajectories. Logsdon et al.² review the status quo of some of the latest developments in long-read human genome sequencing and its applications. Although if the past has taught us anything, it is that the present is unlikely to remain the status quo for long...

In the first issue of *Nature Reviews Genetics*, the editors at the time wrote, “To an extent, all life scientists are geneticists because genetic technology and the accumulation of genomic information has enriched all of biology”³. Indeed, research is becoming increasingly multidisciplinary; the changes of the past two decades, including revolutionary advances in genome engineering that are driving exploration into the impact of genotype on phenotype, extend well beyond what might be deemed the field of genetics. High-throughput genomic profiling has fostered a robust culture of data sharing within and across disciplines, which will be key to drive further discovery and the application of genomics into routine clinical practice. Byrd et al.⁴ provide guidance to help researchers assess risks and share data responsibly.

Of course, the vast amount of information gathered has brought not just new knowledge but also plenty of confusion, as dogmas were overturned and new questions emerged. Integrating multiple strands of information from complementary omics technologies offers the opportunity to sift through the vast ‘known unknowns’ and ‘unknown unknowns’ and refine our understanding of fundamental processes, as Buccitelli and Selbach illustrate for the principles of gene expression control as inferred from transcriptomics and proteomics⁵.

Birthdays mark transitions, and transitions always involve exploring new opportunities. The road ahead in genetics and genomics is anticipated by twelve leading researchers in a Viewpoint article⁶, who provide their perspectives on what we have learnt and accomplished but, more importantly, where we are headed as well as the hurdles that need to be overcome along the way. One of the major challenges to be addressed in human genomics research is to make genomics truly equitable, which will require a multifarious approach to tackle inequalities.

Twenty years ago, the first editorial stated that “genetics is about making connections — between phenotype and genotype, zygote and adult, ancestor and descendant”. To us editors, it is also about the connections we make on a personal level, with our colleagues, authors, referees and readers. Reaching this milestone is a testament to all those involved in the journal throughout the past 20 years; it has been a privilege to be a part of this community. We are grateful to everyone for their generosity and willingness to share their time, wisdom and ideas, and we thank you all for your continued support. Here is to the next 20 years!

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