

# Program

**12<sup>th</sup> Student Workshop**

**"Biophysical Methods in Neuroscience"**

**Kyiv, 18-20 April 2018**

**Bogomoletz Institute of Physiology NAS of Ukraine  
(4 Bogomoletz st., Kiev, Ukraine)**

**1<sup>st</sup> day, Wednesday, April 18, 212 audience, admin. bld**

**9:30 – 10:00 – Registration of participants (room 210 admin. bld)**

**10:00 – 10:15 - Nana Voitenko, Bogomoletz Institute of Physiology**

***Opening Ceremony of the Student Workshop.***

***Greeting to the participants from the Workshop organizers***

**10:15 – 11:00 – Bizhan Sharopov, Bogomoletz Institute of Physiology.**

***Electrophysiological methods of research***

**11:00 – 11:45 – Eugen Sheremet, Bogomoletz Institute of Physiology.**

***Advanced methods of fluorescence microscopy***

**11:45 - 12:00 - Coffee Break**

**12:00 – 12:45 – Nana Voitenko, Bogomoletz Institute of Physiology.**

***Universal, ubiquitous free calcium - methods of measurement***

**12:45 – 13:30 - Pavel Belan, Bogomoletz Institute of Physiology.**

***Optogenetics***

**13:30 – 14:00 – Lunch**

**14:15 – 18:15 - Practicum**

**18:30 – 21:00 - Welcome Party (hall of high rise bld)**

## **2<sup>nd</sup> Day, Thursday, April 19, 212 audience admin. bld**

**10:00 – 10:45**– Oksana Sulaieva, Ukrainian Research and Practical Centre of Endocrine Surgery

*Diagnostic immunohistochemistry: possibilities, limitations, alternatives.*

**10:45 – 11:30** – Vladimir Medvedev, Bogomoletz National Medical University.

*Stem Cell Therapy: Myth or Reality?*

**11:30 - 11:45** - Coffee Break

**11:45 – 12:30** – Yaroslav Shuba, Bogomoletz Institute of Physiology.

*Ion channels and cancer: what is the link?*

**12:30 – 13:15** Kseniya Gulak, Bogomoletz Institute of Physiology.

*Introduction to PCR*

**13:15 – 14:00** - Lunch

**14:00 – 18:00** - Practicum

## **3<sup>d</sup> Day, Friday, April 20, 212 audience admin. bld**

**10:00 – 10:45**– Sergey Verevka, Institute of Otolaryngology.

*Structurally damaged proteins: the ways of formation, pathophysiological effects and information value*

**10:45 – 11:30** – Boris Safronov, Institute for Molecular and Cell Biology, Portugal.

*Spinal mechanisms of pain processing*

**11:30 - 11:45** - Coffee Break

**11:45 – 12:30** – Victor Dosenko, Bogomoletz Institute of Physiology.

*Etiology and pathogenesis of love*

**12:30 - 13:15** – Oleg Krishtal, Bogomoletz Institute of Physiology.

*That we know about consciousness in terms of neuroscience*

**13:15 – 14:00** - Lunch

**14:00 – 14:15** - Photo of participants and teachers of the Workshop

**14:15 – 15:00** – Discussion, Summarizing, Diplomas Awarding, (room 214 high rise bld)

**15:00 – 18:00** – Quizz&Beer Party

# PRACTICUM

The duration of each practice session is 50 minutes (10 minutes break).

lab #	Laboratory name, room #	Teachers
<b>1.</b>	<b>Confocal immunohistochemistry. The study of the properties of stem cells of different origins.</b> 2 floor high rise bld, r. 210	Oksana Rybachuk
<b>2.</b>	<b>Sensory Signaling. Behavioral tests. Optogenetics.</b> 2 floor high rise bld, r. 203	Vova Krotov Diana Shevchuk
<b>3.</b>	<b>"Super Resolution" method</b> 4 floor high rise bld, r. 406	Alexander Tarasenko
<b>4.</b>	<b>Method "Patch-Clamp" and genetic modification of cells.</b> 4 floor high rise bld, r. 1106	Bizhan Sharopov Nataly Shtefan
<b>5.</b>	<b>Fluorescent methods. Calcium Uncaging in Neurons.</b> 4 floor high rise bld, r. 404	Andrey Dromaretskiy
<b>6.</b>	<b>Experimental models of epilepsy and neural plasticity.</b> 4 floor high rise bld, r. 402	Alina Savotchenko
<b>7.</b>	<b>Determination of gene expression by real time PCR analysis.</b> 1 floor admin bld, r. 128	Tatyana Lapikova-Briginskaya
<b>8.</b>	<b>Cardiac catheterization to study parameters of cardiodynamics.</b> 3 floor admin bld, r. 326	Yuliya Goshovska Sergey Goncharov

