From the Lab to the Bedside

X Anniversary Ukrainian - Polish - Belorussian Conference
“Physiology and Pathology of Respiration:
Advances in Basic Research and Clinical Applications”

Kiev, 10-13 October, 2013

With the great pleasure we invite researchers and physicians to participate in the X Anniversary Ukrainian-Polish-Belorussian Conference “Physiology and Pathology of Respiration”.

The main idea of this forum is to give our colleagues from different countries a platform for the introduction of advanced achievements in basic research of lung physiology from molecular to systemic level directly into clinical practice.

The conference will be held in Kiev, Ukraine, at the Bogomoletz Institute of Physiology, Bogomoletz St, 4.

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**Official language**: English.
Scientific and Organizing Committee:

Honorary Chairmen:
Professor Janusz Kowalski (Co-Founder of the Polish-Ukrainian Working Group, National Research Institute of Tuberculosis and Lung Diseases in Poland)
Professor Oleg Krishtal (Director of the Bogomoletz Institute of Physiology, Kiev, Ukraine)

Chairmen:
Professor Tatiana Serebrovskaya (Bogomoletz Institute of Physiology in Kiev, Ukraine);
Professor Piotr Gutkowski (Military Institute of Medicine in Warsaw, Poland)
Professor Alexander Makarevich (Medical State University in Minsk, Belorussia)

Executive Secretary:
Dr. Eugenia Kolesnikova (Bogomoletz Institute of Physiology in Kiev, Ukraine);

Scientific Committee Members:
Professor Chrostowska-Wynimko (National Research Institute of Tuberculosis and Lung Diseases in Warsaw, Poland)
Professor Joanna Domagała-Kulawik (National Delegate ERS, Medical University in Warsaw, Poland)
Professor Iryna Mankovska (Bogomoletz Institute of Physiology in Kiev, Ukraine)
Professor Nana Voitenko (Bogomoletz Institute of Physiology in Kiev, Ukraine)
Professor Anatoly Swiecicki (Bogomoletz National Medical University, Kiev, Ukraine)
Professor Vadim Sagach (Bogomoletz Institute of Physiology in Kiev, Ukraine)
Dr. Kateryna Rozova (Bogomoletz Institute of Physiology in Kiev, Ukraine)
Dr. Viktor Lopata (Bogomoletz Institute of Physiology in Kiev, Ukraine)
Working schedule

10 October, Thursday

9:00 – 18:00 – Registration at Bogomoletz Institute of Physiology
16:00 – 18:00 – City tour
19:00 – Welcome party (Bogomoletz Institute of Physiology, Bogomoletz St, 4)

11 October, Friday

8.30 – 9.00  Registration
9.00 – 9.15  Opening ceremony
9:15 – 9:45  Inaugural lectures

  Janusz Kowalski (Warsaw, Poland)
  Decade of the cooperation between Polish, Ukrainian and Belorussian physiologists

  Joanna Chorostowska-Wynimko (Warsaw, Poland)
  Basic research – the moving force of modern clinical practice.

9:45 - 13.15  Session I.

  Physiology and Pathophysiology of Respiration: Basic Research

Chair: Prof. Tatiana Serebrovskaya (UA), Prof. Janusz Kowalski (PL)

9:45 – 10.15  Keynote lecture:

  Nanduri Prabhakar (Chicago, USA)
  Cellular and molecular basis of acute O₂ sensing and its physiological
  consequences.

10.15 – 10.45 Keynote lecture:

  Susanne Arnold (Nijmegen, Netherlands)
  The respiring brain – the regulation of mitochondrial function and
  signalling by hypoxia

10.45 – 11.00  Malieieva G.V., Lushnikova I.V., Skibo G.G. (Kyiv, Ukraine)
  Mitochondrial dynamics in oxygen-glucose deprivation on a model of
  cultivated hippocampal slices

11.00 – 11.15  Coffee-break
11.15 - 13.15 - **Session I** (continuation)

*Chair: Prof. Nanduri Prabhakar (USA), Prof. Galina Skibo (UA)*

11.15 – 11.30 *Jayasri Nanduri* *(Chicago, USA)*
Epigenetic regulation of oxygen sensing and its impact on autonomic functions

11.30 – 11.45 *Savchuk O.I., Goncharov S.V., Dosenko V.E., Skibo G.G.* *(Kiev, Ukraine)*
Proteasome activity changes after focal ischemia

11.45 – 12.00 *Vadim Sagach, Shimanskaya T.V., Goshovska Y.V.* *(Kyiv, Ukraine)*
Inhibition of H₂S-synthesizing enzyme cystationine-gamma-lyase protects heart from reperfusion injury

