

P042 Molecular interplay between UvrA and UvrB in NER

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Preserving the structural integrity of DNA, and hence the genetic information stored in this molecule, is essential for cellular survival. Consequently, efficient repair mechanisms have evolved in order to protect the genome. One of the major DNA repair pathways with a very broad substrate range is nucleotide excision repair (NER). In prokaryotic NER the UvrA/UvrB complex is responsible for damage recognition and verification, hence it represents the decisive component for a correct and therefore successful DNA repair. In this study we present the biochemical characterization of complexes consisting of full length UvrA and UvrB, as well as only the UvrA-UvrB binding domain and UvrB. The proteins are characterized with respect to their activity and complex formation in order to obtain a more detailed picture of the damage recognition process and the affinities of the interaction partners to each other. In summary, the study seeks out to provide biochemical data for the most important steps in NER and will provide a detailed understanding of the recognition process in prokaryotic NER.