# Special Issue

# Biology in the Early 21st Century: Evolution Beyond Selection

## Message from the Guest Editors

The conventional NeoDarwinian appraisal of evolution is based on corresponding pillars of random genetic variation and selection via differential fitness. In the 21st century, a salient question arises. Is this a sufficient evolutionary narrative? This Special Issue will offer several differing perspectives on evolutionary development and phylogeny that extend beyond Darwinian selection. The role of cellular cooperativity, cellular cognition, self-reference, niche construction, stigmergy, self-organization, epigenetic modifications, genetic transfer and mobility, endosymbiosis, hologenomics, and non-stochastic genetic mechanisms will be addressed. In particular, cell–cell communication and aspects of cellular/genetic self-engineering will be considered. Over many years, movement towards a substantial revision of the NeoDarwinian synthesis has gained slow momentum through many diverging approaches. This Special Issue will explore a variety of contemporary alternative views that may provide a pathway towards a dominant, cohering, and predictive non-Darwinian narrative for evolutionary development. . Prof. John S.

## Guest Editors

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## Deadline for manuscript submissions

closed (15 September 2017)

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A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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