

## **Human Erythropoietin Induces Lung Failure and Erythrocytosis in Transgenic Mice**

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### **Abstract**

We have expressed human erythropoietin (EPO) in transgenic mice using a recombinant EPO cDNA combining with partial TPO construct and examined disease symptoms in the mouse tissues. The gene was microinjected using standard techniques and five mice were detected as transgenic by PCR and further used as founders. The life span of the transgenic founders was much shorter than that of their normal littermates. Most of the tissue samples in the transgenic founders were transcribed human EPO judged by RT-PCR. Especially, high expression levels were seen in the liver and lung. The EPO protein levels in serum were examined by ELISA and ranged 266.28~414.06 mIU/mL. The number of red blood cell, white blood cell and hemoglobin in hEPO transgenic mice were higher increased than that of normal mice. These results support the idea that over-expression of hEPO may affect the animal tissues and especially provoke lung failure and erythrocytosis.

Key words) *Erythropoietin, Thrombopoietin, Lung failure, Erythrocytosis*