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عنوان مقاله:

The Use Of Bioinformatics Models To Attribute Determination Of Prolactin Hormone

محل انتشار:

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خلاصه مقاله:

Prolactin is mainly secreted by anterior pituitary and is positively and is able to stimulate mammary gland development and lactation in mammalians, as well as the production of crop milk in pigeons. Although they are sharing a common ancestral gene encoding, but they show species specific characters and their efficiency may be different in various mammals. To investigate the roles of first, secondary and tertiary protein attributes on this variation in different mammals, various bioinformatics algorithms have been applied on all available prolactin sequences. The results showed that various bioinformatics tools and modeling facilities can be used to identify the species specificity of prolactin hormones in animals with acceptable precision rate. To our knowledge, for the first time we showed that structural variation can be traced in prolactin hormones of different species; the counts and the frequencies of dipeptides were the most important protein features in this regard. It has been also reported here that feature selection or attribute weighting can be used to select the most important protein attributes and reduce the burden of processing equipments. The new findings opens up new windows in understanding the characters' of prolactin hormones and also paves the roads to engineer more efficient hormones in lab by using various mutagenesis tools .such as site directed mutagenesis

کلمات کلیدی:

Prolactin, modeling, bioinformatics, data mining

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