## Participants into groups:

Group number	Участники
<b>1.</b>	
<b>2.</b>	
<b>3.</b>	
<b>4.</b>	
<b>5.</b>	
<b>6.</b>	
<b>7.</b>	
<b>8.</b>	

## Schedule labs on April 18, 2018

Lab #	Laboratory name, room #	Teachers	Group number, time			
			14:15	15:15	16:15	17:15
<b>1.</b>	<b>Confocal immunohistochemistry. The study of the properties of stem cells of different origins.</b> 2 floor high rise bld, r. 210	Oksana Rybachuk	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>2.</b>	<b>Sensory Signaling. Behavioral tests. Optogenetics.</b> 2 floor high rise bld, r. 203	Vova Krotov Diana Shevchuk	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>3.</b>	<b>"Super Resolution" method</b> 4 floor high rise bld, r. 406	Alexander Tarasenko	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>4.</b>	<b>Method "Patch-Clamp" and genetic modification of cells.</b> 4 floor high rise bld, r. 1106	Bizhan Sharopov Nataly Shtefan	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>5.</b>	<b>Fluorescent methods. Calcium Uncaging in Neurons.</b> 4 floor high rise bld, r. 404	Andrey Dromaretskiy	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>6.</b>	<b>Experimental models of epilepsy and neural plasticity.</b> 4 floor high rise bld, r. 402	Alina Savotchenko	<b>6</b>	<b>7</b>	<b>8</b>	<b>1</b>
<b>7.</b>	<b>Determination of gene expression by real time PCR analysis.</b> 1 floor admin bld, r. 128	Tatyana Lapikova-Briginskaya	<b>7</b>	<b>8</b>	<b>1</b>	<b>2</b>
<b>8.</b>	<b>Cardiac catheterization to study parameters of cardiodynamics.</b> 3 floor admin bld, r. 326	Yuliya Goshovska Sergey Goncharov	<b>8</b>	<b>1</b>	<b>2</b>	<b>3</b>

## Schedule labs on April 19, 2018

L ab #	Laboratory name, room #	Teachers	Group number, time			
			14:00	15:00	16:00	17:00
<b>1.</b>	<b>Confocal immunohistochemistry. The study of the properties of stem cells of different origins.</b> 2 floor high rise bld, r. 210	Oksana Rybachuk	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>2.</b>	<b>Sensory Signaling. Behavioral tests. Optogenetics.</b> 2 floor high rise bld, r. 203	Vova Krotov Diana Shevchuk	<b>6</b>	<b>7</b>	<b>8</b>	<b>1</b>
<b>3.</b>	<b>"Super Resolution" method</b> 4 floor high rise bld, r. 406	Alexander Tarasenko	<b>7</b>	<b>8</b>	<b>1</b>	<b>2</b>
<b>4.</b>	<b>Method "Patch-Clamp" and genetic modification of cells.</b> 4 floor high rise bld, r. 1106	Bizhan Sharopov Nataly Shtefan	<b>8</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>5.</b>	<b>Fluorescent methods. Calcium Uncaging in Neurons.</b> 4 floor high rise bld, r. 404	Andrey Dromaretskiy	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>6.</b>	<b>Experimental models of epilepsy and neural plasticity.</b> 4 floor high rise bld, r. 402	Alina Savotchenko	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>7.</b>	<b>Determination of gene expression by real time PCR analysis.</b> 1 floor admin bld, r. 128	Tatyana Lapikova- Briginskaya	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>8.</b>	<b>Cardiac catheterization to study parameters of cardiodynamics.</b> 3 floor admin bld, r. 326	Yuliya Goshovska Sergey Goncharov	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>