



Success stories:

Originally developed immune modulators are applied in oncology and in the prophylaxis and treatment of virus-related diseases:

- **Lariphan** is an original pharmaceutical product for the treatment of viral and oncologic diseases. Web: www.larifans.lv
- **Rigvir** is for the treatment of melanoma which is one of the most aggressive forms of cancer. Web: http://www.viroterapija.lv/latvian_virotherapy_center_ru.html#rigvir

Institute's scientists have successfully transformed their research results into products that serve the society:

- **The fermented milk product "Labdaris"**, with the lactic acid bacterium *Lactobacillus helveticus* R-7, normalizes the intestinal microflora.



- **The immunomodulating food supplement "Glycomune"** activates body's immune defense cells and normalizes the intestinal microflora.

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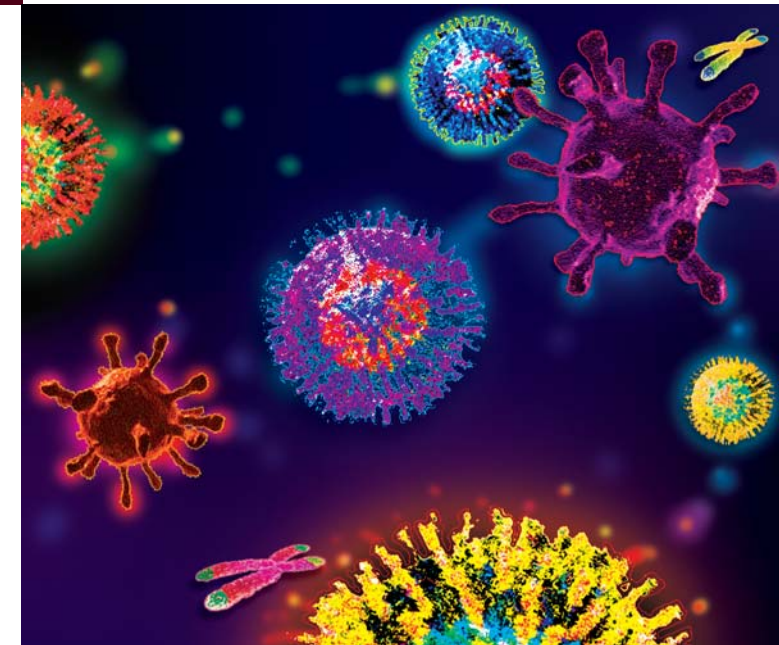
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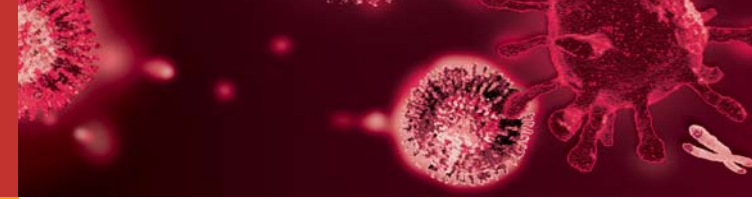


Location

MVI is located in the Kleisti biosciences cluster – the most important agglomeration of research institutions in biology, biomedicine, biopharmacy and biotechnology in Latvia.



AUGUST KIRCHENSTEIN INSTITUTE OF MICROBIOLOGY AND VIROLOGY



About MVI

The August Kirichenstein Institute of Microbiology and Virology (MVI) was founded in 1946 on the basis of the former Institute of Microbiology and Serum Station of the University of Latvia. Since 1961, investigations in virology were intensively developed, starting with poliomyelitis, the Institute's work gaining international recognition with its research on viral hepatitis, influenza and oncogenic viruses, active until present time.

Experience in projects

- The European Social Fund project "Establishment of new interdisciplinary research group for the development of nanotechnology-based approaches in cell biology and medicine".
- The European Regional Development Fund project "New natural immunomodulating composition design and efficacy in cases of oncologic and viral diseases".
- The National research program No 4 "Multi-disciplinary research consortium on major pathologies threatening the life expectancy and quality of life of the Latvian population" project No 9 "Infectious agents and host genetic background interactions".
- The Latvian Council of Sciences research projects – 5.
- Joint research projects – two of them international – with Bulgaria and Belarus.

Applied Biosystems 7500 Real-Time PCR System

for quantitative detection of virus-specific DNA and RNA in cells, blood plasma/serum and other body fluids as well as in cell culture media.



FLUORESCENCE MICROSCOPE – Nikon Eclipse 80i

for detection of viral antigens, cytokines, etc. in cells, for antibody detection in blood plasma/serum and other body fluids.



Multicolor Flow Cytometer and Cell Sorter BD FACSArial

for immun phenotype analysis and cell sorting (peripheral blood, cultured cell lines and tissues).



Inverted Microscope Nikon Eclipse Ti

for control of growth parameters and processes in living cells.

EliSpot Reader

for counting the number of lymphocytes (and other cells) that produce interleukins.

Theme leader in the National Research Programme in Medicine:

- Major pathologies threatening life expectancy and quality of life;
- Development of new approaches to prophylaxis, treatment, diagnostics and biomedical technologies to improve public health.

Research fields:

- Role of viruses in emerging and re-emerging diseases;
- Viruses as health threatening factors;
- Viruses as factors influencing biological aging and life quality;
- New developments in early and non-invasive diagnostics;
- Novel anti-viral therapies;
- Development of nanotechnology-based approaches in cell biology and medicine to targeted drug delivery to tumour cells;
- New natural substances for the treatment and prevention of diseases;
- New methods in virology, immunology and medical technology.