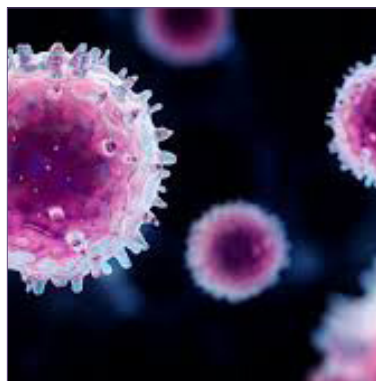
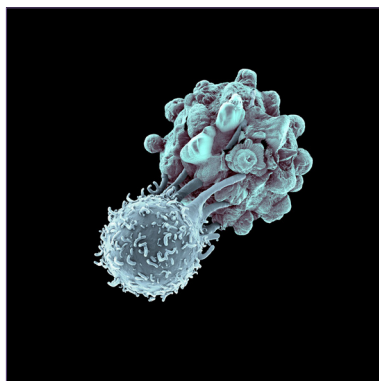
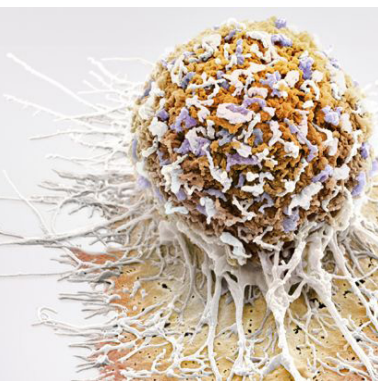
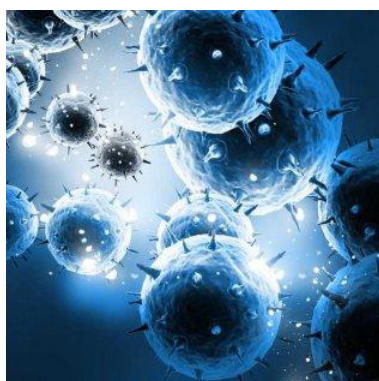


# Keynote Forum July 23, 2018

## *Cancer 2018*



## 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia

# 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia



## Sergey Suchkov

*Sechenov University, Russia*

**Personalized and precision medicine as a unique healthcare model to secure the National and International Biosafety**

A new systems approach to diseased states and wellness result in a new branch in the healthcare services, namely, personalized and precision medicine (PPM). To achieve the implementation of PM concept, it is necessary to create a fundamentally new strategy based upon the subclinical recognition of bio predictors of hidden abnormalities long before the disease clinically manifests itself.


Each decision-maker values the impact of their decision to use PPM on their own budget and well-being, which may not necessarily be optimal for society as a whole. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients resulting in improved patient outcomes, reduced adverse events, and more cost effective use of health care resources. A lack of medical guidelines has been identified by the majority of responders as the predominant barrier for adoption, indicating a need for the development of best practices and guidelines to support the implementation of PPM!

Implementation of PPM requires a lot before the current model “physician-patient” could be gradually displaced by a new model “medical advisor-healthy person-at-risk”. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM to elicit the content of the new branch.

### Speaker Biography

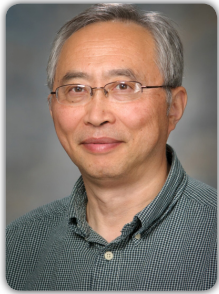
Sergey Suchkov is currently the Professor, Director of Center for Personalized Medicine, Sechenov University and Dept of Clinical Immunology, A.I.Evdokimov Moscow State Medical and Dental University; Professor, Chair, Dept for Translational Medicine, Moscow Engineering Physical Institute, Russia; Secretary General, United Cultural Convention, Cambridge, UK. Also he is a member of the New York Academy of Sciences, USA; American Chemical Society, USA; American Heart Association, USA; European Association for Medical Education, Dundee, UK; European Association for Predictive, Preventive and Personalized Medicine, Brussels, EU; American Association for Research in Vision and Ophthalmology; International Society for Eye Research; Personalized Medicine Coalition, Washington, USA. Finally Dr Suchkov is a member of the Editorial Boards of “Open Journal of Immunology”, EPMA J., American J. of Cardiovascular Research and “Personalized Medicine Universe”.

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# 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia



## Ziding Feng

*The University of Texas MD Anderson Cancer Center, USA*

### Strategies to improve early detection of Cancer

Cancer screening biomarkers promise far greater hope to reduce cancer mortality as compared to cancer treatment drugs. However, most cancer sites do not have effective screening biomarkers (body fluid or imaging). Why there is so big gap between the unmet needs and the potential huge benefit?

