

Moscow Institute of Physics and Technology (State University)

MIPT is a young university with 60 year long history

MIPT is very small university:

Number of students	3600
Number of postgraduates	600

Moscow Institute of Physics and Technology (MIPT)

is a top ranked Russian university considered by many to be on par with the best schools in the world including:

MIT, Stanford, Princeton, Harvard, Berkley, Caltech, etc

MIPT is sometimes referred to as "the Russian MIT"

MIPT Founding Fathers

Nobel Prize Winners



Peatr Kapitsa



Lev Landau

In the end of 1945 the fathers of Soviet rocket science (Korolev), nuclear bomb (Kurchatov) and future Nobel Prize winners Kapitsa, Landau and Semenov lobbied the government to create a university of a principally new kind

In a letter to Stalin in February 1946, Kapitsa argued for the need for such a school, which he tentatively called the *Moscow Institute of Physics and Technology*, to better maintain and develop the country's defense potential

This project received the seal of approval from Joseph Stalin himself in 1946 and the MIPT was born

Physteh System

Best Professors

Leading Russian Researchers
from Best Research Institutes

Best Students

Efficient System of Attracting/
Selecting Talented Students

Best Educational System

Deep and Active Knowledge to
Solve Most Challenging Problems

Best Research Training

3d Year Students Start Research
Work in Best Russian Research
Laboratories

Best Professors



Nobel Prize Winners

P. Kapitsa

N. Semjonov

L. Landau

A. Prohorov

N. Basov

V. Ginzburg

A. Abrikosov

Education

General courses and Practicum

(Mathematics, Physics, Computer Science, Biology, etc)

B.Sc.- 4 years

Special courses and Practicum

Research Work in the best Research Institutions of Russian Academy of Science, Russian Space Agency, Russian Atomic Commission etc.

