COLUMBIA UNIVERSITY
MEDICAL CENTER
DEPARTMENT OF BIOCHEMISTRY & MOLECULAR BIOPHYSICS
650 W. 168th STREET, NEW YORK, NY 10032

New York, February 6, 2020

Dear Editors,

It is our pleasure to be invited to submit our manuscript entitled "**DNA curtains shed light on complex molecular systems during homologous recombination**" for consideration for the Collection '*Methods for Studying DNA Double Strand Break Repair and Its Impact on Genome Integrity*' at *Journal of Visualized Experiments*.

Since the inception of DNA curtains almost two decades ago, our lab has published regularly on its application in studying protein-DNA interactions in various DNA repair processes. Over the last decade, we have focused on applying the technology to study proteins involved in key intermediates of DNA double strand break repair. In this manuscript, we describe in detail the protocol for setting up single- or double-tethered dsDNA curtains, from nano-fabrication of chromium patterns to fluorescence imaging. In representative results, we provide the example of studying the yeast resection machinery Sgs1-Dna2 using single-tethered dsDNA curtains. Finally, we discuss critical steps in consistently assembling DNA curtains and highlight other practical considerations in the process. We envision that this protocol, accompanied by the unique visual nature of *JoVE* articles, will significantly benefit the readers in their experience understanding, setting up, and troubleshooting their own experiments.

Thank you for your consideration

Sincerely,

ERIC C. GREENE, PH.D
PROFESSOR
DEPART. OF BIOCHEMISTRY & MOLECULAR BIOPHYSICS
COLUMBIA UNIVERSITY MEDICAL CENTER
NEW YORK, NY 10032 USA