Professor Harri Lönnberg
A Tribute

Dedicated to Professor Harri Lönnberg on the occasion of his 60th birthday

Harri Lönnberg was born on October 25, 1949 in Heideken in the historical and cultural city of Turku. In fact he has spent all of his life as a Turku citizen and now lives in a private house in Vaala. Harri studied in the Department of Chemistry, University of Turku where he received his B.Sc. in 1970, M.Sc. in 1972 and Ph.D. in physical organic chemistry 1976. It is worth mentioning than Harri is one of the three all time youngest doctors of Chemistry from Turku. His Ph.D. thesis was entitled "Mechanisms for the Cleavage of the Glycosidic Bond in the Hydrolytic Decomposition of Aldofuranosides".

Harri's professional appointments include: Docent in Physical Organic Chemistry 1980-1992; Teaching Assistant in Chemistry 1972-1979; Research Assistant (1974-1977), Junior Research Fellow (1979-1982) and Senior Research Fellow (1982-1987) of the Academy of Finland; Acting Associate Professor of Physical Chemistry (University of Turku) for 12 months 1989-1990; Advanced Research Fellow (Academy of Finland) altogether for 36 months 1990-1992 and 1995-1996 and Professor of Organic Chemistry (University of Turku) since 1992.

Harri is happily married and he has two sons - one has a Ph.D. degree from Harri's own group and the other is a biologist. Harri is a typical Finn since he likes spending time in his summer house, work in the garden and outdoor activities. In 1977 after completing his doctorate Harri served as a recruit in an anti-tank defence regiment in Mikkeli, attended the Reserve

Officer School in Hamina, and served as a cadet in the Defence School in Upinniemi. His military rank is Lieutenant.

He has been a member of the Finnish Academy of Sciences and Letters since 1995 and he received the first grade decoration of Finnish White Rose order in 2000.

He was Head of the Graduate School of Bioorganic Chemistry (1995-2002), Bioorganic and Medicinal Chemistry (2002-2006) and is now Head of the Graduate School of Organic and Biological Chemistry (2007-2011). He has been the opponent for Academic Disputations 11 times and supervised 20 Ph.D theses. He has been very active in the administration of University of Turku being the Dean of the Faculty of Mathematics and Natural Sciences 1993-1995 and 1998-2000 and Vice Rector responsible for research strategies, doctoral education, research services and industrial collaboration 1999-2004. He has also been Head of the Chemistry Department in 1993 and again from 2003 onward.

He has a lot of other activities, e.g. as a member of several editorial boards and boards of trustees. He is a member of several scientific societies such as the American Chemical Society and the Society of Combinatorial Sciences. He has given numerous invited plenary and keynote lectures and short oral communications in international scientific meetings and foreign universities and research institutes since 1985. He is a widely used referee for international journals and besides all the above, he is the author of more than 250 original research articles in international journals, as well as numerous review articles and/or book chapters, conference proceedings or short presentations published in books or scientific journals, 4 patents and 170 conference abstracts (not printed in scientific journals).

In his research Harri has been very versatile. He has published papers in collaboration with ca 20 foreign institutions, most actively with the Universities of Stockholm and Upsala in Sweden, University of Warsaw in Poland and University of Szeged in Hungary. Some of the main branches of his research can be described as follows:

- *In addition to the kinetics and mechanisms of RNA cleavage, which is his main scientific activity, his group prepares oligonucleotides which are stabilized by structural modifications against enzymatic degradation and which bear various non-natural conjugate groups since they are increasingly used as research tools for life sciences. The latter groups provide the oligonucleotide with some novel properties, such as cleaving activity, cell specificity, improved cellular uptake, improved selectivity of hybridization, or they may allow in vivo imaging of oligonucleotides.*
- *His group is also developing novel solid-phase methods for the preparation of oligomeric bioconjugates. Such conjugates typically contain structural units of more than one type of biopolymer. Combining template synthesis and classical solid-phase synthesis is seen as a special challenge. In addition, novel types of combinatorial libraries of potential phosphokinase inhitors are under development.*
- *Formation of cyclic adducts of DNA bases is one of the major mechanisms of chemical carcinogenesis. He has therefore undertaken the study of kinetics and mechanism of the modification of nucleic acid bases by 1,3-dicarbonyl compounds and their congeners.*

- *Enrichment of phosphoproteins from the protein pool of the cell. This would greatly simplify the proteomics related to post-translational phosphorylations playing the major role in cell signalling. Therefore his group is involved in developing methods for chemical modification and derivatisation bearing the above general goal in mind.*

Harri thinks that he is a fairly typical university professor, whose time is shared between teaching research and administration which makes it difficult to get practically anything done. By inspecting Harri's achievements I must take a rather opposite view. It is amazing that with all of his activities, of which only some are listed here, he has managed to do so much not only in research but also as a good teacher and an excellent administrator. I always valued Harri's thinking, ideas and creativity very highly and feel happy to take credit for pushing him many years ago to open his international connections which are nowadays very versatile and plentiful. There is no doubt that Harri is one of the forefront persons in organic chemistry in his field and I am happy that you all wished to contribute a paper to his commemorative issue.

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Selected Papers

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