M.Sc. - 2 years

Ph.D- 3 years

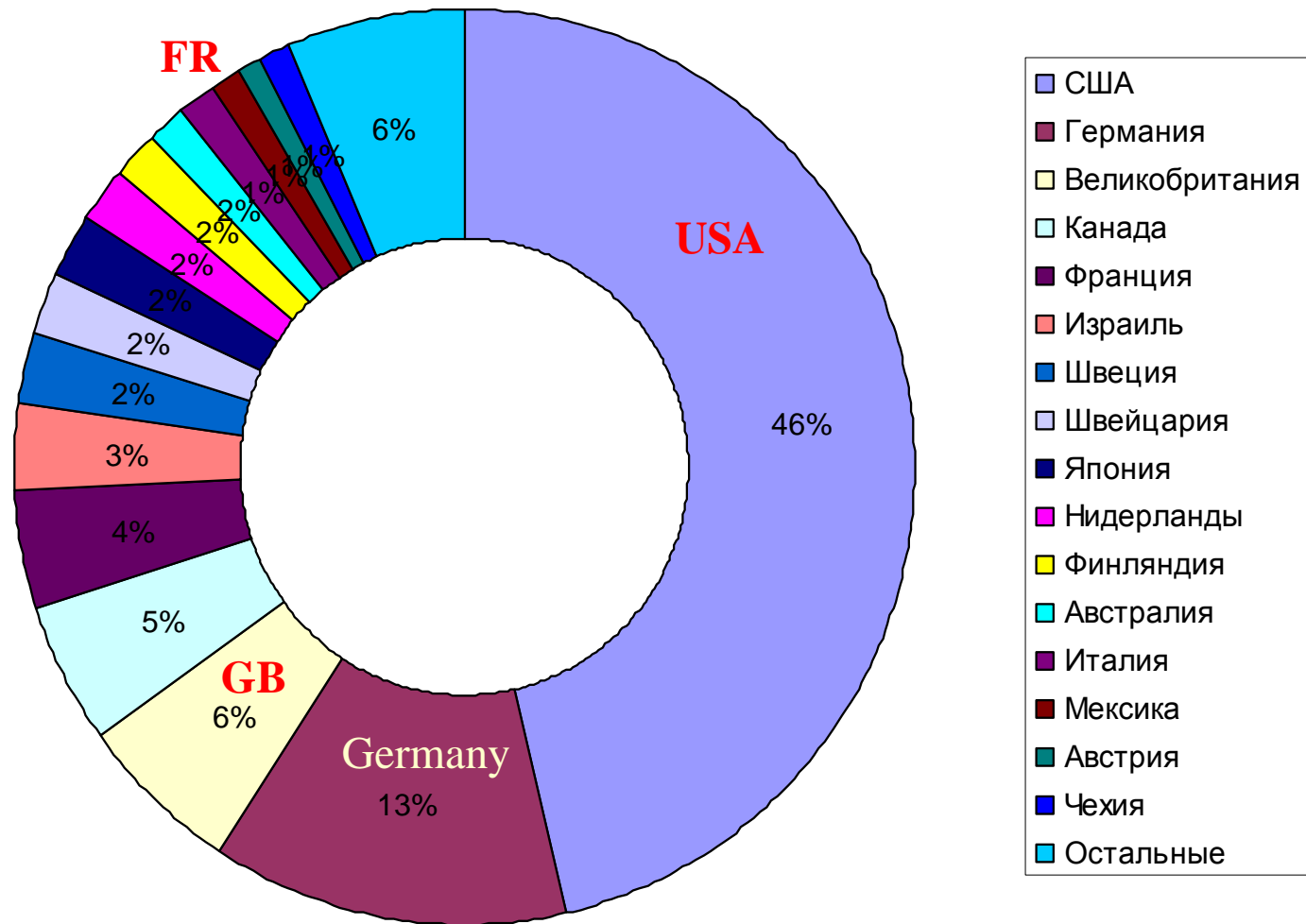


Moscow Institute of Physics and Technology (MIPT)

