

Development, Maintenance, and Characterization of Porcine Hepatocellular Carcinoma Cell Lines

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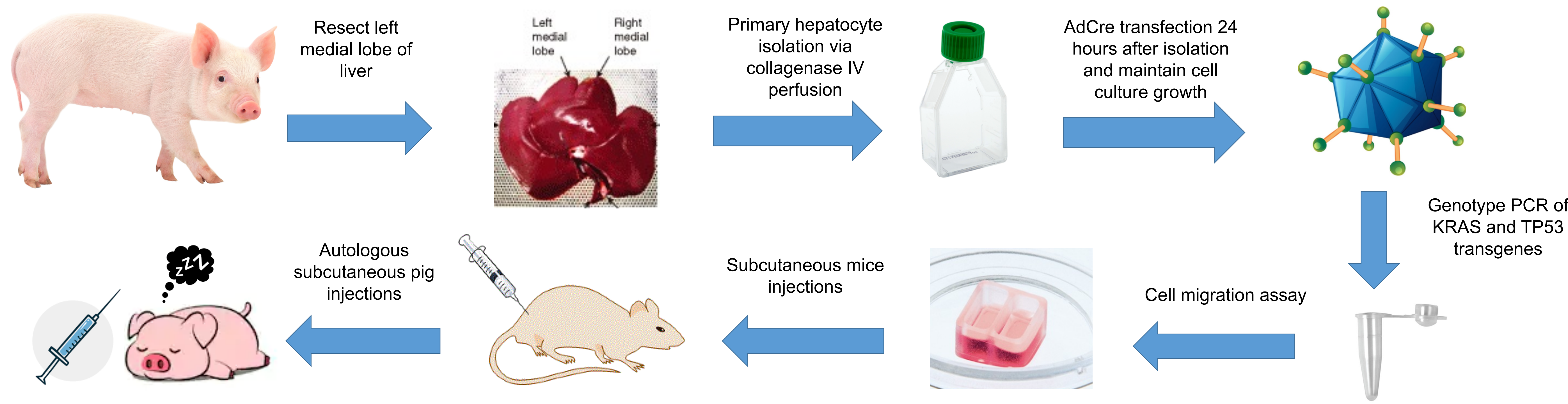
Background

- Hepatocellular carcinoma (HCC) is the fifth most common cancer globally and second most common cause of cancer-related deaths worldwide. (1)
- An ideal translational model to study HCC would be the use of a genetic pig model due to the many similarities between pigs and humans which include anatomy, physiology, metabolism, and genetics.
- The Oncopig Cancer Model (OCM) is a transgenic swine model that develops site and cell specific tumors through Cre recombinase induced expression of KRAS^{G12D} and TP53^{R167H} transgenes. (2)

