Innate immune response molecules as target and biomarkers

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Key research areas of the group

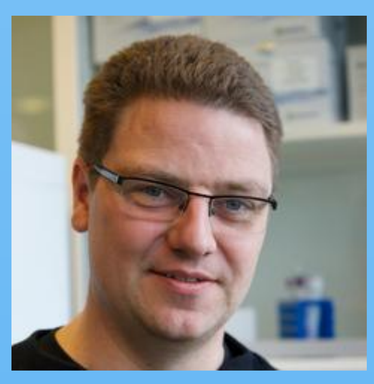
We study molecules expressed on immune cells to better understand their function and role in the innate immune system and its regulation. By understanding the function and regulation of expression of these molecules we can better understand their role in health and disease, which helps us to identify subsets of immune cells that may be targeted to develop therapies regulating the immune response. Understanding regulation of molecules of immune cells has also helped us develop novel biomarkers.

In addition, we are developing novel antibodies, including optimizing antibody development, as part of MADE, a national antibody core facility.

An important aspect of our research is a potential translational applications.

Methods

1. Biosensor technology for analyzing protein-protein interactions
2. Recombinant protein expression
3. Development of novel antibodies & antibody derivatives
4. Bioassay development
5. In vitro & in vivo disease models – often as part of larger collaborations where we provide the novel treatment



Er du interesseret i at skrive projekt i gruppen, så kontakt :
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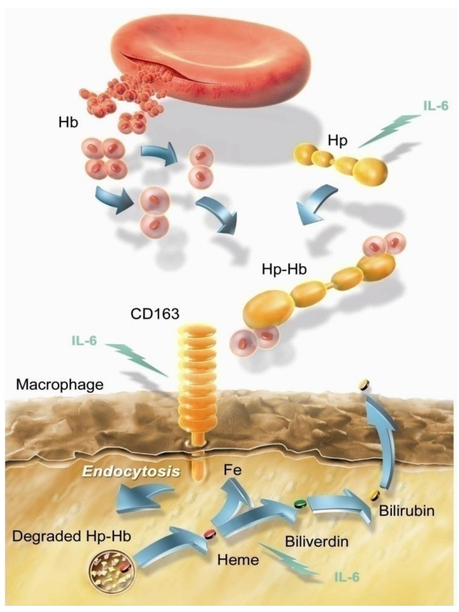

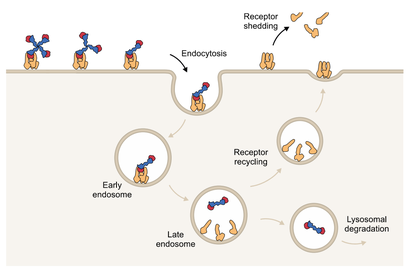

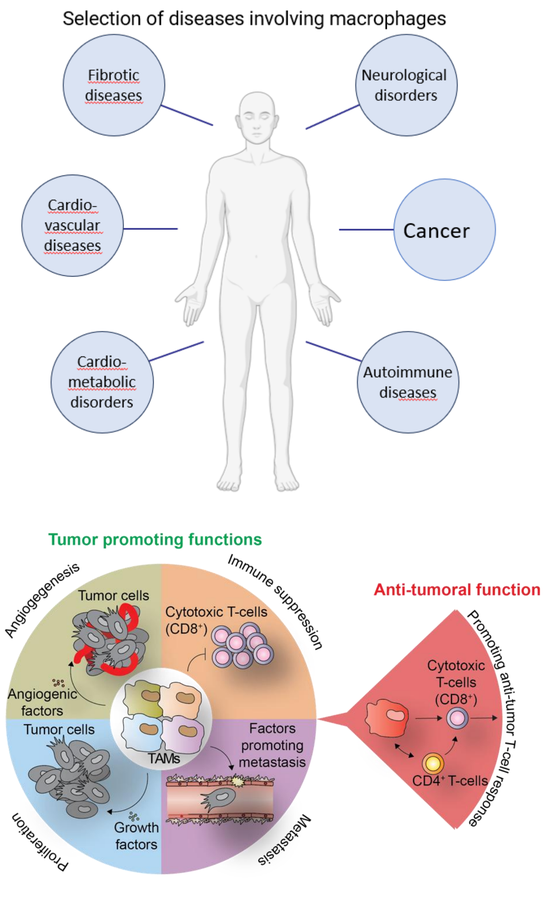

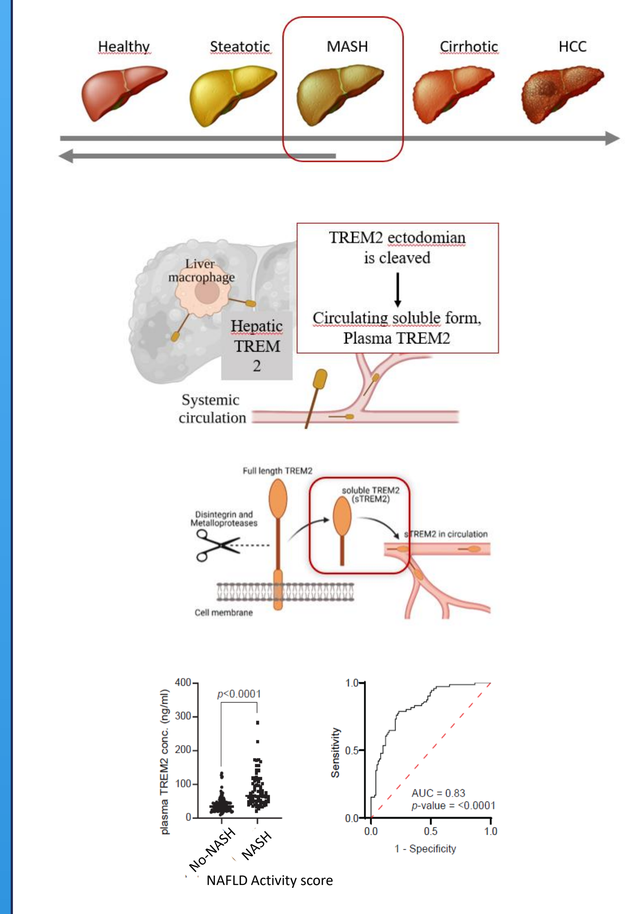

Project examples	Description
Understanding receptor function	We have been studying CD163 for many years, it is a key molecule to identify a subset of macrophages important in cancer and inflammation. We also study its function in mice and humans including its functional role in innate immunity.
Novel targets on myeloid cells for improved therapy of cancer and inflammation	By analyzing patient and animal tumor material we have identified potential novel targets on myeloid cells, that may be useful as targets. A typical project could start with characterizing expressing of this target and developing antibodies binding the target.
Identification of biomarkers in development of MASH (metabolic dysfunction-associated steatohepatisis)	Project to identify novel biomarker for easily identifying MASH, including developing bioassays to measure these biomarkers. Part of ATLAS Center of Excellence