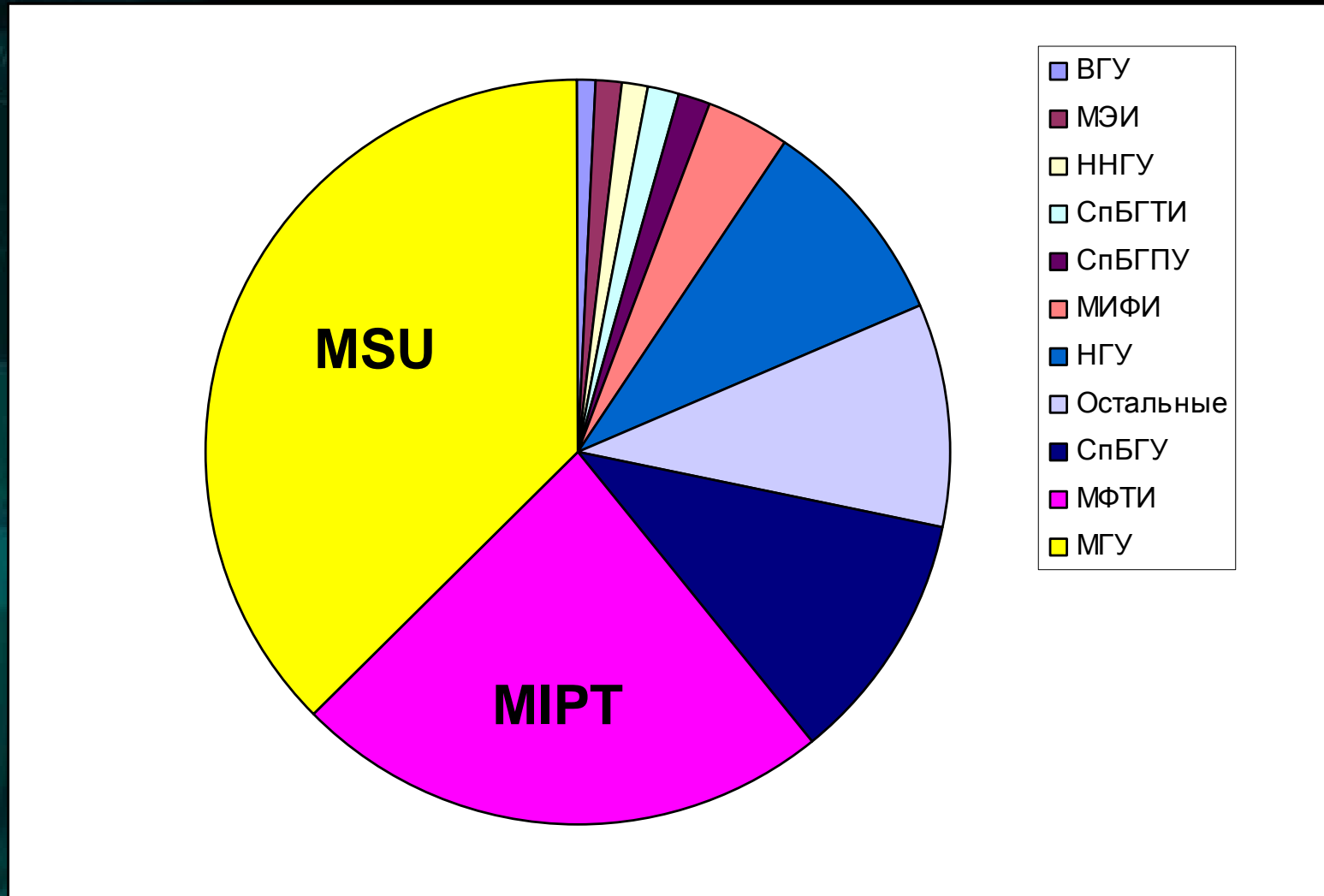
MIPT was famous in Soviet Union, but was considerably less known abroad

