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Geneeskunde & Farmacie

GF

PhD in Medical Sciences
2015-2016

INVITATION to the Public defence of

Kim DE VEIRMAN

To obtain the academic degree of **'DOCTOR IN MEDICAL SCIENCES'**

The role of bone marrow derived bystander cells in the development of multiple myeloma

Thursday 26 May 2016
Auditorium **Brouwer**, 16:00
Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

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Summary of the dissertation

Multiple Myeloma (MM) is a hematological cancer hallmarked by the clonal expansion of malignant plasma cells in the bone marrow (BM). Despite significant therapeutic advances, MM remains an incurable disease for the majority of patients due to an incomplete eradication of residual cancer cells and/or acquired drug resistance. It is now well-established that the BM constitutes a microenvironment required for development, maintenance, proliferation and drug resistance of MM cells. In the past decade, proteasome inhibitors as well as immunomodulatory agents significantly increased the survival of MM patients by targeting both the BM microenvironment and the MM cells. This emphasizes the need for further investigation of the MM-BM interactions to develop new targeted therapies. The aim of this PhD thesis was to study bystander cells of the BM niche in their potential to stimulate myeloma progression and drug resistance. We used the immunocompetent 5TMM mouse model that resembles the human disease closely and allows the ability to investigate the interactions between MM cells and the BM microenvironment. We focused on the role of myeloid derived suppressor cells (MDSC), cancer associated fibroblasts (CAFs) and mesenchymal stromal cells in the development of MM disease.

Curriculum Vitae

Kim De Veirman (° Dendermonde, 01-08-1988) studied biomedical sciences at the Vrije Universiteit Brussel. In 2011, she performed her master thesis at the UZ Brussel under the supervision of Prof. Ivan Van Riet and investigated the role of mesenchymal stromal cells in multiple myeloma. She obtained her master degree with great distinction and continued her research on multiple myeloma in the lab of Hematology and Immunology at the Vrije Universiteit Brussel under the supervision of Prof. Karin Vanderkerken and Prof. Dr. Els Van Valckenborgh. She participated in the OVER-MyR project which was funded by the European Commission. Her work was focused on the role of bone marrow derived bystander cells in the development of multiple myeloma and resulted in several peer-reviewed research publications and two review articles.