



Dear Matanel Foundation Donors,

My name is Hanan Abu Tayeh. I am the recipient of the Metanel scholarship for 2012. I am 29 years old and I live in Nazareth with my family, with three brothers. Being a daughter to a caring father and encouraging mother, being the oldest member of my family, made me always have the motivation to achieve high academic degrees, and to become a part of medical research.

I received my B.Sc. degree in Biology Science from the Technion Institute of Technology and worked at the medical laboratory in the English Hospital of Nazareth. In 2010 I joined the Department of Human Biology at Haifa University and started my M.Sc. studies. In 2011 I finished my M.Sc. degree with honors and my thesis was; "Expression of $\beta 3$ -integrin Induces Morphological Reversion of the Malignant Cells to a Normal-like Phenotype". Now, I am studying for my Ph.D degree at the Department of Human Biology at Haifa University focusing on Breast Cancer. Since then my research developed significantly by which it will be a part of more understanding of breast cancer disease. Loss of cell polarization and luminal filling of mammary glands are key structural alterations in breast cancer disease. Recent findings support the notion that disruption of cell-polarity mechanisms plays a causal role in tumor initiation thus, implicating a role of cell and tissue polarity mechanisms as potential non-canonical tumor suppressors. We are demonstrating for the first time the role of beta 3-integrin (Int $\beta 3$) in promoting the commitment of luminal breast cancer progenitor like cells to differentiate to polarized acini-like structure resembling a normal breast tissue. These finding exhibits a novel mechanism to reprogram cancer luminal progenitor like cells to differentiate to a normal-like acini by inducing the expression of Int $\beta 3$. Therefore, promoting such differentiation of luminal breast cancer cells in conjunction to their microenvironment, can potentially promote the normalization of their malignant phenotype.

Our work was already presented in several meetings and we submitted a manuscript to high tear journal. Our work is novel and groundbreaking and may have a great impact on breast cancer research. The Matanel scholarship that you have kindly awarded to me during my first year of Ph.D. studies, has helped me to dedicate my full attention to my research. This dedication resulted in obtaining novel and exciting results in the field of breast cancer which might serve and improve people lives in the future which is the goal I keep having in my mind for getting a better results. All that I am doing can't be done without your generous support. For that a thank you word is too small for expressing the appreciation I have.

So I would like to thank you for your generous contribution and kindness for giving me the great opportunity to successfully carry out my dreams. I hope that one day I will be able to give someone else the opportunity to learn and succeed as you kindly awarded me.

Sincerely

Hanan Abu Tayeh