MIPT was quite hidden during the Cold War era when leading scientists and engineers of the Soviet defense programmes studied there

Affiliation of Russian Scientists (Scopus)



Number of Undergraduates from Different Russian Universities obtained their PhD in the USA



(1997-2006 data from SED)

Faculty of General and Applied Physics

Former Graduates



**Alexander
Polyakov**

Professor
Princeton University
USA



**Mikhail
Voloshin**

Professor/Director
Theoretical
Physics Institute,
USA



**Nikita
Nekrasov**

Professeur
permanent à l'IHÉS
France

INSTITUT DES HAUTES ÉTUDES SCIENTIFIQUES
Fondation reconnue d'utilité publique

Research Universities - new Russian Scientific Policy

2007- 2008 **M. Trunin** (Dean of the Faculty) and two former Faculty students
V. Lebedev (Director of Landau Institute of Theoretical
Physics) and myself
initiated creation of an Institute for Advanced Study

We named it “Bionanocenter” of MIPT



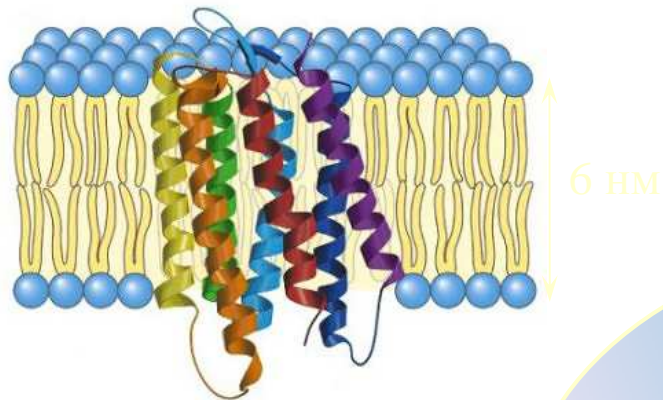
Applications

**In 2009 all-Russian competition for the status “Research University”
MIPT was ranked number 1**

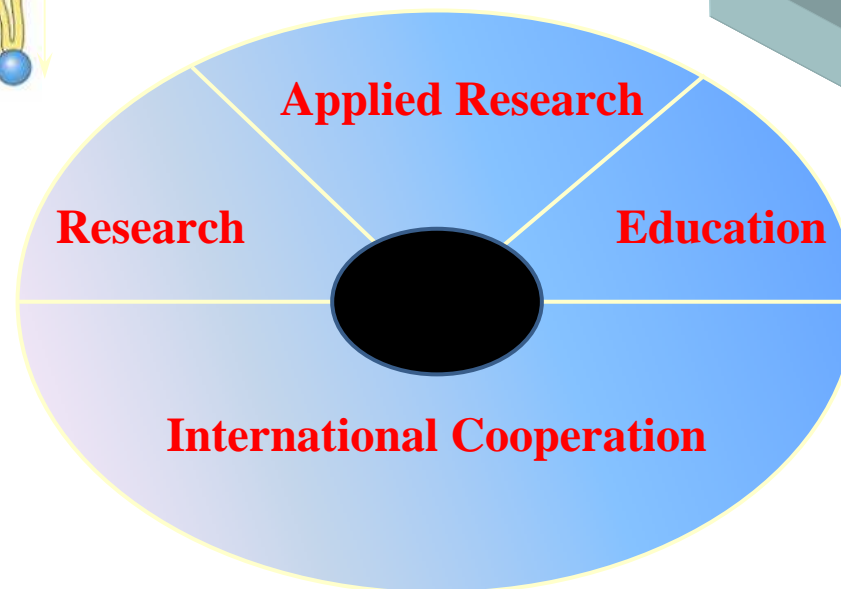
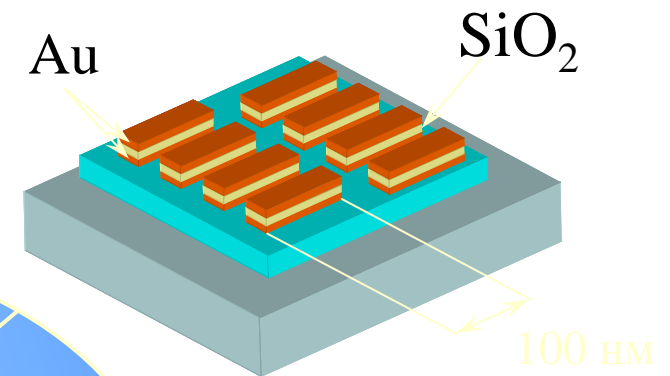
Международное
сотрудничество

What is “Bionanocenter” ?

Biomembranes and Membrane Proteins

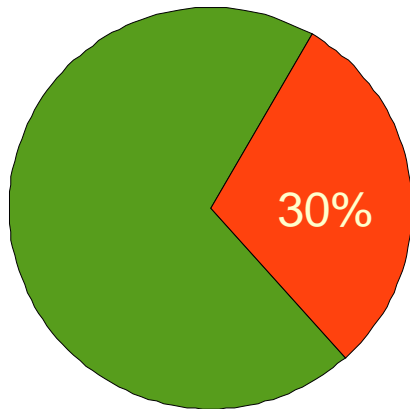


Nanomaterials

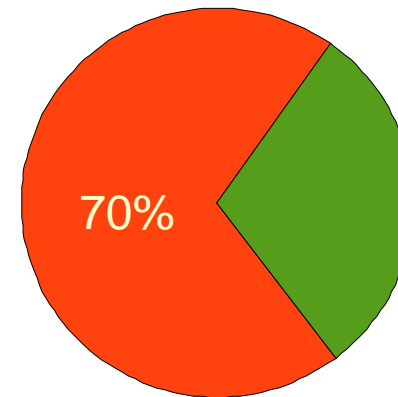


Motivation for Membrane and Membrane Protein Studies

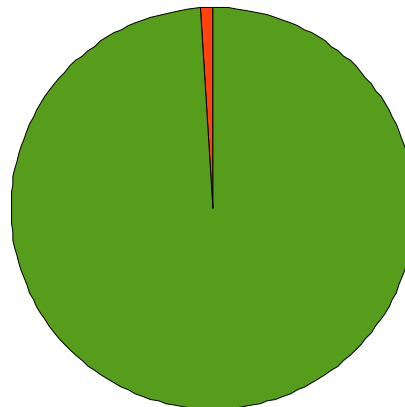
They represent one-third of the proteins encoded in the genome



