Reviewer's report

**Title:** The feasibility of ureteral tissue engineering using autologous veins: an orthotopic animal model with long term results

**Version:** 2  **Date:** 22 September 2014

**Reviewer:** Yuanyuan Zhang

**Reviewer's report:**

1. What is the rational of using urothelial cell-seeded vein as a scaffold? The reason that vein with non-cell seeding achieved better result might be due to well-preserved entire layer of endothelial cells on the lumen side. A fresh vein vessel alone might be better in ureter regeneration.

2. It would be helpful if information about jugular vein graft could be provided, such as:
   
   # whether were veins decellularized and why was it called as vein matrix?
   # Why were jugular vein used, were the vein graft sizes enough for the onlay patch of the ureter?
   # Are there any native endothelial and smooth muscle cells left after vein are cultured in vitro prior to implantation and months after implanted in vivo as well?

3. Please describe the gross observation in the detail, such as adhesion around the graft, hardness, calcification or stone formation, stricture of ureter lumen.

4. Smooth muscle cell special marker, such as smoothlin should be assessed to evaluate the muscle layer within the vein graft, alpha SM actin is not Smooth muscle cell special marker as it also displays in myo-fibroblasts or fibroblasts.

5. Serum creatinine and urea tests are not unnecessary as one is for ureter graft and one is normal.