

# Keynote Forum July 05, 2019

## Pathology and Surgical Pathology 2019









2<sup>nd</sup> International Conference on

Pathology and Surgical Pathology July 05-06, 2019 | Paris, France



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## Michael R Condon<sup>1,2</sup>,

### Yang Chen<sup>1,2</sup>, Jacquelyn C Klein<sup>1</sup>, Duncan Ndirangu<sup>1</sup> and Michael J Falvo<sup>1,2</sup>

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### Abnormal red blood cell rheology as a contributor to Gulf War Illness

urrently, 25-32% of military personnel that were deployed to the Persian Gulf for Operations Desert Shield and Storm (1990-1991) are afflicted with the chronic disorder known as Gulf War Illness (GWI). Veterans with GWI exhibit persistent health issues such as unremitting fatigue, widespread musculoskeletal pain and cognitive impairment being the most commonly reported symptoms. The purpose of this study was to determine whether the microrheological behavior of RBCs is altered in GWI following exercise. We recruited seventeen Gulf War veterans (GWV) with GWI (GWI+) and 10 age matched controls (GWI-). Venous blood was collected pre and post exercise. RBC deformability and aggregation were measured by ektacytometry along with complete blood counts. RBCs were more deformable in GWI+ pre and postexercise as indicated by higher elongation indices when compared to GWI-. Aggregation formation, stability and kinetics were similar between GWI+ and GWI- pre and post exercise. Complete blood counts were also similar, with the exception of mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC)



and RBC distribution width (RDW) which was elevated in GWI+. In this study, we observed increased deformability in veterans with GWI+ at rest and following exercise. These results suggest that the already abnormal erythrocytes in GWIV are not worsen by a bout of exercise and that this underlying abnormality may be a contributing factor to their feeling fatigued. Further research is required to confirm our findings and the role of RBC microrheology in GWI.

#### **Speaker Biography**

Michael R Condon, completed his PhD and currently working as a senior scientist in the Department of Surgical Services at the veteran's affairs, New Jersey Health Care System. He has over 20 years experience examining the effect of trauma/injury. His previous research focused on the effect of hemorrhagic shock on red blood cell (RBC) deformability and its contribution to organ injury/failure. His current research explores the involvement of RBC dysfunction as a contributor to disease, has led to a strong collaboration with Dr Michael J Falvo from the New Jersey war related illness and injury study center, examining RBC contribution to the maintenance of symptoms reported by veterans identified as having Gulf War Illness (GWI).

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## Irina P Shabalova

Russian Medical Academy, Russia Clinical cytology in surgery: Ovarian lesions

here were almost 541000 new carcinoma cases in Russia in 2017 and 40% of them detected in III-IV stage. The percentage of new ovarian cancers among women population in Russia in 2017 was 4.3%. Ovarian neoplastic changes can be problematic from the point of view of early detection, accurate morphological, biochemical and molecular data. The aim of the study was to analyze the possibilities of ROSE (rapid on-site sample evaluation) during surgery in Filatov Clinical Hospital №15 (Moscow). 377 consecutive cases were included to the study. Imprints from ovarian tumors were made during surgery, MGG staining was used. Only 5 of tumors were malignant, 372 were benign: Serous adenomas, teratomas, endometrioid and luteal cysts. Rapid cytological diagnosis was very useful for morphological verification of benign and malignant lesions, assessment of the rate of spreading (dissemination) of malignant tumor. The possibility to compare cytological data with surgical findings, consultation in difficult cases and creation of individual algorithms for correct diagnosis and treatment has the limitless diagnostic opportunities: Correction of surgical plan, decision for taking more adequate material for cytology and histology, etc. Scanned slides and microphotographs can be useful for final decision, consultations, quality control and teaching as well.

#### **Speaker Biography**

Irina P Shabalova, MD, PhD., ScD., March 10, 1950 cytopathologist in Russian Medical Academy of continuous professional education (Moscow) and past president of Russian Asociation of Clinical Cytologists. 1975-medical doctor on clinical laboratory diagnostics, out-patient clinic 38. 1981-Junior researcher, department of clinical cytology, n.a. Herzens' Moscow Cancer Research Institute, Russia. 1988-associate professor, department of clinical laboratory diagnostics, central institute of postgraduated education, Moscow, Russia. 1994- senior researcher, department of clinical cytology, n.n. Blokhin cancer research centre, Moscow, Russia. 1997- associate professor, department of clinical laboratory diagnostics, Russian Medical Academy of postgraduated education, Moscow, Russia. 2003- professor, department of clinical laboratory diagnostics, Russian Medical Academy of postgraduated education, Moscow, Russia. Member of russian scientific society of laboratory medicine (RSSLM), International academy of cytology, advisory editorial board "cytopathology" (gb), editorial board "laboratory" (Russia), editorial board "clinical laboratory diagnostics" and editorial board "acta cytology".

