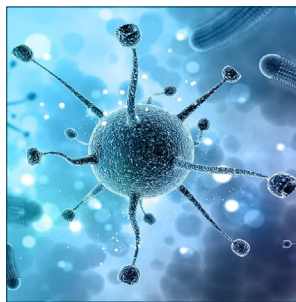
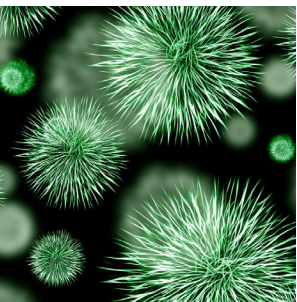
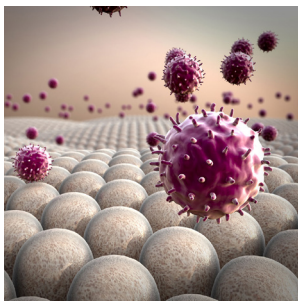

Keynote Forum June 12, 2019

Clinical Microbiology 2019 & Biotechnology 2019



Joint Event

8th European Clinical Microbiology and
Immunology Congress

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3rd World congress on Biotechnology

June 12-13, 2019 | Edinburgh, Scotland

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Personalized and precision medicine as a unique healthcare model through the view of biodesign and translational armamentarium of the newest generation

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 biopredictors 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 re-ponders 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 graduated from Astrakhan State Medical University and awarded with MD, then in 1985 maintained his PhD at the I M Sechenov Moscow Medical Academy and in 2001, maintained his doctorship degree at the Nat Inst of Immunology, Russia. From 1987 through 1989, he was a senior researcher at Koltzov Inst of Developmental Biology. From 1989 through 1995, he was a head of the lab of clinical immunology, Helmholtz Eye Research Institute in Moscow. From 1995 through 2004, as a chair of the dept for clinical immunology, Moscow Clinical Research Institute (MONIKI). He has been trained at NIH; Wills Eye Hospital, PA, USA; Univ of Florida in Gainesville; UCSF, S-F, CA, USA; Johns Hopkins University, Baltimore, MD, USA. He was an executive secretary-in-chief of the editorial board, biomedical science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry, UK. At present, he is a chair, dept for personalized and translational medicine, I M Sechenov First Moscow State Medical University. He is a member of the: New York Academy of Sciences, USA; American Chemical Society (ACS), USA; American Heart Association (AHA), USA; EPMA (European Association for Predictive, Preventive and Personalized Medicine), Brussels, EU; ARVO (American Association for Research in Vision and Ophthalmology); ISER (International Society for Eye Research) and PMC (Personalized Medicine Coalition), Washington, USA.

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Charles H Williams

The Williams Research Laboratory, USA

Malignant hyperthermia - a genetic disease of sodium channel function

Malignant hyperthermia is inherited as a dominant gene in pigs and in humans. It is characterized by a rapidly increasing body temperature up to 118°F with a metabolic rate over 10x normal, an intense peripheral vasoconstriction with blood pressures over 400 mmHg and a fatal outcome in most cases.

The MH syndrome is triggered by exercise, hauling to market, breeding activity, hot weather and other stress factors. In humans, the cases are triggered by depolarizing muscle relaxants, halothane anesthesia and other halogenated anesthesia compounds. Non-depolarizing muscle relaxants such as pancuronium and vecuronium are safer to use. Organon 9426 (rocuronium) is safe to use and provides carry over protection against the development of MH.

The widespread use of sevoflurane in humans has reduced the incidence of MH to 1:550,000. Only two cases of MH have been reported in the USA during the past 30 years.


The MH susceptible pig is an outstanding animal model for research purposes and has enabled the development of new muscle relaxants and anesthesia agents that are safer for human use.

The sodium channels in MH susceptible animals are leaky and allow the influx of sodium into muscle cells which must be pumped out by sodium-potassium ATPase, thereby using ATP and generating heat.

Speaker Biography

Charles H Williams completed his PhD in 1968 and then a post-doctoral at the Institute for Enzyme Research with David E Green on mitochondrial studies. He moved to Missouri as an associate professor of biochemistry and as an assistant professor of medicine. He relocated to TTUHSC-El Paso in 1982, where MH research was his primary area of interest. He has published over 50 papers in refereed journals and has presented posters and lectures at many international events. He has also awarded with US Patent #5,030,633 in July 9, 1991 for the use of androstane derivative against malignant hyperthermia. He (editor and author or co-author on 7 of 14 Chapters) has published over 50 manuscripts, published abstracts, presentations at various meetings and two books published, one of those books is experimental malignant hyperthermia, New York, Springer Verlag, 1988.

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