Dear Editor Sean O'Donoghue:

We are pleased to submit a revised manuscript that responds to the comments of your last review. We include below a point-by-point response to the comments.

**Comment:** In the Background, mentioning David Goodsell's poster is an anecdote that contributes nothing directly to the story. **Response:** Mention of Goodsell’s excellent poster removed.

**Comment:** In 'Driving problems', the manuscript mentions the name of five or so collaborators - this is mostly unnecessary, as in most cases their work is not cited. If the goal is to acknowledge their contribution to the work, then in most cases they should be either added in the acknowledgements or as co-authors. **Response:** This detail was added at the request of a previous reviewer who wanted very clear descriptions of the driving problems and how their requirements drove the design; thus, removing the section seems counterproductive. The section describes ongoing unpublished research, thus there are not always available references to the research. Replacing the names with “one collaborator”, and “another collaborator” seems only to un-necessarily obscure which collaborator was associated with each piece of work. This does not seem to be an improvement over the previous wording, but we saw no alternative that addresses all reviewers’ comments and so have anonymized the driving problems.

**Comment:** Conversely, in the 'Results and discussion', it is indeed relevant to mention the names of the users that have generated the figures. Given this, I would propose that the authors mention also their affiliation directly in the figure legends. **Response:** Collaborators and their affiliations added to the figure captions.

**Comment:** 'Limitations and future work' begins with: "After successfully using SketchBio for his initial needs, Peter has requested new features. He is particularly interested in using SketchBio as a thinking tool to determine how mutations in vinculin turn normally- straight actin filament bundles into helices." The name of the user ('Peter') is irrelevant for the reader. The feedback should be formulated in a more generic way that does not depend on individuals (e.g., "Users have said they want ..."). **Response:** We have anonymized the collaborators who provided feedback as requested. It is inaccurate to pluralize in this particular case, because the report was from an individual. We have applied this same approach to all reports presented in the results section and following.

**Comment:** I believe there may be still other examples of informal language remaining in the manuscript. To fully address this issue - and hence avoid yet another round of review - the authors need to respond not only to the specific issues raised, but to carefully review the language in the manuscript. Thus, the manuscript requires close attention from a senior scientist with experience in publishing formal, scientific journal publications. **Response:** We had a senior scientist with over twenty years’ experience publishing in journals including Science, Nature, and PNAS edit the paper. Despite having the opinion that such changes are detrimental to readability, he changed first-person to third-person (where possible) and otherwise modified the text to remove potentially-informal language.

We hope that the revised manuscript is acceptable. We look forward to publication.

Thank you,

Shawn M Waldon, Peter M Thompson, Patrick J Hahn and Russell M Taylor II