

Yale University

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December 21, 2020

New Haven, Connecticut, USA.

To: Marian Turner, PhD

Dear Marian,

We enclose the revised manuscript now titled: "Engineering complex communities by directed evolution". Please note that title has been changed relative to the first submission (NATECOLEVOL-200711037 *Top-down engineering of complex communities by directed evolution*) in response to a request by Reviewer #3).

As you will see, we have carried out a massive number of new simulations (close to 7X the number in the original paper) to address all of the issues raised by all three reviewers. We believe that, by doing so, we have been able to extend the generality of our more qualitative findings, and we also illustrate the power of our methodology to model a very large range of ecological and evolutionary scenarios beyond the ones we have specifically studied here.

We hope that with these and all other revisions, our manuscript will be apt for publication in Nature Ecology & Evolution. We note that Wenying Shou will be submitting the revised version of her own manuscript (which had been co-submitted alongside ours in the first submission) at around the same time as when you will receive ours too. Should both manuscripts be accepted, both Wenying and I would very much like that the two appear on the same issue, as we think they are synergistic and together make a particularly strong case.

Sincerely,



Alvaro Sanchez

Assistant Professor of Ecology & Evolutionary Biology

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