

The Genetic Code in the Age of Synthetic Biology

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The genetic code, initially thought to be universal and immutable, is now known to contain many variations, including biased codon usage, codon reassignment, ambiguous decoding and recoding. As a result of recent advances in the areas of genome sequencing, biochemistry, bioinformatics and structural biology, our understanding of genetic code flexibility has advanced substantially in the past decade. This presentation will highlight our current knowledge of the genetic code, its flexibility, and its evolution *in vivo* and *in vitro*.