Andres Metspalu

Department of Biotechnology, University of Tartu, Estonia

CV

EDUCATION:
M.D., Tartu University. Date of graduation: June 1976.
Ph.D., in Molecular Biology 1979. "Structure and function of the eukaryotic ribosome". Institute of Molecular Genetics, Ukrainian Acad. of Sciences, Kiev.
POSTDOCTORAL RESEARCH:

1. Columbia University, New York, USA. Prof. Alex Tzagaloff laboratory. From August 1981 to February 1982. Yale University, New Haven, USA. Prof. Joan Steitz laboratory. From March 1982 to May 1982.
2. European Molecular Biology Laboratory (EMBL), Heidelberg, Germany. Prof. Riccardo Cortese laboratory. Fellowship from European Society of Biochemistry (FEBS) 1985.
3. Max-Planck Institute of Molecular Genetics, Wittman, Berlin, Germany. Fellowship from European Molecular Biology Organization (EMBO) 1988.
4. Visiting scientist at University of Tampere, Finland. From October to November 1991.
5. Visiting scientist at Hamburg University, Dept. of Molecular Biology, Germany. Prof. Joachim Kruppa laboratory. Fellowship from DAAD, 1991-1992.
6. Research grant in 1993 from EC to study hRP protein S6 gene at University of Hamburg.

PROFESSIONAL HISTORY:

1976-1980	Junior scientist at the Laboratory of Molecular Biology, Tartu University.
1981-1982	EREX fellow in USA, Columbia University, New York, and Yale University, New Haven.
1982-1984	Senior scientist at laboratory of Molecular Biology, Tartu University.
1985-1992	Head of Laboratory of Gene Expression, Tartu University.
1986-1992	Research Director of the Estonian Biocentre.
July 1992 -	present. Full professor of Biotechnology at Tartu University
October 1993 - December 1994	Visiting professor faculty at Baylor College of Medicine, Dept. of Molecular and Human Genetics with Prof. C.T. Caskey.
February 1996 -	present. Head of Molecular Diagnostics Center at Children's Hospital of Tartu University.
1999-2000	IARC, Lyon France, The Visiting SCIENTIST AWARD

Main interest is to develop highly parallel and roboust arrayed primer extension technology for DNA microchips.
AT PRESENT, MY RESEARCH INTERESTS ARE:

1. Fundamental questions of gene structure, function and organization. Special interests are human disease genes.
2. Developing new oligonucleotide array - based SNP genotyping methods and applying DNA diagnostics for detecting human genetic diseases, gene expression and resequencing.

TEACHING:
1980-present. I have supervised diploma works, M.Sc., M.D. and Ph.D. students.
1989-present. I have lectured in, and I am currently in charge of the Molecular Biotechnology and Molecular Diagnostics and Gene Therapy courses at Tartu University.

CONTACT INFORMATION

Andres Metspalu, M.D., Ph.D.
Head of the Department of Biotechnology
University of Tartu
Riia 23, Tartu, Estonia
Tel:+(372) 7 375 029
Fax: :+(372) 7 420 286
e-mail andres@ebc.ee

Estonian Genome Project: Current Status, Permissive Technologies and Future Steps

The Estonian Genome Project (EGP) has developed in leaps and bounds since the last Gene Forum meeting. First of all "Human Genome Research Act" was passed by the Estonian parliament in December 2000. This is one of the most comprehensive legal documents in the world regulating population based genomic studies and a main cornerstone of the EGP. Passing the law by the Estonian parliament resulted in state funding provided for the implementation of the EGP, in founding of special non-profit and for-profit organizations and in working out legal documents aimed at regulating complex interactions between different bodies involved.

As of today, 25 people are working for the project in Estonia and USA, preparing the pilot phase of the EGP (10 000 individuals to the database by July 2001), looking for funding and transforming the EGeen (commercial partner for the EGP) into a successful genomics company. According to the recent poll people are supporting the EGP: ~ 40% would like to join, ~36% would like to get more information before decision and 6% said definite no.

Technologies are maturing also and the prices are decreasing to the level which will make genotyping of the pilot project samples feasible in year 2002. And again, the EGP is supposed to benefit from the developments at the global level. International haplotyping consortium was formed with the task to build the human LD and haplotype map. The latter will help to select the right set of the SNPs for the EGP without a need for constructing the relevant map ourselves. The genotyping data of Estonians and the others and LD map of the human chromosome 22 demonstrate clearly that there are only minor differences between European populations. Meaning that if the new drug will be based on the genetic data of Estonians, it can be used as a drug for other Europeans as well.

Future of the EGP depends on two major factors: i) how many Estonians would like to be a part of it and ii) level of trust of the public institutions and private investors in the EGP and the project team working hard to make it happen.