The major hurdles are: 1) low incidence of cancer in the general population, even in high risk population; 2) low cancer signal at asymptomatic stage; 3) lack of mechanism or incentive to translate a research assay to a clinical assay; 4) cost and benefit dilemma (company vs societal); 5) appropriate roadmap for biomarker development and adoption; 6) rigorous evaluation of biomarker for its clinical application. Examples are used to illustrate these challenges and possible solutions.

**Conclusions:** Multi-disciplinary team with government, industrial, and academic partnership is required for attacking this problem. Developing and implementing the road map guided by a clear clinical goal is necessary for the success.

### Speaker Biography

Ziding Feng is a Professor, Kathryn O'Connor Research Professor, and Section Chief of early detection and biomarkers in the department of Biostatistics, and Co-Director of the Center for Global Cancer Early Detection at UT MD Anderson Cancer Center. He has completed his PhD from Cornell University. He has been the principal investigator of the Data Management and Coordinating Center (DMCC) for the Early Detection Research Network (EDRN) since 2000, and of the Coordinating and Data Management Center for the Consortium to Study Chronic Pancreatitis, Diabetes and Pancreatic Cancer (CPDPC) since 2015. He also has a grant from NCI to incorporate biomarkers to improve lung cancer risk prediction model using PLCO specimens and data. He is the coordinating center PI for a study funded by Cancer Prevention Research Institute of Texas (CPRIT) to establish a large cohort of cirrhosis patients to improve early detection of HCC.

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# 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia



**Stephen J Beebe<sup>1</sup>**

**Brittany Lassiter<sup>2</sup>**

**Siqi Guo<sup>3</sup>**

*Old Dominion University, USA*

**Translational research with nanosecond pulse stimulation for Immuno-Oncology applications**

**N**ano-Pulse Stimulation (NPS) is a technology based on pulsed power physics, used for decades in high-powered physics and military applications. Electrical energy is stored and released in nanosecond bursts, producing instantaneous high power and low, non-thermal energy. Since biological cells have not experienced NPS in evolutionary history, they can exhibit unique intracellular responses. At NPS levels cells undergo programmed cell death (PCD) and induce innate and adaptive immune mechanisms while at low NPS levels cells can be stimulated and activated. The transition of this technology from physics scenarios to biologic and medical landscapes uniquely combines expertise from engineers, physicists, biologists and physicians.

Our NPS strategy uses 60-100 ns pulse durations and electric fields up to 50 kV/cm. When orthotopic mouse mammary and rat liver tumors are eliminated by NPS, animals are protected by an immune-mediated, vaccine-like effect against the same cancer. Immune responses are dynamic on several therapeutic fronts. NPS directly eliminates primary tumors by inducing regulated form(s) of immunogenic cell death. This is accompanied by specific activation of natural killer cells and NKT-cells expressing NKG2D and CD161 activation receptors. In addition, dendritic cells (DCs), which are activated by dead and dying cancer cells, induce cytotoxic T-cells expressing

adaptive memory phenotypes. Importantly, NPS eliminates immunosuppressive cells in the tumor microenvironment and blood. In the mouse model, a strong abscopal effect occurs including reduction of spontaneous distant metastases and eradication of second untreated lesions.

Non-lethal NPS can activate DCs. NPS attenuates respiration in DCs and other cells by affecting electron transport chain complexes I and IV increasing superoxide anions in mitochondria, which activate DCs that express activation markers and cytokine secretion. Higher NPS induces opening of the permeability transition pore and induces PCD. How these and other intracellular NPS-induced mechanisms lead to ablation-induced immune responses is under investigation.

## Speaker Biography

Stephen J Beebe is a Research Professor in the Frank Reidy Research Center for Bioelectrics at Old Dominion University (ODU). He received his PhD in Medical Sciences (Pharmacology) at the University of Toledo College of Medicine in 1982 and was a post-doctoral fellow at the Howard Hughes Medical Institute, Department of Molecular Physiology and Biophysics, Vanderbilt University School of Medicine. He was a Fulbright and Marshall Scholar in Oslo, Norway. He is the author of 125 peer reviewed manuscripts and books chapters. He was awarded two NIH grants analyzing structure and function of Protein Kinase A and cAMP signal transduction. He now investigates mechanisms of NanoPulse Stimulation (NPS) in cancer and biology. He has trained over 30 graduate students and post-doctoral fellows, is a member of Editorial Boards for four journals and is the Chair of the ODU Institutional Animal Care and Use Committee (IACUC).

