

## **C-kit-positive progenitor cells activation in rats pancreas after partial hepatectomy**

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### **Abstract**

One of the most common markers of pancreas stem cells is a stem cell factor receptor C-kit. According to some authors, this marker is presented in islet cells of normal rat pancreas. But it is unknown about the behavior of these cells in disorders of carbohydrate metabolism during liver disease. The aim of our study was to evaluate C-kit expression in pancreas after partial hepatectomy in rats. Partial hepatectomy was performed for 27 white male rats. The expression of C-kit, insulin and glucagon in rats pancreas was studied. The expression of C-kit in islets and interstitial cells was shown in results after 3 days of the experiment, and double staining showed that these cells can express glucagon. Thus, there is the activation of C-kit<sup>+</sup> progenitor cells in pancreas after partial hepatectomy and the beginning of there differentiation to  $\alpha$ -cells of Langerhance islets.

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### **Keywords**

Differentiation, Islet cells, Pancreas, Partial hepatectomy, Progenitor cells, Stem cell factor receptor