Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology)

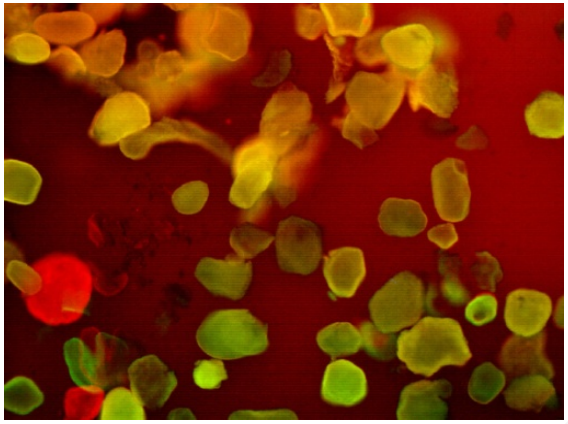
Cite this as: Hai-tao ZHU, Liang YU, Yi LYU, Bo WANG, 2014. Optimal pig donor selection in islet xenotransplantation: current status and future perspectives. *Journal of Zhejiang University-Science B (Biomedicine & Biotechnology)*, 15(8):681-691. [doi:10.1631/jzus.B1400120]

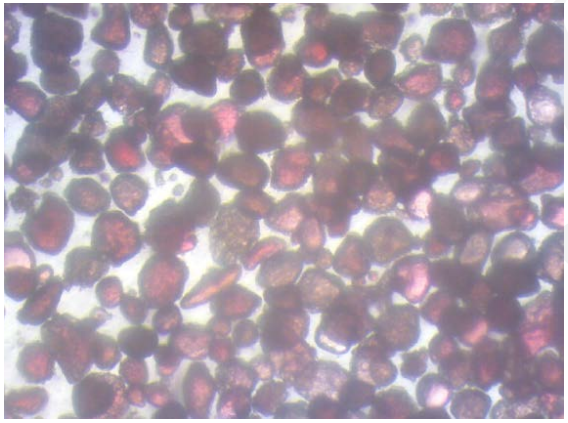
Optimal pig donor selection in islet xenotransplantation: current status and future perspectives

Key words: Islet, Pig, Xenotransplantation, Donor

Research Summary

This review discusses the suitable pig donor selection for islet xenotransplantation and forms basis for a breeding project :





- **pig age**
- **pig strain**
- **structure/function of islet**
- **genetically modified pig**

Pictures adapted from: Min, T., Yi, L., Chao, Z., Haitao, Z., Wei, W., Liang, Y., Bo, W., 2010. Superiority of visipaque (iodixanol)-controlled density gradient over ficoll-400 in adult porcine islet purification. *Transplant Proc*., 42(5):1825-1829. [doi:10.1016/j.transproceed.2010.01.068]

Research Summary

- **More comprehensive metabolism, lineage, and genotyping analyses of donor pigs are needed.**

- **Adult pathogen-free transgenic pig will be the optimal islet donor for future large-scale clinical applications.**

- **Comprehensive tables are created to summarize the latest knowledge about donor pig**

Table 1 | **Benefits and drawbacks of islets isolated from donor pigs with different ages.**

Table 2 | **Experience with genetically engineered pig islet xenotransplantation in diabetic primates.**

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