

## Curriculum Vitae: Dr. Inna V. Sokolowska

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**Personal:** Born: 4.9.86, Zhovti Vody, Ukraine.

**Education:** Higher ed. 2008, Dnipropetrovsk National University (Major: human and animal physiology); Cand. of Biol. Sci. (PhD), 2012, A.A. Bogomoletz Institute of Physiology, Kyiv

### **Professional Experience:**

2008-2011: Postgraduate student in the Department of Movement Physiology, A.A. Bogomoletz Institute of Physiology, Kyiv (Sci. Adviser Prof. Alexander I. Kostyukov)

2011-2013: Junior Research Fellow at the Department of Movement Physiology, A.A. Bogomoletz Institute of Physiology, Kyiv

2012 – Doctor of biological science; (Majoring in Human and Animal Physiology) Bogomoletz Institute of Physiology, National Academy of Science of Ukraine, Kyiv. Ph.D. thesis: „*Activation of the shoulder belt and shoulder muscles of the humans in the two-joint isometric force*”.

2013-2015: Research Fellow at the Department of Movement Physiology, A.A. Bogomoletz Institute of Physiology, Kyiv. Head of the PhD students group and participant in **projects**:

- influence of C<sub>60</sub> fullerene nanoparticles on muscle fatigue in rat (2015);
- study of the stress urinary incontinence in pregnant women (2014-2015);
- development of new approach to study cyclic movements in humans with combining kinematics and EMG analysis (2013-2016);
- pre-clinical investigations of the peptide (dynorphin B, naloxon) effects with lateralized actions on the dynamic of the amplitude and time characteristics of ipsi- and contralateral interneurons and motoneurons in the cat spinal cord (2012-2013);
- investigation of the central control of the human movements (2012-2015).

2015-2016: Senior Research Fellow at the Department of Movement Physiology, A.A. Bogomoletz Institute of Physiology, Kyiv. Head of the PhD students group and participant in science projects

2016-**date** - Lecturer, Gdansk University of Physical Education and Sport, faculty of Physical Education, the Unit of the Theory of Physical Education.

2020 – Associated professor of Gdansk University of Physical Education and Sport. Habilitation in Physical Culture Science – University of Physical Education and Sports in Gdansk. Subject of habilitation thesis: “*The movement control process – the effect of fatigue and oxidative stress*”.

2021-**date** – head of the **Laboratory of Neurophysiology and Human motor skills**.

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### **Techniques:**

- neurophysiology:
  - ⇒ registration of monosynaptic reflex (H-reflex) in humans;
  - ⇒ surface electromyography recordings in human;
  - ⇒ intramuscular recording of the motor units activity; registration of the static and dynamic components of the muscle activity in humans;
  - ⇒ registration of the motor units and motoneuron pool activity in animals;
  - ⇒ registration of the focal potential in the spinal cord of the spinalized animals;
  - ⇒ immunohistochemistry
- neuromuscular slice preparation (preparation of the rat muscles and nerves with its sequential stimulation);

- statistical analysis (OriginLab 8.5; Two-Way ANOVA analysis).

**Research Interests:** Neurophysiology, human physiology, sport science, central control of movements and muscle dynamic in human, kinesiology, neurochemistry.

**Professional Societies:** Federation of European Neuroscience Societies

**Didactic Experience:**

2016-date - Gdansk University of Physical Education and Sport – lecturer of anthropology, anatomy, physiology, anthropometrics, theory of sports in Polish and English languages, classes with Erasmus student.

**Grants:**

2012-2013 – The central effects of peptides with lateralized actions on the dynamic of the amplitude and time characteristics of ipsi- and contralateral interneurons and motoneurons in the cat spinal cord

2013-2016 - Development of new approach to study cyclic movements in humans with combining kinematics and EMG analysis (0024/RSA2/2013/52; Ukraine - Poland).

2016-2019 – head of statutory project “Mechanisms of the central and peripheral muscle fatigue formation and possibilities of adaptation in physical training”, nr **DS\_WF|I|16|2017**

**Scientific cooperation with other scientific institutions:**

- Bogomoletz Institute of Physiology, National Academy of Science of Ukraine
- Laboratory of Biophysics, Intercollegiate Faculty of Biotechnology Gdansk University-Medical University of Gdansk.

**Study visits to foreign scientific or academic centers**

- Universidad de Malaga, Spain.
- Bogomoletz Institute of Physiology, National Academy of Science of Ukraine
- University of Cagliari (Italy), Department of Science of Life and Environment, Section of Neuroscience and Anthropology

**Languages:**

Mother language – Ukrainian;

Other languages – English; Polish; Russian.

**As a reviewer:**

- Reviewer of article in *The Journal of Physiological Science* “Application of water-soluble pristine C60 fullerenes for correction of ischemia-reperfusion injury in the skeletal muscles of limbs: mechano-kinetic and biochemical analysis ”.
- Reviewer of article in *Biocybernetics and Biomedical Engineering* “Influence of obesity on mechanokinetic of muscle fatigue development in muscle soleus of rats”.
- Reviewer of article in *Nanoscale Research Letters*.
- Reviewer of PhD thesis “*Control of chronic fatigue in highly skilled athletes in various kind of sports*”
- Reviewer of article in *Fiziol Zh* “Impact of C60 fullerene on the dynamics of force-speed changes in soleus muscle of rat at ischemia-reperfusion injury”