12.00 – 12.15 *Segizbaeva M.O., Aleksandrova N.P.* *(St. Petersburg, Russia)*
Inspiratory muscle resistance to fatigue during simulated airway obstruction

12.15 – 12.30 *Makarevich A., Lemeshevskaya S, Poctavcev A., Lemeshevsky A., Nedvedž M.* *(Minsk, Belarus)*
Dynamics of respiratory muscle changes during chronic obstructive pulmonary disease progression

12.30 - 12.45 *Donina Zh.A.* *(St.Petersburg, Russia)*
Effects of head-down tilt on respiratory control and load compensatory responses in rats

12.45 – 13.00 *Mieczyslaw Pokorski* *(Warsaw, Poland)*
Sensing changes in oxygen content: the role in health and disease

13.00 – 13.15 Discussion

13.15 - 13.45 **Poster session I** *(Chair: Prof. Zh. Donina, RU; Prof. A. Makarevich A, BY)*

13.45 – 14.30 Lunch
14.30 – 17.45  **Session II**  
**Physiology and Pathophysiology of Respiration: Clinical Physiology**

*Chair: Prof. Iryna Mankovska (UA), Prof. Joanna Chorostowska-Wynimko (PL)*

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**14.30 – 15.00  Keynote lecture:**

*Tatiana Serebrovskaya (Kyiv, Ukraine)*

Lessons from twenty years' investigation of intermittent hypoxia: principles and practices

**15.00 – 15.15  Stryapko N.V., Sazontova T.G., Hajrullina A.A., Vdovina I.B., Kulikov A.N., Arkhipenko Yu.V. (Moscow, Russia)*

Antitoxic effect of adaptation to hypoxia and hyperoxia: redox signalling and physical endurance in the model of low dose intoxication by chromium and benzene

**15.15 – 15.30  Portnichenko V.I., Nosar V.I., Portmychenko A.G., Pavlovich S.I., and Mankovskaya I.N. (Kiev, Ukraine).**

Phase changes in energy metabolism during recovery after hypoxia or stress

**15.30 – 15.45  Glazachev O.S., Sazontova T.G., Bolotova A.V., Vdovina I.B., Arkhipenko Yu.V. (Moscow, Russia)*

Adaptive effects of interval hypoxia and hyperoxia on exercise tolerance in professional athletes: role of ROS and redox pathways

**15.45 – 16.00  Korkushko O., Ishchuk V., Shatylo V. (Kyiv, Ukraine)*

Effect of intermittent hypoxia training (IHT) on oxygen consumption in elderly people with and without obesity

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**16.00 – 16.15 - Coffee-break**
16.15- 17.45 - **Session II (continuation)**

*Chair: Prof. Yuri Kislyakov (RU); Prof. Juri Marushko (UA)*

**16.15 – 16.30**  
Strutynska N.A., Semenykhina O.M., Kotsuruba A.V., Dobrovolsky F.V., 
Sagach V.F. (Kyiv, Ukraine)  
Hydrogen sulfide as endogenous modulator of Ca\(^{2+}\)-sensitive mitochondrial permeability transition pore in adult and old rat heart

**16-30 – 16.45**  
Zinchuk V.V., Stepuro T.L., Khodosovsky M.N. (Grodno, Belarus)  
The in vivo and in vitro blood oxygen-binding properties modification by different nitric oxide donors

**16. 45 – 17.00**  
The influence of hyperinflation and systemic inflammation on the 6 minute walking distance in patients with chronic obstructive pulmonary disease

**17.00 – 17.15**  
(St.Petersburg, Russia)  
Universal mobile analytical complex for research of respiration and gas exchange in man and animals

**17.15 – 17.30**  
Arokina N.K. (St. Petersburg, Russia)  
Methods of the breathing restoration after the respiratory arrest under deep hypothermia in rats

**17.30 – 18.00 – Oral and Poster Presentations Discussion**

**18.30 – Reception at the Polish Embassy**
Poster session 1

Chair: Prof. Zhanna Donina (RU); Prof. Prof. A. Makarevich A, (BY)


2. Kolesnikova E. E., Drevitskaya T. I., Mankovskaya I. N. (Kyiv, Ukraine). Expression of pyruvate dehydrogenase kinase-1 (PDK-1) gene in brainstem mitochondrial dysfunction during adaptation to intermittent hypoxic and hypoxic-hyperoxic training


7. Mankovska I., Gonchar O., Steshenko N. (Kyiv, Ukraine). Intermittent hypoxia-hyperoxia, a new mode of adaptive training in correction of lung mitochondrial dysfunction


11. Rozova E.V. (Kiev, Ukraine). Some possibilities of elimination of the ultrastructural prerequisites under experimental pneumoconiosis development

12. Sas P.A. (Ternopil, Ukraine). Features of the kidney inflammation and the level of endogenous intoxication in acute lungs injury in experiment


12 October, Saturday
9.00 – 13.00 Session III:

Clinical Aspects of Lung Diseases

Chair: Prof. Piotr Gutkowski (PL), Prof. Andrey Dorofeyev (UA)

9.00 – 9.30 Keynote lecture:


(Warsaw, Poland; Kosice, Slovakia; Pleven, Bulgaria; Bucharest, Romania; Vilnius, Lithuania)

The alpha-1-antitrypsin (AAT) deficiency in respiratory patients – targeted screening programs in Poland and central Eastern Europe (CEE AAT network).


