

U wordt vriendelijk uitgenodigd op de openbare verdediging van het proefschrift van

Eline MENU

'Pleiotropic role of chemokines in Multiple Myeloma, study in the 5TMM model'

Op **maandag 8 mei 2006** om **16u00**
in auditorium P. Brouwer van de
Faculteit Geneeskunde & Farmacie,
Laarbeeklaan 103, 1090 Brussel

Situering van het proefschrift

This dissertation investigates the role of chemokines in the development of Multiple Myeloma (MM). Despite intensive research, multiple myeloma remains an incurable plasma cell malignancy, characterized by the accumulation of the malignant cells in the bone marrow (BM) where they modulate the microenvironment to their needs, inducing osteolysis and angiogenesis. This leads to pathological fractures, anemia and hypercalcemia. Many questions still remain regarding the development of the disease. A MM cell most likely develops from a post switch B cell and then enters the BM from the blood circulation or at least spreads over the BM. Chemokines play an important role in this process as they attract the MM cells to the BM. Moreover, chemokines have also been implicated in processes such as osteolysis and angiogenesis.

In this work we investigated several chemokines and their pleiotropic role in the development of MM in the murine 5TMM model. 5TMM models initially originated spontaneously in aging C57BL/KaLwRij mice and have since been propagated in young syngeneic mice by intravenous transfer of the diseased BM. The models closely represent the human disease.

We found that several molecules such as insulin-like growth factor-1 (IGF-1), stromal cell derived factor 1 α (SDF1 α) and macrophage inflammatory protein 1 α (MIP1 α) are not only chemotactic proteins for MM cells but also have pleiotropic roles in the development of MM. Targeting these chemokines in vivo proved to have therapeutic value and could thus possibly contribute to the development of novel drugs in the future.

Curriculum Vitae

Eline Menu was born in 1979 in Oostende. At the age of 5 she moved with her parents to Virginia, USA, where they lived for 3 years, and where she learned English and the American culture. Back in Belgium her interest was sparked for science and research. In 1997 she began her studies in Biomedical Sciences at the Vrije Universiteit Brussel. In her last year, she prepared a master thesis on Multiple Myeloma cell migration at the department of Hematology and Immunology and she graduated with greatest distinction in 2001. During this period she was triggered by scientific research and she began the preparation of her PhD thesis in the same laboratory on a FWO scholarship, supervised by Profs. B. Van Camp and K. Vanderkerken. Several (inter)national collaborations proved to be fruitful. Points of interest during her scholarship were: in vitro and in vivo studies on cancer cell biology, signal transduction pathways, and preclinical drug discovery. Her work resulted in several publications and awards, among which the Amgen award of the Belgian Hematology Society for best overall presentation. Recently her publications also received media interest from several newspapers.