

Tetiana I. Abramovych

Curriculum Vitae



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Personal: Born: 1/25/90, Dniprodzerzhynsk, Ukraine. Unmarried.

Education: Higher ed. 2012, Dnipropetrovsk National University (Major: physiologist); Candidate of Biol. Sci. (Ph.D.), 2021; O.O. Bogomoletz Institute of Physiology, Kyiv;

Professional Experience:

2012-15: Postgraduate student at the Department of Movements Physiology, O.O. Bogomoletz Institute of Physiology, Kyiv (Sci. Adviser Prof. Olexander I. Kostyukov).

2012-15: 1st category engineer at the Department of Movement Physiology, O.O. Bogomoletz Institute of Physiology, Kyiv.

2015- present: Junior Research Associate at the Department of Movement Physiology, O.O. Bogomoletz Institute of Physiology, Kyiv.

2021- 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 muscles of the human arms during slow two-joint movements”.

Registration of EMG and EEG activity in humans and animals.

Participation in programs:

-investigation of central mechanisms of human movement control (2012-2015);

-development of a new approach to studying cyclic movements in humans by combining kinematic and EMG analysis (2015-2020);

-study of the mechanisms of skeletal muscle fatigue development using the method of H-reflex registration in humans and animals (2021-present).

Research Interests: Neurophysiology, human physiology, muscle dynamics and central control of movements in mammals, sport science, EMG, EEG.

Techniques:

- neurophysiology:
 - ⇒ registration of monosynaptic reflex (H-reflex) in rat;
 - ⇒ surface electromyography recordings in human;
 - ⇒ registration of the motor units and motoneuron pool activity in animals;
 - ⇒ registration of the focal potential in the spinal cord of the spinalized animals.

Languages:

- Mother language – Ukrainian;
- Other languages – English; Russian.

Total number of articles – 8

Total IF: 11.905

Information about scientific publications:

1. Dornovski, V., Kostyukov, A. I., **Abramovych, T. I.**, Vereshchaka, I. V., Tal'nov, A. M., Gorkovenko, A. V. (2015). Coordination of activity of the shoulder belt and shoulder muscles in humans during bimanual synchronous two-joint movements. *Neurophysiology*, 47 (4), 50-60.
2. **Abramovych, T. I.**, Gorkovenko, A. V., Vereshchaka, I. V., Tal'nov, A. N., Mishchenko, V. S., & Kostyukov, A. I. (2016). Peculiarities of activation of human muscles in realization of cyclic bimanual movements with different organization of the cycles. *Neurophysiology*, 48(1), 31-42.
3. **Abramovych, T. I.** (2017). Peculiarities of Activation of the Upper Limb Muscles in Humans during Realization of Two-Joint Movements *Neurophysiology*, 49(2), 168-172.
4. Tomiak, T., Gorkovenko, A. V., Tal'nov, A. N., **Abramovych, T. I.**, Mishchenko, V. S., Vereshchaka, I. V., & Kostyukov, A. I. (2015). The averaged EMGs recorded from the arm muscles during bimanual "rowing" movements. *Frontiers in Physiology*, 6(349). doi: 10.3389/fphys.2015.00349.
5. Tomiak, T., **Abramovych, T. I.**, Gorkovenko, A. V., Vereshchaka, I. V., Mishchenko, V. S., Dornowski, M., & Kostyukov, A. I. (2016). The movement- and load-dependent differences in the EMG patterns of the human arm muscles during two-joint movements (a preliminary study). *Frontiers in Physiology*, 7(218). doi:10.3389/fphys.2016.00218.
6. Vereshchaka, I. V., Gorkovenko, A. V., Lehedza, O. V., **Abramovych, T. I.**, Pilewska, W., Zasada, M., & Kostyukov, A. I. (2018). EMG patterns of the elbow- and shoulder-operating muscles in slow parafrontal upper limb movements under isotonic loading. *Neurophysiology*, 50(6), 466-474.
7. Gorkovenko, A. V., Lehedza, O. V., **Abramovych, T. I.**, Pilewska, W., Mishchenko, V.S., & Zasada, M. (2019). Evaluation of the complexity of control of simple linear hand movements using principal component analysis. *Neurophysiology*, 51(2), 132-140.
8. Kostyukov, A. I., Lehedza, O. V., Gorkovenko, A. V., **Abramovych, T. I.**, Pilewska, W., Mishchenko, V. S., & Zasada, M. (2019). Hysteresis and synergy of the central commands to muscles participating in parafrontal upper limb movements. *Frontiers in Physiology*, 10. doi: 10.3389/fphys.2019.01441.