

January 11, 2019

Nandita Singh, Ph.D.
Senior Science Editor
JoVE

Dear Dr. Singh,

Thank you for arranging the reviews for JoVE58900R1. The reviewers' comments considerably improved the manuscript and I have appended a separate file titled 'Response to Reviewers' where we have addressed all comments. We have also added new data in the manuscript to address the reviewer's concerns.

I respectfully submit a revised manuscript titled "Lucifer Yellow is a Robust Paracellular Permeability Marker in a Cell Model of the Human BBB." We present a simple and robust assay to determine the apparent permeability coefficient of Lucifer Yellow in a cell model of the human blood-brain barrier (BBB). Drug delivery to the BBB is an exciting area of research where advances can lead to great impacts in the treatment of CNS diseases. *In vitro* BBB models are useful tools for research but must be carefully validated for accurate interpretation of experimental data. We present a simple and robust assay to determine the time required for the formation of functional tight junctions, a key characteristic of the BBB. Going further, we demonstrated an additional utility of this assay to determine changes in tight junction barrier characteristics in DNA nanoparticle-transfected cells.

Thank you for your consideration.

Yours sincerely,



Devika S Manickam, Ph.D.
Assistant Professor of Pharmaceutics
Division of Pharmaceutical, Administrative and Social Sciences
Graduate School of Pharmaceutical Sciences
Duquesne University, Pittsburgh, PA.
Phone: (412) 396-4722, Fax: (412) 396-4660
E-mail: soundaramanickd@duq.edu