INTRODUCTION TO THE JOHANNES LINNEBORN PRIZE AND THE 2013 WINNER LAUDATION

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Chairman of the Nomination Committee

The Johannes Linneborn Prize was established in 1994 on behalf of the European Commission by Dr. Wolfgang Palz to honor a European individual for an exceptional life-time contribution to the field of sustainable energy from biomass. It is not a reward for scientific excellence only but also technical and managerial merits are appreciated. This prestigious award was connected to the name of Johannes Linneborn, a German biomass pioneer and businessman and the manufacturer of more than 500,000 Imbert small-scale wood gasifiers used to fuel cars, when fossil liquid fuels were scarce. His ideal was a world in which mankind lives in harmony with nature with optimal exploiting of biomass for energy and materials. On the picture you see Mr. Linneborn together with the young Dr. Palz.
From a long list of excellent candidates the Prize Committee selected as winner of the Linneborn Prize 2013:

Professor Liisa Viikari
Research Director and Professor em.
University of Helsinki, Finland

The prize is awarded to her for her outstanding contribution and leadership for over 35 years in research and development of a large number of important biotechnologies for conversion of renewable ligno-cellulose resources into energy carriers and high added value chemicals and products. Especially her fundamental and development work on novel enzymes and on new combined conversion techniques for ligno-cellulosic raw materials and their constituents attracted worldwide attention and admiration. Her innovative ideas for new biotechnological conversion routes to new and existing products for the pulp and paper, chemical and energy sectors are exceptional.

This remarkable lady created her highly recognized and successful work in a strongly competitive and important area: renewable biomass, not interfering with the food and feed chain, converted to highly valuable fuels and products by biotechnological, enzymatic, or mixed techniques.

Liisa Viikari started her work as a research scientist at VTT in Finland in 1975 in the biotechnological laboratory. At VTT she made a rapid career and became head of the Process Technology section in 1981 and later head of Research in Biotechnology in VTT Biotechnology and Food Research. In 1981 she got her licentiate and later a PhD (Helsinki University of Technology). In 1995 she was nominated Research Professor Pulp and Paper Industry at VTT and in 2000 Research Professor Biotechnology. In 2007 she was invited to become Professor in Biorefining at the University of Helsinki.

If biomass has to become a major source of energy and products, the ligno-cellulosic feedstocks will be the preferred ones, due to the large quantities and the avoidance of competition with feed and food. It is clear that biotechnology can bring a wide spectrum of conversion routes to desired products. In the first part of her career at VTT Liisa worked on applications in the Pulp and Paper Industry where the ligno-cellulosic feedstock is already collected and used in huge quantities. Here Liisa was active in studying the enzymatic conversion and pretreating possibilities in the existing and new processes for pulp (like bleaching of pulp, etc.)of different origins.

Also the production and application of a wide variety of different enzymes from new sources, for conversion or pretreatment of different constituents of wood were studied. Moreover she and her co-workers studied bacterial treatment steps, fungal treatment steps and many more important subjects ranging from fundamentals to direct applications and improvements in the processes.

Lately her work on biomass conversion was concentrated on novel enzymes and technologies that decrease the cost of ligno-cellulose conversion to energy carriers like ethanol, methane, etc. and to upgrading components in the feedstock into value added products. Cost reduction by clever solutions and reduction of losses and energy consumption is indeed the crux in the chain to the market. Apart from her more than 160 scientific papers and many patents and patents requests (> 30) Prof. Viikari was also very active in producing visionary and authoritative critical reviews and overview lectures, stand of technology and science papers, book contributions, etc. in the earlier mentioned fields.

Many people and organizations requested her advice and she participated in a wide range of advisory and/or program guidance committees inside Finland in other Nordic countries and for the EU (like AGE, Advisory councils: European Industrial Platform Biofuels, Cell Factory, SCAN, etc.).

She was co-organizer and committee member of countless symposia and was a highly appreciated member of editorial board of scientific journals like the Journal of Biotechnology, Carbohydrate polymers, Cellulose, Wood Science, Biotechnology for Biofuels, etc. She was also member of many professional societies in Finland, Europe and in other parts of the world.

Prof. Viikari is a member and was vice chairman of the Board of the Finnish Academy of Technology.

She also received for the work many awards in Finland, like from the Ministry of Environment, Emmanuel Merck, Walter Allström Price.

She also is a Knight First Class of the Order of the White Rose of Finland. Recognition came also from the USA: Anselm Payan Award and recently 2013 Charles D. Scott Award.

Ladies and gentlemen, it is now time that here in Europe we make a clear statement to Prof. Viikari. Liisa we are proud of you to have you as a professional scientist and teacher, engineer and inventor and as a person in the biomass community here in Europe and we are particularly happy that the prestigious Linneborn Price 2013 will be conferred to you.

Our warmest congratulation and we are sure the whole community of biomass in Europe and worldwide will join the committee in this congratulation.