

PERSONAL DATA

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DEGREES

1985: Centre Universitaire du Luxembourg (Cours de Chimie/Biologie), Luxembourg
1989: Master in Biology, University of Fribourg, Switzerland
1996: Ph.D. degree in Cell Biology, Friedrich Miescher Institute and University of Basel, Switzerland
2008: Authorized PhD supervisor at the University of Luxembourg

RESEARCH POSITIONS

1990-1991: Research assistant at SANDOZ Pharma AG, Central Nervous System Department, Basel, Switzerland
1991-1996: PhD student, Friedrich Miescher-Institut, Basel, Switzerland, Lab of Prof. D. Monard
1997-2000: Postdoctoral fellow in the lab of Prof. J. Raper at the University of Pennsylvania Medical School, Department of Neuroscience, Philadelphia, USA. Research area: Axon guidance during CNS development
2000-05: Junior scientist in the Neuroregeneration Department at the Netherlands Institute for Neuroscience (NIN), Amsterdam. Group of Prof. J. Verhaagen. Research area: Chemorepellent guidance molecules in spinal cord regeneration
2005-07: Senior scientist establishing the NorLux Neuro-Oncology Laboratory at CRP-Santé (Luxembourg), in close collaboration with Prof. R. Bjerkvig from the University of Bergen (Norway)
Since February 2008: Head of the NorLux Neuro-Oncology Laboratory at CRP-Santé, Luxembourg. Research area: Molecular mechanisms of brain tumour development, tumor angiogenesis and cancer stem cells in malignant gliomas.

SCIENTIFIC MANAGEMENT AND ACTIVITIES

- Head of the Norlux Neuro-Oncology Research Laboratory at CRP-Santé, Luxembourg (www.norlux.lu), currently comprising 14 members (one associate head, one staff researcher, two postdocs, six PhD students, one research engineer, three technicians, a variable number of Master students)
- Member of the Advisory Committee to the CEO of CRP-Santé
- Responsible of Animal Facility at CRP-Santé
- Longterm experience in lab organization, in the transfer of techniques and the communication of scientific results, in the supervision and training of scientific and technical staff.
- Regular referee for grant proposals and scientific articles
- Organization of scientific conferences and workshops
- Regular invited speaker at major international conferences including: *World Congress for Neuro-Oncology (2009)*, *Meeting of the British Neuro-Oncology Society (2009)*, *Scandinavian Neuro-Oncology Meetings (2007, 2009)*, *Meetings of the COST Action on Bioencapsulation (COST 865) (2008-2009)*, *Asilomar Brain Tumor Meeting (2010)*, *European Association for Neuro-Oncology Meeting (EANO 2010)*, *Meeting of the US Society for Neuro-Oncology (SNO 2010)*.
- Responsible for undergraduate student projects (master's thesis) and co-promotor of 7 PhD projects at several universities: University of Luxembourg (Luxembourg), Nancy University (INPL, UHP) (France), University of Bergen (Norway), University of Groningen (Netherlands) and Free University of Amsterdam (Netherlands).

- Participation in thesis committees and thesis defenses at the Free University (VU) Amsterdam, the University of Luxembourg, University of Nancy UHP (France).
- Member and 'Rapporteur' in HDR committee of Dr. B. Janji (Université Pierre et Marie Curie, Paris) 2011.
- Member of the Scientific Advisory Board of the Centre François Baclesse (National Center for radiotherapy), Luxembourg

RESEARCH FUNDING SUPPORT (past and present)

- Swiss National Science Foundation, Ciba Geigy Foundation, Switzerland, 1996-1997
- Bourse formation recherche (BFR), Ministry of Higher Education and Research (MESR) of Luxembourg, 1997-1999
- Christopher Reeve Paralysis Foundation (CRPF), US (with J. Verhaagen), 2000-2001
- Van den Houtenfonds, NL, 2002
- Dutch Brain Foundation (Hersenstichting Nederland, HsN), NL, 2002, 2003-2005
- International Spinal Cord Research Trust (ISRT), UK (with J. Verhaagen), 2005
- EU 6th FP, Integrated Project (coordinator R. Bjerkvig), 2005-2009
- Fonds National de la Recherche (FNR) Luxembourg, 2007-2008, 2009-2011, 2011-2013

Currently the laboratory is financed about 60% through internal funding, and about 40% through competitive funding.

PROFESSIONAL MEMBERSHIPS

- Society for Neuroscience (SFN), since 1998
- Dutch Neurofederation, since 2000
- European Association for Neuro-Oncology (EANO), since 2007
- Society for Neuro-Oncology (SNO), since 2008
- American Association for Cancer Research (AACR), since 2008
- European Association for Cancer Research (EACR), since 2010

PEER-REVIEWED PUBLICATIONS

Keunen O, Johansson M, Oudin A, Sanzey M, Abdul Rahim SA, Fack F, Thorsen F, Taxt T, Bartos M, Jirik R, Miletic H, Wang J, Stieber D, Stuhr L, Moen I, Rygh CB, Bjerkvig R, Niclou SP. Anti-VEGF treatment reduces blood supply and increases tumor cell invasion in glioblastoma. *Proc Natl Acad Sci U S A*. 2011 Feb 14. (E pub ahead of print)

Golebiewska A, Brons NH, Bjerkvig R, Niclou SP. Critical appraisal of the side population assay in stem cell and cancer stem cell research. *Cell Stem Cell*. 2011 Feb 4;8(2):136-47.

