

Changes in the polypeptide composition related to the growth response in chronically isoproterenol-stimulated mouse parotid glands

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The administration of isoproterenol induces DNA-synthesis mitosis and growth (increase in size) responses in mouse parotid glands. Both responses were uncoupled by means of daily stimulations with isoproterenol in such a way that the DNA-synthesis mitosis response was observed during the first 4 days only, whereas the growth response was continuous since the first stimulation until about day 12. In parallel to the chronic stimulation by isoproterenol, drastic changes in the polypeptide composition of parotid glands were observed. These modifications, consisting basically of the reduction in content of a couple of major poly peptides (polypeptides A and B) together with the reciprocal massive accumulation of five new polypeptides (polypeptides C, D, E, F and G), were also progressive and continuous along the chronic stimulation by isoproterenol, even after the disappearance of the DNA-synthesis mitosis response. Thus, a relationship between specific changes in the mouse parotid content