

Nancy Owens Memorial Foundation  
c/o Bernstein Realty, Inc.  
9575 Katy Freeway, Suite 205  
Houston, Texas 77024-1409

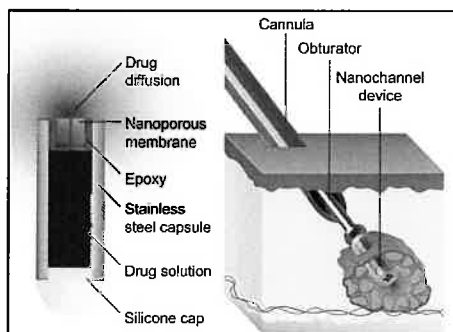
June 8, 2016

**Dear Director Board Members,**

We are pleased to report to you that, thanks to your kind donation and support, we have successively achieved our objectives with the demonstration of the nanochannel delivery system for the sustained delivery of tamoxifen for ER+ breast cancer prevention. We also made significant progresses in the development of the innovative minimally invasive intratumoral delivery system for combined image-guided radiotherapy as well as local immunotherapy. We are currently exploring this exiting technology for treatment of one of the most deadly forms of breast cancer, triple negative breast cancer (TNBC).

✓ **Project 1: Local delivery of tamoxifen for ER+ breast cancer prevention: (completed).** Our objective was to demonstrate a novel approach that uses a nanochannel system to deliver tamoxifen (TMX), which is FDA approved for breast cancer prevention within the breast tissue to minimize side effects, increase patient compliance, and most importantly, improve the effectiveness of the preventive treatment. **Our Findings:** 1) The nanochannel delivery systems can achieve sustained and constant delivery of tamoxifen at clinically relevant doses. 2) When tested in vivo in a model of ER+ breast cancer our nanochannel system delivers effective doses of tamoxifen and avoids the formation of tumors as compared to the control group. 3) When compared to oral tamoxifen, our nanochannel system shows significantly lower side effects. **Next step:** We submitted the results of our work for consideration for publication to Drug Delivery Letters (see manuscript attached). Your valuable support allowed us to test our innovative strategy. The results obtained are encouraging, and we are now seeking support from the pharmaceutical industry to take our innovative approach to clinical trials.

✓ **Project 2: Miniaturized drug eluting fiducial marker for Triple Negative Breast Cancer (TNBC) radio-immunotherapy (on-going).** Our objective is to develop and validate a minimally invasive intratumoral system for the local delivery of immunotherapeutics for the treatment of triple negative breast cancer. Our **major achievements** for this project during the past year were: 1) Developed a miniaturized version of a minimally invasive drug delivery implant (nDSmini) suitable for small animal testing, 2) Successfully tested the device in vitro and in vivo with delivery of various drugs including anticancer drugs and immuno-therapeutics. The manuscript that originated from this work was accepted for publication in the scientific *Journal of Biomedical Nanotechnology*. **Next step:** We will test our intratumoral delivery system in vivo in a rodent model of TNBC. **Broad interest in the field:** Our innovative delivery system has received substantial interest among the scientific community and fostered numerous collaborations across different cancer areas. We are excited to continuing our partnership with you in the validation of our strategy for the treatment of TNBC.



**Figure 1** Minimally invasive intratumoral drug delivery system for local immunotherapy of triple negative breast cancer.

Translating these innovative technologies to the clinic is our mission. While we seek the right partner for translation of the preventive strategy for ER+ breast cancer, we are continuing our research efforts in the fight against cancer and eagerly looking forward to demonstrate our second platform technology for the treatment of TNBC. We are dedicated to translating our research to impact the lives of breast cancer patients worldwide. We express our heartfelt gratitude for your generous support and hope to continue our productive partnership to achieve better care and clinical outcomes for breast cancer patients as well as those are at high risk of developing it.

Sincerely,



**Alessandro Grattoni, Ph.D.**  
Chairman & Professor,  
The Department of Nanomedicine  
Institute for Accademic Medicine  
Houston Methodist Research Institute