

## *Biopolymers* Celebrates 50 Years of Nucleic Acids Research

### **DNA AND RNA OVER HALF A CENTURY: GOING STRONG AND GETTING STRONGER**

Ever since the Nobel-prize-winning discovery of the structure of the DNA double helix by James Watson and Francis Crick 60 years ago, our grasp of the central role of nucleic acids in the biology of life has skyrocketed. For 50 years, *Biopolymers* as a journal has aimed to advance our understanding of the central dogma of molecular biology that DNA makes RNA makes protein, which was quickly amended to include such non-canonical events as reverse transcription of RNA into DNA and ribozyme catalysis. It is only a decade ago, however, that the human genome was sequenced in its entirety, laying the foundation for breathtaking advances in revealing that nucleic acids – and especially RNAs – play a plethora of additional critical roles in controlling virtually every cellular process, particularly in eukaryotes.

After a half-century of publishing on nucleic acids, the time has come for *Biopolymers* to look at where DNA and RNA research has been and where it may still be going. In this special anniversary issue, a series of review and research articles by senior and junior leaders of the field provide a broad – even if

surely incomplete! – overview of the past 50 years of nucleic acids research. The breadth of the field is conveyed by historical perspectives that trace the inspiring but humbling arc of discovery mixed in with articles that highlight recent advances and future possibilities. We hope that everyone – from the young high school student to the most senior investigator – can find in this extraordinary collection inspiration for making the many exhilarating discoveries on nucleic acids we can still expect.

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