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August 13th 2014

Dear Editor

Thank you for your review and comments. Please find below a point-by-point response in addition to the requested changes, identified by track-changes, in the revised manuscript.

**Editorial comments:**  
  
1) Please keep the editorial comments from your previous revisions in mind as you revise your manuscript to address peer review comments. For instance, if formatting or other changes were made, commercial language was removed, etc., please maintain these overall manuscript changes.

***Previous revisions have been retained.***  
  
2) Please take this opportunity to thoroughly proofread your manuscript to ensure that there are no spelling or grammar issues. Your JoVE editor will not copy-edit your manuscript and any errors in your submitted revision may be present in the published version.

***A further, thorough proofreading of this manuscript has been performed.***  
  
3) If your figures and tables are original and not published previously, please ignore this comment. For figures and tables that have been published before, please include phrases such as “Re-print with permission from (reference#)” or “Modified from..” etc. And please send a copy of the re-print permission for JoVE’s record keeping purposes.

***All figures etc presented in this manuscript are original and have not previously been published.***  
  
**Reviewers' comments:**  
  
**Reviewer #1:**   
*Manuscript Summary:*   
This well-written and well-illustrated manuscript described an alternative translational VCA model in the NHP. This model contains vascularized bone marrow and can mimic closely the hand transplant scenario in humans. All sections of the manuscript have been developed well and I recommend this manuscript for publication without reserves.   
  
*Major Concerns:*  
No major concerns.  
  
*Minor Concerns:*  
No minor concerns.   
  
*Additional Comments to Authors:*  
It would have been appropriate to have a short, additional comment in the introduction section highlighting the importance of the vascularized bone marrow presence in this model.

***Thank you for your review and comments. With regard to the presence of vascularized bone marrow, we agree that this is potentially of significant importance in this model. However, we have not as yet performed a quantification of the viable marrow volume in this model, similar to that previously reported by Barth and colleagues for their heterotopic partial facial subunit model, and until such data are available we feel any comment on this issue in the context of our model would lack foundation.***   
  
**Reviewer #2:**   
*Manuscript Summary:*   
The manuscript entitled "Upper extremity transplantation in non-human primates: an orthotopic model for translational research" reports an experimental model in Cynomolgus macaques that can be used in VCA.  
  
The originality is based on the surgical procedure which allows to achieve in these non-human primates a model close to human upper extremity transplantation allowing immunological and functional studies.   
  
The Authors explain well its utility and report clearly and in detailed manner the surgical procedure.  
  
Two autologus replantations and four allotransplantations were performed to show the feasibility of the model. Fifty percent of the transplanted animals were lost and the cause was vascular in two of them.  
  
*Major Concerns:*  
N/A  
  
*Minor Concerns:*  
N/A  
  
*Additional Comments to Authors:*  
The very small group of animals included in the study represents its major limit

***Thank you for your review and comments. We agree that small group size is a limitation at the present time, but nonetheless believe that current numbers are sufficient to demonstrate the feasibility and utility of the model described. Studies using this model are ongoing, and practical limitations on group sizes in large animal studies notwithstanding, we hope to report experimental findings supported by sufficient numbers to demonstrate statistical significance, or lack thereof, in due course.***

We wish to thank the editorial team and reviewers for their comments and critique, and trust that the revisions and responses provided adequately address the issues raised.

Many thanks, and kind regards

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