April 26, 2018

Nandita Singh, Ph.D.

Senior Science Editor

Dear Nandita,

We would like to submit the manuscript entitled: “Analysis of cancer cell invasion and anti-metastatic drug screening using Hydrogel micro-chamber array-based plates” by Ravid-Hermesh Orit, Zurgil Naomi, Shafran Yana, Afrimzon Elena, Sobolev Maria, Hakuk Yaron, Eizig Zehavit and Deutsch Mordechai, for publication in Journal of Visualized Experiments in the category Cancer Research.

The current study deals with the HMCA-based imaging plate for the preparation of 3D multicellular in-vitro models for the research of tumor invasion and anti-metastatic therapy. JoVE’s unique multimedia format for this article will simplify the technical details of 3D tumor spheroids preparation, invasion assay procedure and image analysis performance. The video version of the article will greatly contribute to cancer research area.

Author contributions:

**Orit Ravid-Hermesh** led this study, carried out experimental design and execution of invasion assay and image analysis of HeLa spheroids including manuscript drafting and preparation.

**Naomi Zurgil** led and supervised this study, including its experimental design, the process of image analysis, evaluation of results and manuscript drafting and preparation.

**Yana Shafran** led this study and carried out experimental design and execution of collective invasion assay and image analysis of MCF-7 spheroids including drafting the manuscript.

**Maria Sobolev** was responsible for tissue culture and for design of the HMC array and its production.

**Elena Afrimzon** contributed to in-HMC generation and culturing of breast cancer spheroids and she participated in drafting the manuscript.

**Yaron Hakuk** was responsible for Matlab software programs and contributed to image analysis.

**Zehavit** **Eizig** was responsible for Matlab software programs and contributed to image analysis.

**Mordechai Deutsch** supervised this study, designed and coordinated HMC array production and drafted the manuscript.

This manuscript is original, has not been published before and is not currently being considered for publication elsewhere. We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship, but are not listed. We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

We would like to suggest the following potential Reviewers:

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We thank you for your consideration.

Prof. Mordechai Deutsch

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