

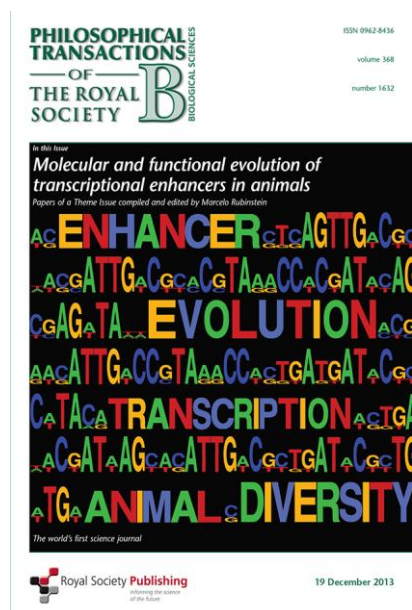
Molecular and functional evolution of transcriptional enhancers in animals

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Deciphering the genetic mechanisms that shape the seemingly infinite variety of animals that populate our planet has been one of the main dreams of Natural Science. Recent technological developments that facilitated the sequencing and assembling of genomic DNA from a wide variety of animal species is allowing this dream to come true.

Whole genome comparisons shows that variation in DNA sequences of gene regulatory elements known as transcriptional enhancers is likely to explain morphological and physiological innovations, since these DNA elements encode critical information about where, when and how much a protein-coding gene is expressed in every animal tissue.

The articles in this Theme Issue shed more light on the still mysterious world of gene expression evolution and animal diversity.

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