

EDITORIAL

Ten years of *Genome Biology*

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Abstract

Huge advances in the field of genomics along with the continued rise of open access has made the past ten years an exciting time to be a biologist.

Over the past decade we have witnessed a revolution in biology, and especially in molecular biology and genetics. No longer are experiments restricted to the study of a particular gene in one of a small number of model organisms. Today, a more global approach is being embraced, which has not only given rise to the field of systems biology, but has also touched all areas of biological and medical research, bringing them closer together and blurring the lines that previously defined individual disciplines. And our expectations are now much higher. It no longer satisfies us to know simply that a given transcription factor activates a particular gene. We now want to know about all of the regulatory sites for a gene and what other factors might modulate transcription factor binding and gene activation. Horizons and expectations have broadened, but what has driven this shift in attitude? It surely has to be the technological advances in the field of genomics over the past decade, such as chromatin immunoprecipitation coupled to DNA microarray (ChIP-chip) or sequencing (ChIP-seq), next-generation sequencing, RNA-seq and new techniques in proteomics.

Techniques aside, the past decade will surely be best remembered as the decade of the genome. Since the White House press release [http://www.ornl.gov/sci/techresources/Human_Genome/project/clinton1.shtml] in June 2000 in which the completion of the initial sequence of the human genome was announced - followed by publications in 2001 in *Nature* and *Science* - many draft genomes from other organisms have been published. The chimpanzee, chicken, honeybee and *Arabidopsis* have most recently been followed by the

giant panda. The speed with which new genomes can now be sequenced has been facilitated by the development of powerful new sequencing technologies and assembly methods. It is now possible to assemble *de novo* a large genome, such as that of the giant panda, using only short reads provided by next-generation DNA sequencing. These technological advances are also driving the development of novel diagnostic and therapeutic approaches to the treatment of cancer, as researchers re-sequence matched tumour and normal genomes from specific types of cancer. Add to this the advances made in our understanding of say, regulatory genomics that have come from projects such as ENCODE and it is little wonder that the genomics field continues to advance at an unrelenting and increasing pace. The mind boggles to think where we may be in another ten years.

In parallel, the past ten years have seen huge changes in the scientific publishing world. Many new journals have been launched, providing authors with much more choice when deciding where to submit. In addition, the open-access model has been widely embraced, with researchers and funding bodies not just demanding that articles should be freely available to all, but that all metadata are also accessible for others to use, ushering in an era of greater collaboration. Indeed, the demand from researchers that their data should be accessible to all has caused many journals to partly change their business model by offering an option of making an article freely available.

Genome Biology was launched in 2000, and so this year is celebrating its tenth birthday. Over the past ten years, the journal has taken its place alongside other well respected journals as a first-class venue for publishing high-quality, exciting research from a broad range of biological disciplines. This is an achievement indeed, given that at the time of its launch *Genome Biology* was one of the first online journals, and all its research articles were (and still are) open access, a concept then regarded with some suspicion.

These successes could not have been achieved without the efforts of a dedicated editorial staff at *Genome Biology*. Theodora Bloom, *Genome Biology's* founding Editor, along with Michaela Torkar, now the Editorial Director for biology at *Genome Biology's* publisher BioMed Central, were instrumental in steering the journal onto the road

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to success. Managing Editor Ruth Rowland has provided essential support in developing the website, commissioning reviews and acting as the first port of call for author inquiries. Along with its staff, the support of our readers and advisory board has helped shape *Genome Biology* into the journal that it is today. We are committed to listening to your feedback, continually reassessing our thresholds and criteria for publication, and developing the journal according to your needs, and we look forward to your continued support and feedback.

We are marking *Genome Biology's* tenth birthday with some celebrations. In June 2010, at BioMed Central's fourth annual research awards ceremony (which will also mark BioMed Central's tenth birthday), there will be a special prize for the best research article published in *Genome Biology* in 2009, as voted for by our readers. In October, *Genome Biology* will hold its first conference in Boston, which promises to be an exciting meeting.

Details will be announced soon. We are also making some changes that we feel will improve the look of the journal. The website and PDFs are being redesigned and this redesign will be implemented later in the year. A refreshment of our advisory board and a continued editorial presence at international conferences will help us to reach out to our readers, to continue to attract the very best genomics articles, and to stay ahead of advances in the genomics field as they happen.

As we look forward to the next decade in these exciting times, we would like to thank our supporters, readers, authors and referees for their support over the past decade. We couldn't have done it without you!

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