**Project description**
The overall aim of our research is to define the mechanisms for immune cell recruitment to gastrointestinal tissues, both in steady state and during inflammatory conditions and cancer development. We focus especially on lymphocyte – endothelial cell interactions, adhesion molecule expression, chemokine production and modulation by decoy receptors, and lymphocyte migration into tissues after vaccination and into tumors. To do this, we use tissue material from patients and healthy volunteers, animal models of gastrointestinal cancer, and an in vitro system for assessment of transendothelial migration that we have developed in the group. Our recent studies have shown the importance of the mucosal chemokine CCL28 for recruitment of specific IgA-secreting cells to intestinal tissues following oral immunization and for recruitment of IgA-secreting cells to Helicobacter pylori infected gastric mucosa. We have also devoted much energy to elucidating mechanisms of effector T cell recruitment to gastrointestinal tumors. We showed that there is a shift in endothelial adhesion molecule expression in gastric tumors, resulting in recruitment of naïve T cells and regulatory T cells (Treg), but also in a reduced influx of activated effector T cells. The Treg are functional and suppress specific T cell activation, and a similar increase in Treg accumulation has more recently been found also in colon tumors. Migration of effector T cells and Treg into tumors is probably also affected by a substantial decrease in expression of the chemokine decoy receptor D6 in colon cancer, that we have recently identified. In healthy tissues, D6 mediates endocytosis and destruction of surplus chemokines, but in tumors this ability is abrogated, probably leading to increased recruitment of tumor associated macrophages and Treg. We have also shown that Treg from cancer patients, but not from healthy volunteers, are potent inhibitors of transendothelial migration of conventional effector lymphocytes. We are now actively investigating the mechanisms behind this finding. Using a mouse model of spontaneous colon cancer and in vivo microscopy, we will also extend these studies to in vivo monitoring of the effect of Treg on lymphocyte extravasation into tumors.

**Key publications during 2006-2009**


**Members of the group:**
Marianne Quiding-Järbrink, professor
Hanna Stenstad, post-doc
Malin Sundquist, post-doc,
Parik Sundström, post-doc
Veronika Olofsson, doktorand
Helena Svensson, doktorand
CURRICULUM VITAE

Name: Marianne Quiding-Järbrink
Date of birth: May 20, 1964

Degrees
1984-1988   M.Sc. in chemistry and biology, Göteborg University

Post-doctoral training
1994-1998   Göteborg University, immunity to H. pylori infection, supervisor: Ann-Mari Svennerholm
1998-2000   London School of Hygiene and Tropical Medicine, London, UK, MMPs in mycobacterial infections, supervisor: Greg Bancroft. Sponsored by STINT (Stiftelsen för internationalisering av forskning och högre utbildning).

Docent (associate professor) competence
1998       Docent in Immunology, Göteborg University

Present position
Professor in immunity to infectious diseases, Institute of Biomedicine, Göteborg University.

Previous positions
2000-2001   Researcher (Forskare) at Dept. of Medical Microbiology and Immunology, Göteborg University.
2002-2008   Researcher (forskare) in “Experimental vaccine research”, financed by the Swedish Science Council, Institute of Biomedicine, Göteborg University.

Ph.D. students supervised to completion of their Ph.D. (main supervisor)
   Mikael Innocenti, thesis defence 2001-12-18.
   Patrik Sundström, licenciate thesis defence 2008-12-04

Ph.D. students supervised to completion of their Ph.D. (co-supervisor)
   Anna Mattsson, thesis defence 1997-12-03.
   Ann-Marie Calander, thesis defence 2007-01-31

Ph.D. students currently being supervised (main supervisor)
   Helena Svensson, thesis defence autumn 2010
   Veronica Olofsson, thesis defence autumn 2011

Post-doctoral scientists supervised
2005-2006 Karin Enarsson, 8 months
2007- Hanna Stenstad, 3 years starting May 2007
2008- Malin Sundquist, 3 years starting March 2008
2009- Patrik Sundström, 2 years starting Feb 2009

Publications
Author of 44 published or accepted original articles and 3 reviews

Funding
Funding from The Swedish Science Council (previously MFR) since 1999, from the Cancer foundation since 2006, and ALF-funding for clinical research since 2005. Member of the MIVAC – mucosal immunobiology and vaccinology - centre of excellence funded by the Foundation for Strategic Research (SSF)

Invited speaker at congresses
I have received 5 invitations to speak at international conferences, and have served as chairman at 5 international conferences.

PhD thesis committee participation
I have been a member of ca 40 Ph.D. examination committees, and the opponent to two Ph.D. theses.

Commissions of trust
2008- Member of the Sahlgrenska Academy advisory board for research policies
2007- Member of different VR evaluation panels (beredningsgrupp) C2 - Infections, airway diseases, and allergy; post-doc applications
2006 VR-hosted evaluation of post-doc applications from the Finnish Academy
2005-2008 Member of the Sahlgrenska Academy advisory board for Ph.D. education
2002-2007 Member of the Medical Faculty thesis examination board (fasta betygsnämnden) at Göteborg University.

Teaching experience
Course leader for an annual 10 week course at MSc level in vaccinology and mucosal immunology, 2008 and 2009
Course leader for a 5 week elective course at MSc level for pharmaceutical students, 2010
Member of the managing group for a biannual 13 week course in infection, microbiology and immunology for medical students, 2005 and onwards
Manager of a biannual 1 week module of endocrinology and immunology for medical students, 2003-2005
Course leader for a 1 week PhD education course in immunocytometry, 2002
Supervisor of 15 MSc theses, 1995 and onwards
Lectures and small group teaching at PhD educations courses, advanced training for nurses and technicians, MSc courses and BSc courses, as well as for medical, dental and nursing students.