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**Dean Konjevic<sup>1</sup>** 

### Miljenko Bujanic<sup>1</sup>, Franjo Martinkovic<sup>1</sup>, Haidi Arbanasic<sup>1</sup>, Elena Bužan<sup>2</sup> and Ana Galov<sup>1</sup>

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Red deer fascioloidosis – a model for host-parasite interaction

ascioloidosis is a parasitic disease caused by non-native parasite *Fascioloides magna*. *F. magna* originally parasitize in the North American deer species. It was introduced to Europe at least twice, forming the three foci of infection: Italian, Czech and Danubian. The latter two gave origin to other, newly formed areas, including the Croatian one. F. magna was detected in Croatia in 2001 and since then have spread to the majority of its lowland areas. The fact that F. magna is a non-native parasite enables us to observe development of host-parasite interactions, but also to create conditions of case-control study in the wild, large mammal population. In this research we aimed to compare variability and presence of specific alleles of MHC class II - DRB exon 2 in relation to F. magna infection. A total of 117 red deer livers and faecal samples originating from lowland (Baranja, Lipovljani and Spačva) and mountain area (Gorski Kotar) were collected. Of them, based on location and parasitological analysis, 46 individuals were selected and tissue samples were sent for analysis using next generation sequencing (NGS). We have detected 44 DRB alleles (2-4 alleles per individual). Four

alleles were already known (our references - DRB\_NS36, DRB\_ NS38, DRBref01 i DRBref02). Statistically significant difference was detected in the level of infection in the case of animals with DRB\_ref01 and DRB\_ref06 alleles ( $\chi 2 = 0, 939, p = 0, 332$ ). This implicates on a potential development of host-parasite interaction in the case of red deer and *Fascioloides magna*.

#### **Speaker Biography**

Dean Konjevic is currently working as a professor at the department of veterinary economics and epidemiology, University of Zagreb Veterinary Faculty. He received his DVM in 2000 and PhD in 2009. He is active diplomate of the ECZM and European veterinary specialist in zoological medicine. Since 2016, he serves as vice-dean for science, postgraduate studies and lifelong learning. He was member of scientific and organizational committees of several international conferences, workshops and summer schools. He was principal investigator on two Croatian Science Foundation projects and one ESF project and associate on FP7 and IPA projects. His fields of interests are veterinary epidemiology, wildlife diseases, species conservation and comparative odontology.

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## Ahmed Abdelhalim Yameny

Society of Pathological Biochemistry and Hematology, Egypt

The role of miRNA in early cancer diagnosis

ancer affects everyone - the young and old, the rich and poor, men, women and children, about 16% of people die from cancer, in 2015, 8.8 million people died from cancernearly 1 in 6 global deaths (WHO). The total economic cost of cancer in 2010 was estimated at approximately \$1.16 Trillion. Cancer defined as a disease in which a group of abnormal cells grow uncontrollably the normal cell of division, continue and spread, it can be fatal, we now define cancer as a disease involves mutations in the cell genome (DNA mutations), cancer starts in just one cell, so early laboratory diagnosis of cancer is very important, ordinary tumor markers are not enough and using 400-gene test for cancer is difficult and limited in medical laboratory, miRNAs biomarkers have become as key molecular components of the cell in both normal and pathologic states, each tumor type has a distinct miRNA signature, now there are over 2500 human miRNAs recorded, the purpose of this work is to design a one laboratory test for early diagnosis of cancer using small

group of miRNAs as one panel, which need blood sample less than 1 ml by which patient can check up for many types of cancer, can do population screening, diagnosis, prognosis, therapeutic decision making and disease monitoring.

#### **Speaker Biography**

Ahmed Abdelhalim Yameny is the head of society of pathological biochemistry and hematology. He is the chairman of Medical Laboratory Syndicate in Egypt. He was the chairman for five international conferences of medical laboratory and four international conferences of the society of pathological biochemistry and hematology. He is an expert and medical laboratory consultant. He is chief editor of Journal of Bioscience and Applied Research; International Journal of Pathology and Biomarkers and Journal of Medical and Life Science. He has a PhD in Microbiology and has five high diplomas (bacteriology, public health of parasitology and medical entomology, analytical biochemistry, hematology and genetic analysis). He has a BSc in Biochemistry (Alexandria University in Egypt). He is a researcher and interested in molecular pathology.

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