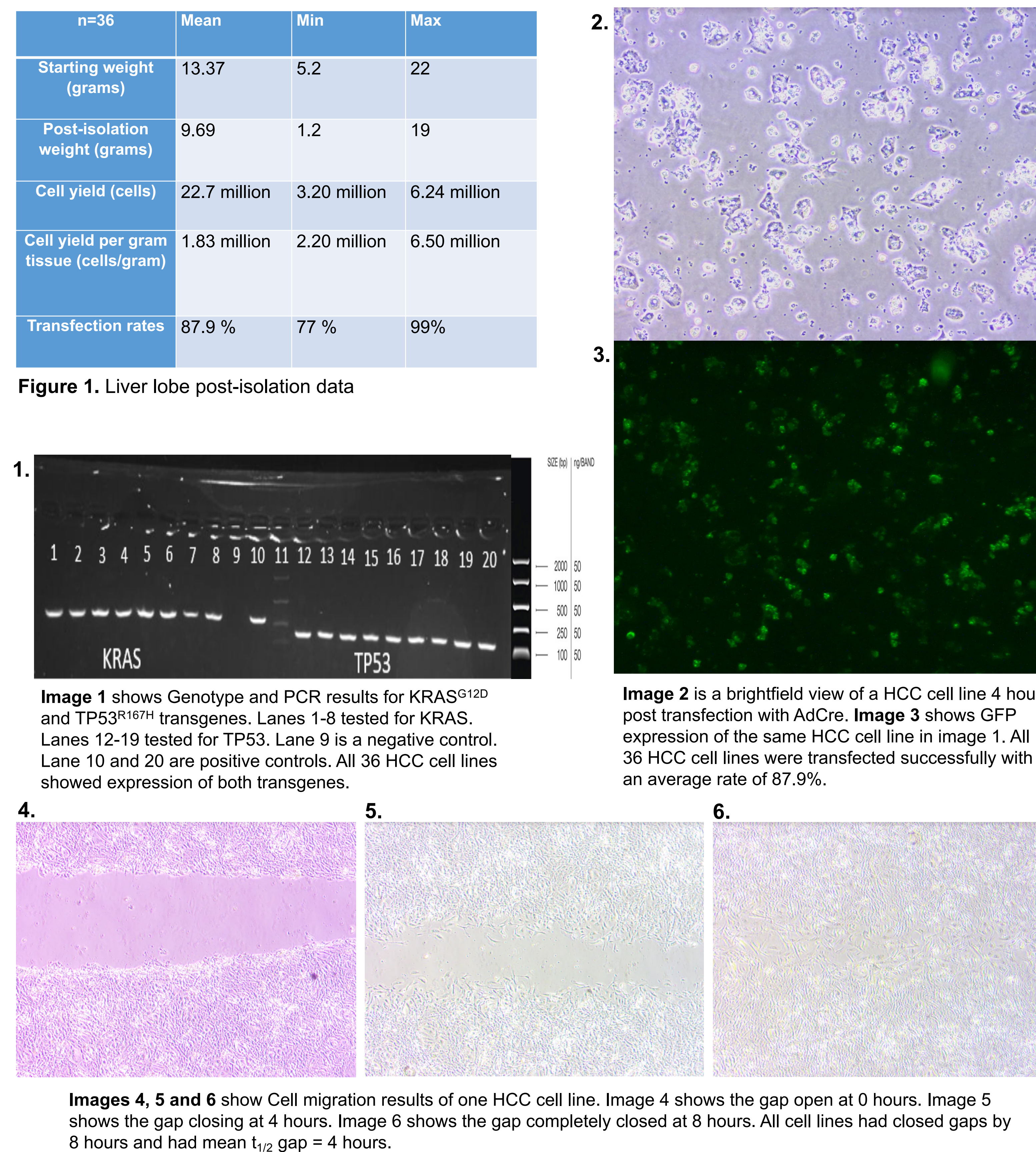
Objective

- To develop an *in vitro* HCC model using primary hepatocytes isolated from Oncopig liver tissue
- To induce subcutaneous HCC tumor growth in mice and autologously into oncopigs

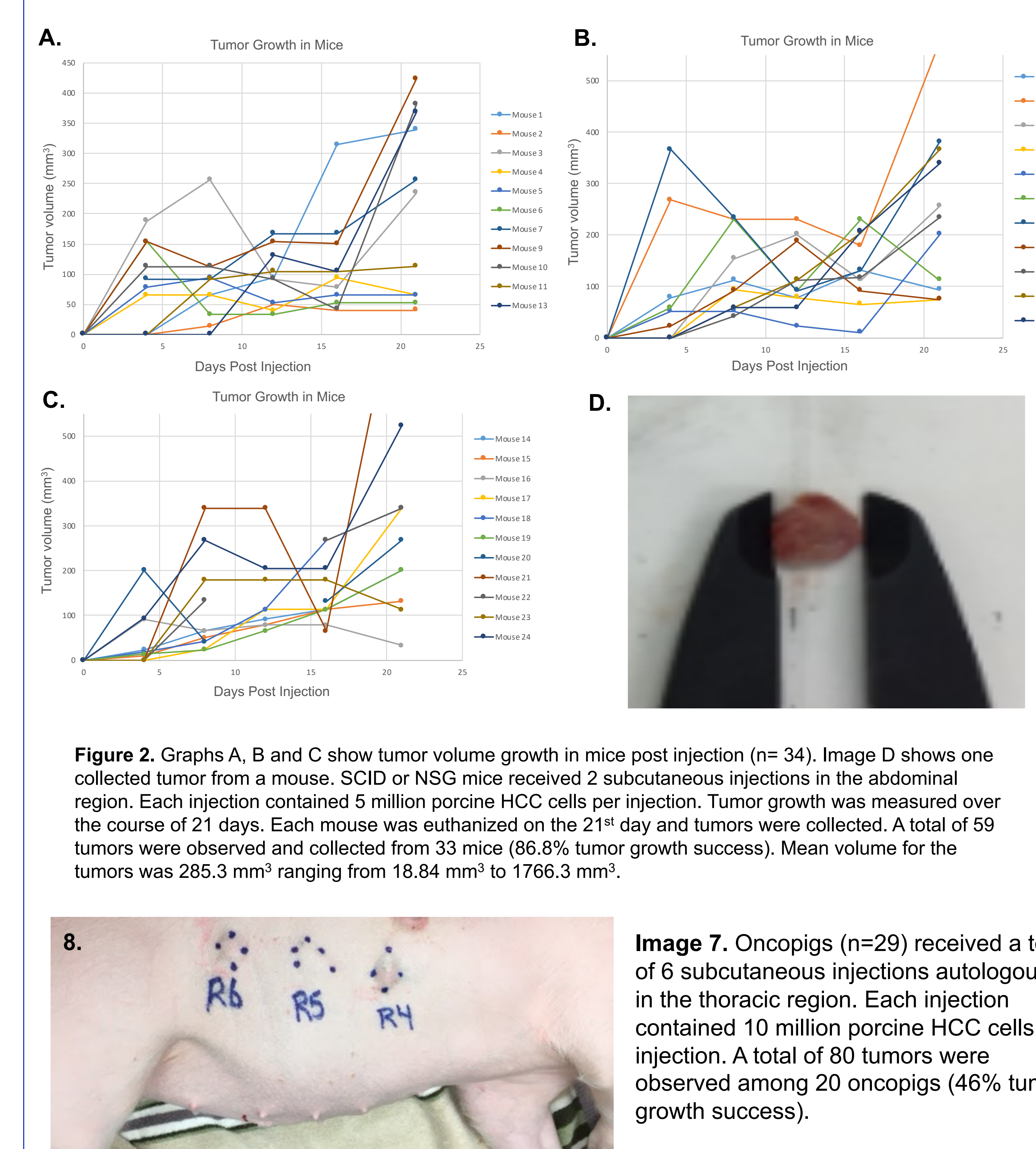
Methods



Results



Results



Conclusions & Future Work

- A genetic swine model for HCC can be maintained by cell culturing and characterized by *in vitro* assays.
- Subcutaneous HCC tumor growth can be induced in mice and oncopigs.
- Future work involves developing intrahepatic tumors in oncopigs in order to further improve translational research in treatment techniques for HCC.

References

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