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August 03-05, 2015 Birmingham, UK

Exhibitors

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OMICS International Conferences
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Scientific Program

Day 1 August 03, 2015

08:00 - 08:30 Registrations

Hall - 2

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08:30 - 09:00 **Opening Ceremony**

Keynote Forum

09:00-09:05	Introduction
09:05-09:25	**Shahla Masood** University of Florida College of Medicine-Jacksonville, USA
09:25-09:45	**Chintamani** The Association of Breast Surgeons of India, India
09:45-10:05	**Raj Kumar** The Commonwealth Medical College, USA

Track 1: Biology of Breast Cancer

Session Introduction

Session Chair: **Shahla Masood**, University of Florida College of Medicine-Jacksonville, USA
Session Co-chair: **Christopher Busby**, Environmental Research SIA, Latvian Academy of Sciences, Latvia

10:05-10:20	Title: The Breast Cancer Epidemic: Evidence For a Radiogenic Cause
	Christopher Busby, Environmental Research SIA, Latvian Academy of Sciences, Latvia
10:20-10:35	Title: Changes in Breast Cancer Pathology Reports After Second Opinion
	Vicente Marco Molina, Hospital Quirón Barcelona, Spain
10:35-10:50	Title: The Unknown Predisposition Can lie Deep in the Family Tree
	San Ming Wang, University of Nebraska Medical Center, USA
10:50-11:05	Title: Origin of breast cancer metastasis
	Gaspar Banfalvi, University of Debrecen, Hungary

Coffee Break: 11:05-11:20

11:20-11:35	Title: Multiparameter characterization of breast carcinoma: subgross, microscopy, proteins, and genes
	Tibor Tot, European Society of Pathology, Sweden
11:35-11:50	Title: Differentiation and histogenesis of syringomatous tumour of the nipple and low-grade adenosquamous carcinoma: Evidence for a common origin
	Werner Boecker, University of Muenster, & Institute for Hematopathology, Germany
11:50-12:05	Title: Microcalcification as an active phenomenon mediated by epithelial cells with mesenchymal characteristics
	Elena Bonanno, University of Rome Tor Vergata, Italy
12:05-12:20	Title: A role for lipids and statins in breast cancer risk and prevention?
	Mieke Van Hemelrijck, King's College London, London UK
12:20-12:35	Title: DNA methylation profiles in advanced breast cancer
	Ivana Fridrichova, Cancer Research Institute, Slovak Academy of Sciences, Slovakia
12:35-12:50	Title: Passive smoking, household exposure to PAH, GST polymorphisms and risk of breast cancer
	Nelly H Alieldin, Cairo University, Egypt

Group Photo

Lunch Break: 12:50-13:30

Ivana Fridrichova et al., J Cancer Sci Ther 2015
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DNA methylation profiles in advanced breast cancer

Ivana Fridrichova, BozenaSmolkova, VieraKajabova, IvetaZmetakova, Tomas Krivulcik, Michal Mego, ZuzanaCierna, Marian Karaba, JurajBenca, Daniel Pindak, Martin Bohac, Vanda Repiska and **Ludovit Danihel**
Cancer Research Institute, Slovak Academy of Sciences in Bratislava, Slovakia

More than 25% of the patients with breast cancer (BC) develop metastatic disease. We investigated the relationship between DNA methylation levels in genes regulating cell growth, invasiveness, and metastasis and advanced BCs and evaluated the clinical utility of methylation profiles for detecting metastatic potential. Methylation levels in 11 cancer associated genes in primary tumors (PTs), lymph node metastases (LNMs), plasma (PL), and blood cells from 206 patients with invasive BC were quantified by pyrosequencing. PTs showed hypermethylation of *RASSF1A, APC, CXCL12,* and *ADAM23* genes with means 38.98%, 24.84%, 12.04%, and 10.01%, respectively. Positive correlations were identified between methylations in PTs and LNMs, but not between PL and PTs. The cumulative methylation of PTs and LNMs manifested similar spectrums of methylated genes that indicate the maintaining of aberrant methylation during breast tumorigenesis. Significantly increased methylation levels in *RASSF1A, APC, CXCL12,* and *ADAM23* were found in ER positive BCs in comparison with ER negative cases. Regarding these results, the evaluation of DNA methylation could be more informative in testing of patients with ER positive BC. The risk for LNMs development and higher proliferation of cancer cells measured through Ki-67 expression was increased by hypermethylation of *CXCL12* and *ADAM23,* respectively. Therefore, the quantification of *CXCL12* and *ADAM23* methylation could be useful for the prediction of advanced stage of BC.

This study was supported by the Slovak Research and Development Agency (APVV) grant No. APVV-0076-10; the Research and Development Operational Programme (ERDF), grant No. 26240220058; the Scientific Grant Agency (VEGA), grants No. 2/0120/13, No. 2/0169/14, no. 2/0092/15 and No. 1/0324/11; and the RFL2010 Programme funded by the Slovak Cancer Research Foundation.

Biography

Ivana Fridrichova has completed her university and PhD study from Comenius University in Bratislava and Cancer Research Institute, Slovak Academy of Sciences (CRI SAS) in Bratislava, Slovakia, in 1983 and 1991, respectively. Currently, she is senior scientist and head of Epigenetic Research Group at CRI SAS and she has supervised the research projects dealing with investigation of the aberrant epigenetic changes in cancer patients. Her research team is focused on aberrant methylation profiles of genes associated with metastatic breast cancer. She has published more than 25 papers in reputed journals.

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