

**S006** Vascular tumour targeting: from the bench to the clinic  
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One avenue towards the development of more selective anti-cancer drugs consists in the targeted delivery of bioactive molecules (drugs, cytokines, procoagulant factors, photosensitizers, radionuclides, etc.) to the tumor environment by means of binding molecules (e.g., human antibodies) specific for tumor-associated markers.

The targeted delivery of therapeutic agents to newly-formed blood vessels (“vascular targeting”) opens a broad palette of biomedical opportunities. Angiogenesis, i.e., the proliferation of new blood vessels from pre-existing ones, is an important process not only in cancer, but also in relevant diseases such as certain blinding ocular disorders and rheumatoid arthritis. The ability to selectively target and occlude neovasculature promises to be useful for the diagnosis and treatment of angiogenesis-related diseases.

In collaboration with Philogen, Schering and with Luciano Zardi (Genova), my laboratory has developed human monoclonal antibodies, capable of selective targeting of neo-vascular structures in solid tumors and in a number of angiogenesis-related diseases. Three derivatives of these antibodies (i.e., two immunocytokines and a radiolabeled antibody) are currently being investigated in clinical trials.