70% of drugs have as a target membrane proteins



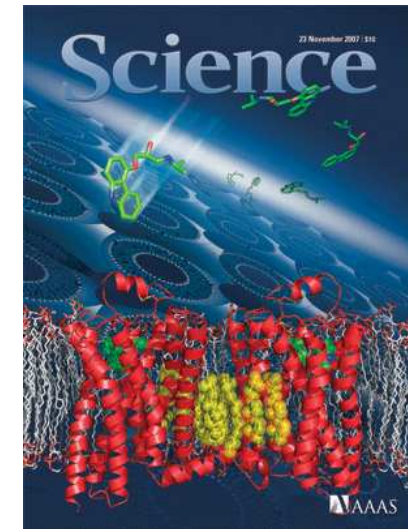
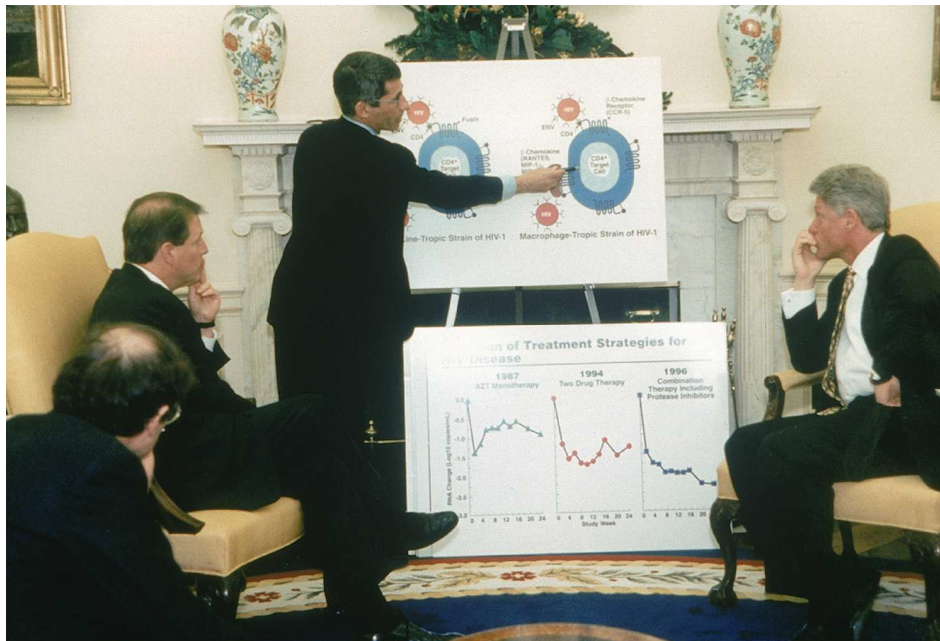
They comprise about of 1% of proteins of known structure





Vadim CHEREZOV (former graduate of MIPT) *et al*
solved the structure of GPCR receptor
[(2007) *Science* 318, 1258 – 1265]

This work is considered as a breakthrough in bioscience and is of high importance for medicine and is now one of the most cited papers in bioscience



Membranes: Ageing, Cancer and Neuroscience



**There is special funding for
France-MIT (USA) cooperation**

**Might Grenoble-MIPT cooperation would be of
an interest for scientific community in Grenoble?**

If yes

**I would suggest to consider creation of a special
funding for Grenoble -MIPT (Russia) cooperation**