

# TRANSLATIONAL NEUROSCIENCE

Moscow Institute of Physics and Technology (National Research University)

Degree or qualification is awarded: **PhD (Candidate of Science)**

Language of study: **English**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **375 000 RUB**

Programme curator: **Denis Ustyuzhaninov**

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## Research supervisor:

[Allan Kalueff](#)

PhD, DSc

## Supervisor's research interests:

We utilize animal models (rodents and especially zebrafish) to study neurobiological and molecular mechanisms of the brain, and their pharmacological correction. We create animal models of various complex brain disorders, including both psychiatric and neurological. We apply cell technologies to dissect the role of neurons and neuroglia in these mechanisms, with a specific focus on stress and neuroinflammation. We also study brain-altering drugs and how they affect brain functions on behavioral, neurochemical, genetic, genomic and epigenetic levels. Our lab is also involved in CNS drug screening and discovery.

## Research highlights:

Our lab is a fast-paced research team actively publishing in esteemed international journals. We collaborate with multiple international colleagues (China, UK, US, Brazil).

## Supervisor's specific requirements:

- Be smart, fast, ambitious, hardworking and eager to learn new things.
- No 'slow' or 'lazy' people are allowed in the lab.
- Background in Biology, Medicine or Chemistry.
- Interest in Neuroscience. Prior research experience is a bonus, especially in neuroscience or drug research.
- Be careful with experiments and pay attention to detail.
- Be able to analyze data and write scientific texts well.
- Being good with computers will be helpful.

## Main publications:

- Cheresiz SV, Volgin AD, Evsyukova AK, Bashirzade AAO, Demin KA, Abreu MS de, et al. Understanding neurobehavioral genetics of zebrafish. *Journal of Neurogenetics* 2020;34:203-15. <https://doi.org/10.1080/01677063.2019.1698565>
- Wang J, Li Y, Lai K, Zhong Q, Demin KA, Kalueff AV, et al. High-glucose/high-cholesterol diet in zebrafish evokes diabetic and affective pathogenesis: The role of peripheral and central inflammation, microglia and apoptosis. *Prog Neuropsychopharmacol Biol Psychiatry* 2020;96:109752. <https://doi.org/10.1016/j.pnpbp.2019.109752>
- de Abreu MS, Genario R, Giacomini ACVV, Demin KA, Lakstygala AM, Amstislavskaya TG, et al. Zebrafish as a Model of Neurodevelopmental Disorders. *Neuroscience* 2020;445:3-11. <https://doi.org/10.1016/j.neuroscience.2019.08.034>

## **Specializations within this programme**