

and cytokinin ratio in cultivation medium To elucidate the qualitative composition of polypeptides synthesized in various conditions of callus cultivation protein SDS-Na electrophoresis with subsequent gel fluorography was performed In all cases the above-mentioned radioactive amino acid inclusion was established to take place in a number of peptides T stimulator activates synthesis of high molecular polypeptides with molecular mass of 90-67kDa comprising 10% of the whole composition and of a group of low molecular polypeptides with molecular masses of 25-22kDa Thus, the obtained results evidenced that T stimulator activates protein synthesis in cotton callus cells



UZ0302016

DETERMINATION OF THE ERYTHROCYTES H^3 -INSULIN BINDING AND H^3 D-GLUCOSE UPTAKE AT THE HYPERGLYCEMIA

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Background and aim Determinations of primary localization of molecular defect at the study and treatment choices at many pathologic states is important The aim of our study was to determine the erythrocytes H^3 -insulin and H^3 d-glucose binding at the Diabetes Mellitus (DM) and secondary hyperglycemia states such as Acromegaly (A), Cushing Disease (CD), Obesity (O), and Ovarian Cystic Syndrome (OCS)

Materials and Methods Insulin Actrapid (NovoNordisk) and D-glucose were labeled with thermally activated tritium At the in vitro study erythrocytes from 10 patients with DM 9 persons with Impaired Glucose Tolerances (IGT), 6 patients with A, 6 with OCS, 4 with O and 9 healthy (control group) subjects with normal glucose tolerances were used Erythrocytes H^3 -insulin binding and H^3 d-glucose uptake measured by incubation in Krebs-Ringer-Phosphate buffer pH7.4 for 15 minutes at 37°C which contained 0.1 U in the first sample and 10 mmol/l of H^3 d-glucose in the second sample Erythrocytes H^3 -insulin binding and H^3 d-glucose uptake were calculated according to differences of radioactivity in both incubation media and hemolysate of erythrocytes

Results Erythrocytes H^3 D-glucose uptake was increased by 49.3% ($P < 0.05$) at the DM and by 21% at the IGT as compared with the data on the control subjects Erythrocytes H^3 -insulin binding was higher by 18.77% and 9.8%, respectively H^3 D-glucose uptake was increased for patients with A, O, OCS, CD But erythrocytes H^3 -insulin binding did not differ than that for control subjects **Conclusion** Use of the tritium labeled H^3 -insulin and H^3 D-glucose in our experiments permitted to show differences in insulin binding and glucose uptake capability at the secondary hyperglycemia state