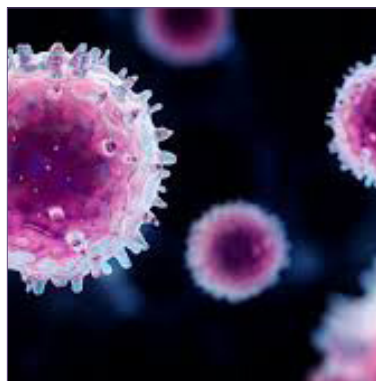
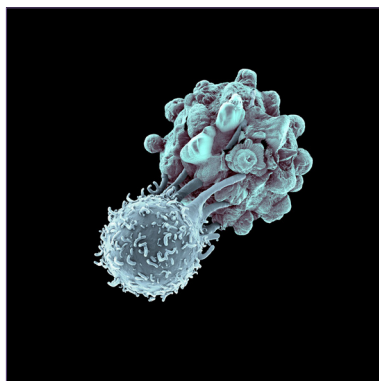
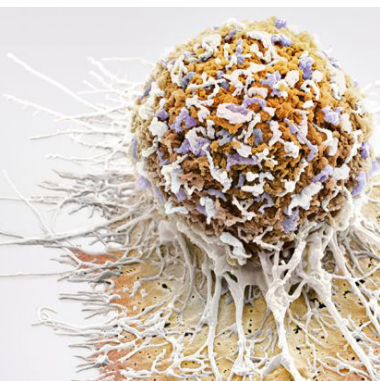
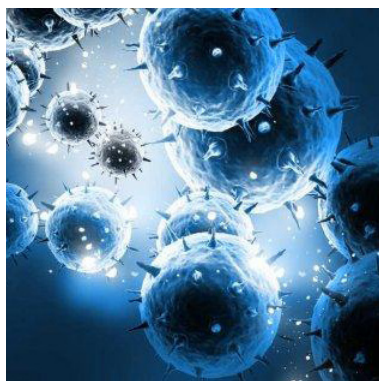
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# Keynote Forum July 24, 2018

## *Cancer 2018*



## 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia

# 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia



## Yongxiang Zhao

*Guangxi Medical University, China*

**Oxygen self-produced nanoplatform for relieving hypoxia and breaking resistance to sonodynamic treatment of Pancreatic Cancer**

Hypoxia as one characteristic hallmark of solid tumors has been demonstrated to involve in cancer metastasis and progression, induce severe resistance to oxygen-dependent therapies and hamper the transportation of theranostic agents. To address these issues, an oxygen self-produced sonodynamic therapy (SDT) nanoplatform involving modified fluorocarbon (FC) chains-mediated oxygen delivery protocol has been established to realize highly-efficient SDT against hypoxic pancreatic cancer. In this nanoplatform, mesopores and FC chains of FC chainsfunctionalized hollow mesoporous organosilica nanoparticles (FHMONS) carriers can provide sufficient storage capacity and binding sites for sonosensitizers (IR780) and oxygen, respectively. In vitro and in vivo experiments demonstrate the nanoplatform involving this distinctive oxygen delivery protocol indeed breaks the hypoxia-specific transportation barriers, supplies sufficient oxygen to hypoxic PANC-1 cells especially upon exposure to ultrasound irradiation and relieves hypoxia. Consequently, hypoxia-induced resistance to SDT is inhibited and sufficient highly reactive oxygen species (ROS) are produced to kill PANC-1 cells and shrinkage hypoxic

PANC-1 pancreatic cancer. This distinctive FC chains-mediated oxygen delivery method provides an avenue to hypoxia oxygenation, and holds great potential in mitigating hypoxia-induced resistance to those oxygen-depleted therapies, e.g., photodynamic therapy (PDT), radiotherapy, chemotherapy, etc.

### Speaker Biography

Yongxiang Zhao is the innovative leading talent of National "Ten Thousand Talent Programme", the Director of the National Center for International Research of Biological Targeting Diagnosis and Therapy, the moderator of the BIT's 5<sup>th</sup> World Gene Convention Keynote Forum, Nobel Laureate Forum, the national talented person of "New Century National Hundred, Thousand and Ten Thousand Talent Project". The leader of National Innovative Talent Promotion Program Innovation Team of National Key Fields, the leader of National Innovation Team for the Changjiang Scholars Project, the expert of National "Ten Thousand Talent Programme" and "Changjiang Scholars Programme", the expert of National Natural Science Foundation of subject review group, the standing Director of Chinese Immunological Society, the member of Chinese Medical Association Professional Committee of Clinical Precision Medicine, the expert of National Science and Technology Award Assessment, the member of Chinese medical science and Technology Award Evaluation Committee, the member of Gene Therapy Branch of Chinese Medical Association. The reviewers and editorial board members of multiple SCI journals such as Nature. He has taken charge of 14 national science and technology major projects and 16 provincial and ministerial projects.

