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1. Introduction

The study of biological networks is a very challenging research area in bioinformatics. This field is of utmost importance, however, as these networks are the basis of the emerging fields of synthetic and systems biology, which are revolutionizing molecular biology. Here, we use the term “biological networks” both to refer to biomolecular networks (e.g., gene regulatory networks) and to supporting knowledge representation networks (e.g., Gene Ontology).

There have been numerous recent advancements in synthetic biology. Recently, the Registry of Standard Biological Parts has been developed based on the concept of BioBricks, allowing scientists to develop highly standardized and interchangeable biological parts for building new biological systems. In the computer world, the company Color Genomics is aiming to commercialize DNA synthesis on demand. An important milestone in the field is the first description of the