Modulating the behaviour of pancreatic tumour cells

Vlecken, D.H.W.

Curriculum Vitae

Danielle Helena Wilhelmina Vlecken was born on 12 November 1975 in Ain Aer, Lebanon and grew up in Amstenrade, The Netherlands. She attended secondary education at the Waterland college in Amsterdam-Noord.

In 2004, Danielle started her study in biology at the University of Leiden, where she completed two internships. Both internships were done in Dr. Bagowski's lab which formed a bridge between Integrative Zoology and Molecular and Cell biology. During the first (BSc) internship Danielle studied the role of myoglobin in zebrafish development which became a publication in the International journal of developmental biology. During the second (MSc) internship, Danielle worked on two projects. The first one included studying the expression patterns of LRIG1, LRIG2 and LRIG3 in zebrafish and mouse embryos. The other project involved assessment of the impact of metal compounds on vasculogenesis and angiogenesis in zebrafish embryos resulting in various co-authorships. These projects resulted in several co-author publications. After finishing the thesis on her MSc research projects, she received her Master's degree in 2009 (cum laude, summos honores).

From 2009-2011, two projects were started at the university of Leiden, completed and subsequently published (Chapters 3 and 4 of this thesis). Two projects were started, but not fully completed (Chapters 2 and 5 of this thesis). The *in vivo* experiments were performed, whereas the *in vitro* work was completed in 2014.

From 2009-2013, Danielle also worked on studies for the projects "Platform technology and expression systems for viral vaccines" and "Adaptation patterns in human viruses". These studies were done within the framework of a PhD project at the NVI (Netherlands Vaccine Institute), the RIVM (national institute for public health and the environment), Intravacc and the university of Utrecht.

In the beginning of 2014, Danielle returned to the University of Leiden to complete her PhD thesis based on research on the behaviour of pancreatic cancer cells under gene-knockdown conditions and in drug-screens using biological –and synthetic bio-active compounds.

In September 2014, Danielle was appointed as a scientist at the university of Leiden and she works on a project involving signaling during embryonic limb development in the chick. Additionally, Danielle is working on the setup of four companies involved in production of biological compounds and development of platforms for the manufacture of biomolecules. These companies, one of which will start as a spin-off company of the university of Leiden, are launched in 2015.

List of publications

1. In Preparation.

   The oncogenic potential of HOX genes in pancreatic cancer cell dissemination and tumour-induced angiogenesis

   Danielle Vlecken, Prisca Leferink, Markus Lerch, Christoph P. Bagowski and Ulrich F. Weiss,

2. In Preparation.
   Whole snake venoms: toxicity and anti-angiogenic properties
   Danielle Vlecken, Babette van Soolingen, Sjors Nooteboom, Freek Vonk, Christoph P. Bagowski, Herman Spaink and Michael Richardson

3. Comparison of initial feasibility of host cell lines for viral vaccine production.
   Vlecken DH, Pelgrim RP, Ruminski S, Bakker WA, van der Pol LA.
   J Virol Methods. 2013 Oct;193(1):28-41. doi: 10.1016/j.jviromet.2013.04.020. Epub 2013 May 14.

4. On the biological properties of alkynyl phosphine gold(I) complexes.
   Meyer A, Bagowski CP, Kokoschka M, Stefanopoulou M, Alborzinia H, Can S, Vlecken DH, Sheldrick WS, Wölfl S, Ott I.
   Angew Chem Int Ed Engl. 2012 Aug 27;51(35):8895-9. doi: 10.1002/anie.201202939. Epub 2012 Jul 29. No abstract available.

5. Iridium complex with antiangiogenic properties.
   Wilbuer A, Vlecken DH, Schmitz DJ, Kräling K, Harms K, Bagowski CP, Meggers E.
   Angew Chem Int Ed Engl. 2010 May 17;49(22):3839-42. doi: 10.1002/anie.201000682.

6. LIMK1 and LIMK2 are important for metastatic behavior and tumour cell-induced angiogenesis of pancreatic cancer cells.

Vlecken DH, Bagowski CP.
Zebrafish. 2009 Dec;6(4):433-9. doi: 10.1089/zeb.2009.0602.

7. Naphthalimide gold(I) phosphine complexes as anticancer metallodrugs.
Bagowski CP, You Y, Scheffler H, Vlecken DH, Schmitz DJ, Ott I.
Dalton Trans. 2009 Dec 28;(48):10799-805. doi: 10.1039/b912378d. Epub 2009 Oct 28.

8. Retinoic acid receptor antagonists inhibit miR-10a expression and block metastatic behavior of pancreatic cancer.
Weiss FU, Marques IJ, Woltering JM, Vlecken DH, Aghdassi A, Partecke LI, Heidecke CD, Lerch MM, Bagowski CP.
Gastroenterology. 2009 Dec;137(6):2136-45.e1-7. doi: 10.1053/j.gastro.2009.08.065. Epub 2009 Sep 10.

9. Metastatic behaviour of primary human tumours in a zebrafish xenotransplantation model.
Marques IJ, Weiss FU, Vlecken DH, Nitsche C, Bakkers J, Lagendijk AK, Partecke LI, Heidecke CD, Lerch MM, Bagowski CP.
BMC Cancer. 2009 Apr 28;9:128. doi: 10.1186/1471-2407-9-128.

10. A critical role for myoglobin in zebrafish development.
Vlecken DH, Testerink J, Ott EB, Sakalis PA, Jaspers RT, Bagowski CP.
Int J Dev Biol. 2009;53(4):517-24. doi: 10.1387/ijdb.082651dv.

11. A gold(I) phosphine complex containing a naphthalimide ligand functions as a TrxR inhibiting antiproliferative agent and angiogenesis inhibitor.
Ott I, Qian X, Xu Y, Vlecken DH, Marques IJ, Kubutat D, Will J, Sheldrick WS, Jesse P, Prokop A, Bagowski CP.
J Med Chem. 2009 Feb 12;52(3):763-70. doi: 10.1021/jm8012135.

12. Modulation of the biological properties of aspirin by formation of a bioorganometallic derivative.
Ott I, Kircher B, Bagowski CP, Vlecken DH, Ott EB, Will J, Bensdorf K, Sheldrick WS, Gust R. Angew Chem Int Ed Engl. 2009;48(6):1160-3. doi: 10.1002/anie.200