

**“Volatile signature of melanoma - a novel approach for early detection”**

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The quest for melanoma biomarkers is paramount. The incidence of melanoma is increasing and mortality rates have not been significantly reduced. There is a need for reliable biomarkers that would help in the diagnosis of this aggressive disease. Our novel approach to detect and identify volatile metabolites released from melanoma tissue has the potential to discover novel biomarkers for detection of melanoma, as well as to increase our understanding of metabolic processes of this malignant cancer. In order to detect volatile metabolic signature of malignant melanoma, we are using Head Space Solid Phase Extraction Method (HS-SPME) and Gas Chromatography/Mass Spectrometry (GC/MS). The volatile metabolome exhibits significant natural variation and it may be very hard to find a variation caused by disease. To overcome this limitation, as a control, we are using perfectly matched, non-neoplastic, un-involved skin tissue from the same patient. Different histo-pathologic types and stages of melanomas are being analyzed. Different volatile signatures are identified indicating that a differential volatile profile of melanoma does indeed exist. A comprehensive volatile metabolomics study of melanoma on a large cohort of patients is underway.

**Biography**

Tatjana Abaffy, PhD is a Research Assistant Professor in the Department of Molecular and Cellular Pharmacology at the University of Miami, Miller School of Medicine, Miami - Florida, USA. She obtained her PhD from the University of Auckland, New Zealand studying complex physiology of glucose homeostasis. Her postdoctoral training was in the chemosensory field and involved studying taste and smell (olfactory) receptors and signal transduction. Currently, she is involved in a translational research related to skin cancer biomarkers detection.