



## Prof. Erna Möller Professor



### Most important awards, prizes and academies

Member of the Swedish Royal Academy of Sciences; Member of the Swedish Royal Academy of Engineering Sciences. Chairman of Karolinska Institutet graduate school; Chairman, Huddinge University Hospital research committee; Chairman, Microbiology Committee, MRC and member of MRC board; Member of faculty board, Karolinska Institutet; Member of the Nobel Assembly (physiology or medicine) (1987-2009); Chairman, Nobel Assembly (2007); Vice Chairman (2006); Director, Astra, Sweden (1995-99); Director AstraZeneca PLC, Great Britain (1999-2007); Board member, European Institute for Innovation and Technology (EIT) (2008-11); Chairman, S.ta Katharinastiftelsen (Katharina Foundation) (2008-). MD *honoris causa*, Turku University and Helsinki University, Finland. Honorary member, Scandinavian Society for Immunology; Knight of the Finnish order – Vita Rosen; Gold Medal (12th size in blue ribbon) from King Carl-Gustav of Sweden (2005).

### Summary of scientific research

Her research focussed on immunological problems when organs are transplanted between individuals, a topic which she has studied in different ways during all her career. Transplantations carry not only immunological risks, such as rejection, but also pose many ethical questions, as important today as they were in the 1960s.

The research of Erna Möller and her many younger colleagues have contributed to safer clinical transplantation of organs, such as kidneys, but also for stem cell transplantation – a treatment for leukemia. Their science has also contributed to the understanding of a set of genes that control immunological reactions, not only in transplantation, but of crucial importance to regulate immune reactions, such as the risk for various autoimmune diseases.

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### Main publications

Möller E and Möller G. Quantitative studies of the sensitivity of normal and neoplastic mouse cells to the cytotoxic action of isoantibodies. *J. Exp. Med.* 115: 527-552, 1962; Möller E. Contact-induced cytoxicity by lymphoid cells containing foreign isoantigens. *Science* 147: 873-879, 1965; Robért K-H, Möller E, Gahrton G, Eriksson H and Nilsson B: B cell activation of peripheral blood lymphocytes from patients with chronic lymphatic leukemia. *Clin. Exp. Immunol.* 33: 302-308, 1978; Möller E, Carlsson B and Wallin J. Implication of structural class II gene polymorphism for the concept of serologic specificities. *Immunol. Rev.* 85: 107-128, 1985; Möller E, Böhme, J, Valugerdi MA, Ridderstad A and Olerup O: Speculations on mechanisms of HLA associations with autoimmune diseases and the specificity of "autoreactive" T lymphocytes. *Immunol. Rev.* 118: 5-19, 1990; Söderberg C, Larsson S, Bergstedt-Lindqvist S and Möller E: Definition of a subset of human peripheral blood mononuclear cells that are permissive to human cytomegalovirus infection. *J. Virol.* 67(3): 3166-3175, 1993; Söderberg C, Sumitran-Karuppan S, Ljungman P and Möller E: CD13-specific autoimmunity in cytomegalovirus-infected immunocompromised patients. *Transplantation* 61: 594-600 1996; Möller E, Söderberg-Nauclér, C and Sumitran-Karuppan S: Role of alloimmunity in clinical transplantation. *Rev. Immunogenetics* 1:309-322, 1999; Lindeborg E, Kumagai-Braesch M, Tibell A and Möller E: Continued production of xenoimmune antibodies 6-8 years after clinical transplantation of fetal pig islet-like cell clusters. *Xenotransplantation* 11:457-470, 2004; Lindeborg E, Kumagai-Braesch M and Möller E: Phenotypic and functional characterization of human T cell clones indirectly activated against adult pig islet cells. *Xenotransplantation* 13(1): 41-52, 2006.