

BIOINFORMATIC PREDICTION OF ULTRAVIOLET LIGHT MUTAGENESIS SENSITIVE HUMAN GENES

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Living on earth, we are exposed to ultraviolet (UV) light as part of the solar radiation. UVB spectrum light exposure contributes to the development of skin cancer by interacting with pyrimidine pairs to create lesions called cyclobutane pyrimidine dimers. If these lesions are not removed by nucleotide excision repair, they often give rise to C to T transition mutations. Based on these observations, a bioinformatics approach was used to predict the vulnerability of every human protein coding gene to UVB induced loss of function mutations. This information may help to predict additional genes involved in skin cancer.