

## The most significant achievements of the science of Latvia in 2005

§ Development of new algorithms of quantum computing allowing for a much faster solution of problems too difficult for the traditional computers and requiring larger storage capacity. (Corresponding member of the Latvian Academy of Sciences Andris Ambainis, academician Rusins-Martins Freivalds. Institute of Mathematics and Computer Science of the University of Latvia in cooperation with the University of Waterloo ( Canada ))

§ Introduction into medical practice of two earlier developed original immunopreparations - Rigvir and Larifāns - applicable for cancer immunotherapy and treatment of secondary immunodeficiency. (Honorary member of the Latvian Academy of Sciences Aina Muceniece and *Dr.med.* Guna Feldmane. Augusts Kirhensteins Institute of Microbiology and Virology of the University of Latvia)

§ Elaboration of the scientific research programme of Letonics (Latvian studies) with results of the last decade of research brought together in the first congress of Letonics held in October 2005 in Daugavpils and Riga . Letonics is an interdisciplinary body of humanities, former of the spiritual culture of society exploring Latvian history, language and culture from the earliest times up to nowadays.

§ Development of the non-contact asynchronous double-fed generator for wind power equipment without speed-reducer allowing for a substantial increase in the utilisation of wind power. (*Dr.habil.sc.ing.* Nikolajs Levins, *Dr.habil.sc.ing.* Vjaceslavs Pugacevs, Corresponding member of the Latvian Academy of Sciences Leonids Ribickis. Institute of Physical Energetics of the Latvian Academy of Sciences and Riga Technical University)

§ Development of new technologies for the production of ecological, healthy products from Japanese quinces and large cranberries. (*Dr.biol.* Edīte Kaufmane, *Mg.sc.* Dalija Seglina, Dobeles Horticultural Plant Breeding Experimental Station.)

§ Elaboration of the holographic inscription method of immersion enabling inscription of holographic grids with a very small (50 nm) period. (*Dr.phys.* Janis Teteris. Institute of Solid State Physics of the University of Latvia .)

§ Discovery of the link between the polymorphism of interleucine-1 gene and the inflammatory markers in coronary heart disease embodying a significant supplement to the existing knowledge about the causes of this disease and assisting in choosing a proper therapy for patient treatment. (Biomedical Research and Study Centre of the University of Latvia , P. Stradins Clinical Hospital)

§ Introduction of the medieval annals “Hermannus de Wartberge Chronicon Livoniae” - source of written history on the developments of the 14th century in the Baltics - into the body of scientific sources. (Translated from Latin and with foreword and commentary written by academician Evalds Mugurevics. Endowed with the 2005 Award of the Baltic Assembly)

§ Accomplishment of the first investigation and review of the history and influence of the Latvian and German (incl. Baltic German) literature in Latvia : “German literature and Latvia . 1890-1945” (in Latvian). (Compiler and scientific editor academician Benedikts Kalnacs, group of authors: Benedikts Kalnacs, *Dr.philol.* Inguna Daukste-Silasproge, *Dr.philol.* Mara Grudule, *Dr.philol.* Zanda Gutmane, Jana Verdina, Institute of Literature , Folklore and Art of the University of Latvia )

♣ Scientific review of the introduction and cultural history of the decorative shrubs rhododendrons as well as descriptions of the varieties of open-air rhododendrons bred in Latvia . (Academician Rihards Kondratovics)