

Oral Presentation

Rule-Based modeling of DNA repair

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Systems Biology is essentially an experimental science and, as a consequence, most of the innovation effort has been dedicated to conceiving devices able to extract more facts from biological systems. It has resulted into a modern trend of Systems Biology where high-throughput experiments are being set up, resulting in an inflation of the publication volume in Biology and medicine. As a consequence it has become impossible for a biologist, specialist of a certain system, to remain up-to-date with all relevant information pertaining to her topic of interest. To counter for this problem, biologists make an intensive use of review papers which are regularly published on a given system. As an alternative to classical reviews, which are static objects with a natural obsolescence, we propose to utilize rule-based modeling [1, 2] as a language for designing formal updatable reviews that are at the same time executable [3, 4] and analyzable [5]. More specifically, we present the first executable model of the Base Excision Repair pathway that includes protein-protein and protein-DNA interactions.

References

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