Changes in epithelial barrier of airways in allergy


(Ternopil, Ukraine)

The role of pulmonary edema and surfactant inactivation in the pathogenesis of HCl-induced acute lung injury

9.50 – 10.00 Doboszyńska A. (Olsztyn, Poland)

Treatment of the advanced chronic obstructive pulmonary disease (COPD).

10.00 – 10.10 Jarzemska A., Przybylski G., Domagała-Kulawik J. (Warsaw, Poland)

How to treat sarcoidosis

10.10 – 10.25 Discussion

10:25 – 10.40 Coffee-break

10.40 Session III (continuation)

Chair: Prof. Joanna Domagała-Kulawik (PL), Prof. Alexander Makarevich (BY)

10.40 – 10.50 Domagała-Kulawik J. (Warsaw, Poland)

EBUS/TBNA – a challenge for pathologist

10.50 – 11.00 Asanov E.O., Dyba I.A. (Kiev, Ukraine)

Age-related characteristics of microcirculation at breathing with positive expiratory pressure.

11.00 – 11.10 Gutkowski P. (Warsaw, Poland)

Spirometry limitations – a few examples.

11.10 – 11.20 Tomchyk N.V. (Grodno, Belarus)

The children’s incidence of asthma in Grodno according to a long-term monitoring.

11.20 – 11.30 Kovalenko SV., Dorofeev AE

Changes of the parameters of the plasmatic component of the hemostatic system in patients with bronchial asthma.

11.30 – 11.40 Skiba T.A. (Lugansk, Ukraine)

Modern trends in the treatment of COPD, combined with osteoarthritis

11.40 – 11.50 Dorofeyev A.E., Chorostowska-Wynimko J., Kovalenko S.V., Khorunzhaya V.S., Vasylenko I.V., Davydenko I.S., Struniawski R. (Donetsk, Ukraine; Warsaw, Poland)

Changes of the cellular infiltrate in the mucous tunic of the bronchi in patients with chronic obstructive pulmonary disease in dependence on antiprotolithic protection.

11.50 – 12.00 Discussion
12.00 - 12.30 – Poster session II  
*Chair: Prof. Oleg Glazachev (RU); Prof. Valeriy Shatilo (UA)*

12.30 – 13.30 – Lunch

13.30 - Session IV:  
**Tuberculosis and the Lung Pathology, Other Aspects of Lung Diseases**  
*Chair: Prof. Anna Doboszyńska (PL), Prof. Leonid Hryshchuk (UA)*

Tuberculous periodontitis: clinical-laboratory and epidemiological aspects.

13.40 – 13.50 *Zienkow L.N., Aleksa E.N. (Grodno, Belarus)*  
Occupational tuberculosis (TB) as the disease of medical personals.

13.50 – 14.00 *Gutkowski P. (Warsaw, Poland)*  
Sleep disordered breathing in childhood.

The influence of hyperinflation on body composition and cytokine profile in patients with chronic obstructive pulmonary disease.

14.10 – 14.25 Coffee-break

Pulmonary alveolar microlithiasis: report of 2 cases.

Nicotine dependence and motivation to quit smoking in patients with acute myocardial infarction.

14.45 – 14.55 *Roubuts T., Kharitonava A. (Grodno, Belarus)*  
Influence of psychological features of children on the parameters of external breathing.

14.55 – 15.15 Poster Session Discussion

15.15 - 15.30 Panel

15.30 – 16.15 Business meeting. Closing of the conference

16.30 – 17.30 Stand-up meal (café at Bogomoletz Institute)

19.00 – Theatre performance
Poster session II

Chair: Prof. Oleg Glazachev (RU); Prof. Valeriy Shatilo (UA)


3. Baradzina H., G.Hurevich, V. Denisevich (Minsk, Belarus). Is there correlation between lung function parameters and the length of industrial work record in potash mine?


7. Gumeniuk SA, Barkhina TG, Polner SA., Guschin MY. (Moscow, Russia). Morphofunctional study of bronchial asthma with extrahospital pneumonia.


13 October, Sunday

9.00 – 10.00 - Mass in St. Alexander Cathedral
10.00 - 10.30 - Business meeting-2
Cultural Program