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# 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia



**Jamal Zidan<sup>1</sup>**  
**Maayan Galer<sup>2</sup>**  
**Sergio Shvalb<sup>3</sup>**

*Bar-Ilan University, Israel*

## Comparison between Ki-67 biomarker expression in primary Breast Cancer before and after neoadjuvant therapy

**Background:** Neoadjuvant treatment (NAT) followed by surgery has currently become a part of standard care for patients with locally advanced breast cancer. Postoperative treatment is generally established on the same detective biomarkers (estrogen receptor, progesterone receptor, HER2 and Ki67) evaluated in Core Needle Biopsy (CNB) before NAT. The aim of this study was to investigate whether NAT induces some selective changes in the breast biomarkers.

**Methods:** We collected the appropriate data for 52 patients that conform to the requirements from the personal hospital files, since 2007 until 2016. Formalin fixed paraffin embedded samples or fresh tissue samples were used from tumors before and after surgery. Ki67 was evaluated using immunohistochemically testing. The antibody-antigen interaction is observed using chromogenic detection, an enzyme (DAB) conjugated to the antibody to produce a colored precipitate at the location of the antigen.

**Results:** Mean age of patients was  $52.3 \pm 13.9$ . Ethnicity: 28 (53.8%) women were Jews and 24 (46.2%) were Arabs. 56%


of women were premenopausal, 44% postmenopausal. Lumpectomy was done in 39 (75%) of patients while the others (25%) had mastectomy. Mean level of Ki67 in the primary tumor was  $34.8 \pm 26.1$  %, after NAT was  $17.8 \pm 22.9$  % ( $P < 0.001$ ).

**Conclusions:** In this study we found significant changes in Ki67 expression between the pretreatment biopsy specimens and the resected specimens of breast cancer patients who underwent neoadjuvant therapy. This discordance in the expression of Ki67 may affect the choice of postoperative adjuvant treatment and may be used as a prognostic factor for response.

### Speaker Biography

Jamal Zidan earned his doctorate in medicine (MD) at the Semmelweis University in Budapest, Hungary. His speciality is Oncology. He is a full professor at the Faculty of Medicine in the Galilee, Safed, Bar-Ilan University, Israel. Head of Oncology Division at Ziv Medical center, Safed, Israel. Prof. Zidan has over 170 publications. He has received many honors as: "Eminent Scientist & Outstanding Scholar of the year 2001" International award of IRPC; International Research Promotion Council Asia-Pacific Chapter, World Scientists Forum International Award, Gold Medal. His main research interest is molecular biomarkers, targeting therapy, breast cancer and other issues in cancer.

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# 12<sup>th</sup> World Cancer Congress

July 23-25, 2018 | Moscow, Russia



## *Hasan Mohammad Alkhudairi*

*King Saud University, Saudi Arabia*

### **Sexual life of Cancer and Palliative women**

During and after receiving treatment for cancer and palliative care treatments women of all ages, with early and advanced diseases or no more treatment for the diseases, will have concerns and questions about sexuality and sexual activity (even most of women in many culture fell shy to ask or talk about sexual issues). Cancer can affect sexuality either direct by affecting sexual organs or indirect by affecting psychological health, disturbing moods.

It is common for some women with different types of cancer to struggle with their body image, some of them have less desire for sexual intimacy, and/or find that penetration during sexual activity has become painful. The worth things that many health care providers do not ask patients about this normal and important aspect of health, on the other side patients should not hesitate to discuss their feelings or ask questions about the impact of cancer treatments on their sexual health. Providers should proactively discuss sexual health with their patients or

consider consultation with a sexual health provider. Clinicians should be encouraged to address these issues early on in the treatment pathway and to encourage patients to discuss them. Although there is no one therapeutic strategy for sexual concerns for female cancer survivors, clinicians should be aware of the multiple modalities present, particularly as they pertain to pharmaceuticals, vaginal moisturizers, and vaginal lubricants. This presentation attempts to answer common questions that arise.

### **Speaker Biography**

Hasan Mohammad Alkhudairi is currently working at King Saud university. Consultant of palliative medicine at King Fahd specialist and King Saud medical city, consultant of obstetrics and gynecology at maternity hospital King Saud medical city, run a clinic women's pain dealing with women's sexual problems at maternity hospital King Saud medical city joined Oncology Center at King Saud University as a consultant of palliative medicine. His Professional Affiliations & Memberships includes member of International Association for Hospice & Palliative Care, member of Arab palliative care association, member of The European Society for Sexual Medicine (ESSM), member of ISSWSH.

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