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## Targets in the microenvironment of rectal cancer

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**Targets in the microenvironment of rectal cancer**  
*A focus on angiogenic growth factors and chemokines*

1. Several clinical and biological characteristics classify rectal cancer as being distinct from colon cancer. (this thesis)
2. Radical surgical treatment of tumor sites after short-course radiotherapy, and bevacizumab-oxaliplatin-capecitabine combination therapy can be a feasible approach in primary metastasized rectal cancer. (this thesis)
3. Placental growth factor (PlGF) and the CXCL12/CXCR4 chemokine ligand-receptor pair are potential drug targets in rectal cancers. (this thesis)
4. CXCR4 and CXCL12 expression in the cytoplasm and nucleus of rectal cancer cells and adjacent stromal cells suggests activated paracrine, autocrine, and intracrine CXCL12/CXCR4 signaling routes. (this thesis)
5. <sup>89</sup>Zr-labeled PlGF-antibody tracer shows tumor specific uptake. (this thesis)
6. Molecular imaging is a tool to study drug behavior, drug target, and functional effects of novel targeted agents in the entire tumor and metastases over time.
7. In the colorectal cancer microenvironment stromal cell rather than epithelial tumor cell gene expression defines poor-prognosis subtypes. (A. Calon et al, Nature Genetics, 2015)
8. Growth takes place whenever a challenge evokes a successful response that, in turn, evokes a further and different challenge. (A.J. Toynbee, A Study of History, 1961)
9. Worldwide all smoking commercials must be forbidden.
10. A rose a day keeps the doctor away.

Karin Tamas  
Groningen, October 19, 2015