

**1st screening**

**Activation of rat oval cells by 2-AAF/PH model**

**Liver perfusion by collagenase and preparation of non parenchymal cells (NPCs)**



**Preparation of total RNA for Signal sequence trap (SST) methods**



**54 membrane proteins**



**2nd screening**

**Profiling of mouse counterpart genes**



**Analysis of expression pattern by RT-PCR and northern blotting**

**Normal liver / DDC liver / Partial hepatectomy / Acute hepatitis by CCl<sub>4</sub>**



**Characterization of molecules specifically up-regulated  
in DDC liver**



**Identification of oval cell markers conserved between rats and mice**