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SUMMARY & MISSION STATEMENT

The mission of the Neri group is to develop novel targeted anticancer therapeutics, capable of preferential localization at the tumor site. A particular focus of the research of the group is devoted to the engineering and testing of novel antibody-cytokine fusion proteins, which boost the activity of the immune system against solid and haematological malignancies.

OVERVIEW

The Neri group has worked for more than two decades on the generation and engineering of fully human antibody products for the therapy of cancer and of chronic inflammatory conditions. In particular, we have developed antibodies against splice isoforms of fibronectin and of tenascin-C, which have shown an impressive tumor-homing potential in mouse models of cancer and in patients with various types of malignancies. These antibodies can serve as delivery vehicles for various types of bioactive payloads, including drugs, radionuclides and cytokines. The antibody-based selective delivery of immunostimulatory agents to the tumor site is particularly attractive for therapeutic applications, as they harness the power of the immune system and as they can be combined with other anti-cancer modalities.

Other areas of research of the Neri group include the generation of large encoded combinatorial libraries of antibodies and of small organic molecules (DNA-encoded chemistry), as well as the ligand-based delivery of cytotoxic agents to solid tumors (small molecule-drug conjugates).

SELECTED CANCER RELATED PUBLICATIONS

Enhancement of the anti-tumor activity of interleukin-12 by targeted delivery to neo-vasculature. Halin C, Rondini S, Nilsson F, Berndt A., Kosmehl H, Zardi L, Neri D. **Nat. Biotechnol.** 2002; 20: 24-269

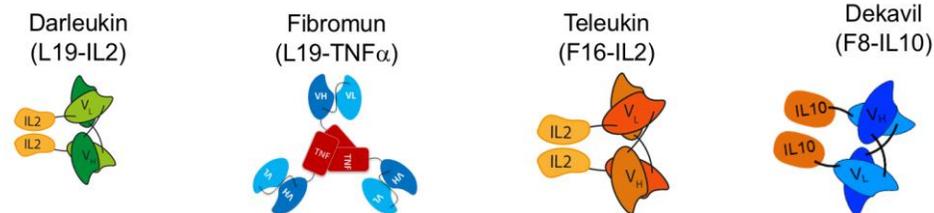
Vascular tumor targeting. Neri D, Bicknell R. **Nat Rev Cancer** 2005; 5: 436-446

Complete eradication of human B-cell lymphoma xenografts using rituximab in combination with the immunocytokine L19-IL2. Schliemann C, Palumbo A, Zuberbuhler K, Villa A, Kaspar M, Trachsel E, Klapper W, Menssen HD, Neri D. **Blood** 2009; 113: 2275-2283.

Antibody-based delivery of interleukin-2 to neovasculature has potent activity against acute myeloid leukemia. Gutbrodt K, Schliemann C, Giovannoni L, Frey K, Pabst T, Klapper W, Berdel WE, Neri D. **Sci Transl Med.** 2013; 5: 201ra118.

Sarcoma eradication by doxorubicin and targeted TNF relies upon CD8+ T-cell recognition of a retroviral antigen. Probst P, Kopp J, Oxenius A, Colombo MP, Ritz D, Fugmann T, Neri D. **Cancer Res.** 2017; 77:3644-3654.

Chemically-defined antibody- and small molecule-drug conjugates for *in vivo* tumor targeting applications: a comparative evaluation. Cazzamalli S, Dal Corso A, Widmayer F, Neri D. **J Am Chem Soc.** 2018; 140: 1617-1621



Antibody-cytokine fusion proteins