Goplen D, Bougnaud S, Rajcevic U, Bøe SO, Skaftnesmo KO, Voges J, Enger PO, Wang J, Tysnes BB, Laerum OD, Niclou S, Bjerkvig R. {alpha}B-Crystallin Is Elevated in Highly Infiltrative Apoptosis-Resistant Glioblastoma Cells. *Am J Pathol*. 2010, 177(4):1618-28

Niclou SP, Fack F, Rajcevic U. Glioma proteomics: status and perspectives. *J Proteomics*. 2010 Sep 10;73(10):1823-38. Epub 2010 Mar 20.

Garcia P, Youssef I, Utvik JK, Florent-Bécharde S, Barthélémy V, Malaplate-Armand C, Kriem B, Stenger C, Koziel V, Olivier JL, Escanye MC, Hanse M, Allouche A, Desbène C, Yen FT, Bjerkvig R, Oster T, Niclou SP, Pillot T. Ciliary neurotrophic factor cell-based delivery prevents synaptic impairment and improves memory in mouse models of Alzheimer's disease. *J Neurosci*. 2010 Jun 2;30(22):7516-27.

Ehlert EM, Eggers R, Niclou SP, Verhaagen J. Cellular toxicity following application of adeno-associated viral vector-mediated RNA interference in the nervous system. *BMC Neurosci*. 2010 Feb 18;11:20. PubMed PMID: 20167052.

Bjerkvig R, Johansson M, Miletic H, Niclou SP. Cancer stem cells and angiogenesis. *Semin Cancer Biol*. 2009 Oct;19(5):279-84. Epub 2009 Oct 7.

Rajcevic U, Petersen K, Knol JC, Loos M, Bougnaud S, Klychnikov O, Li KW, Pham TV, Wang J, Miletic H, Peng Z, Bjerkvig R, Jimenez CR, Niclou SP. iTRAQ-based proteomics profiling reveals increased metabolic activity and cellular cross-talk in angiogenic compared with invasive glioblastoma phenotype. *Mol Cell Proteomics*. 2009 Nov;8(11):2595-612. Epub 2009 Aug 12.

Miletic H, Niclou SP, Johansson M, Bjerkvig R. Anti-VEGF therapies for malignant glioma: treatment effects and escape mechanisms. *Expert Opin Ther Targets*. 2009 Apr;13(4):455-68. Review.

- Rajcevic U, Niclou SP and Jimenez CR. Proteomics strategies for target identification and biomarker discovery in cancer. *Frontiers in Bioscience*. 2009 Jan 1; 14: 3292-3303.
- Niclou SP & Bjerkvig R. Treatment of brain tumors with micro-encapsulated cell therapy. Book chapter in: *The Bioartificial Pancreas and other Biohybrid Therapies*. 2009. Eds. Hallé, de Vos, Rosenberg. Transworld Research Network.
- Utvik JK & Niclou SP. Recombinant cell micro-encapsulation for treating neurodegenerative diseases in the ageing brain. Book chapter in: *The Bioartificial Pancreas and other Biohybrid Therapies*. 2009. Eds. Hallé, de Vos, Rosenberg. Transworld Research Network.
- Johansson U, Rasmusson I, Niclou SP, Forslund N, Gustavsson L, Nilsson B, Korsgren O, Magnusson PU. Formation of composite endothelial cell-mesenchymal stem cell islets: a novel approach to promote islet revascularization. *Diabetes*. 2008 Sep; 57(9):2393-401. Epub 2008 Jun 2.
- Niclou SP, Danzeisen C, Eikesdal HP, Wiig H, Brons NH, Poli AM, Svendsen A, Torsvik A, Enger PØ, Terzis JA, Bjerkvig R. A novel eGFP-expressing immunodeficient mouse model to study tumor-host interactions. *FASEB J*. 2008 Sep; 22(9):3120-8. Epub 2008 May 21.
- Terzis AJ, Niclou SP, Rajcevic U, Danzeisen C, Bjerkvig R. Cell therapies for glioblastoma. *Expert Opin Biol Ther*. 2006 Aug;6(8):739-49.
- De Winter F, Vo T, Stam FJ, Wisman LA, Bar PR, Niclou SP, van Muiswinkel FL, Verhaagen J. The expression of the chemorepellent Semaphorin 3A is selectively induced in terminal Schwann cells of a subset of neuromuscular synapses that display limited anatomical plasticity and enhanced vulnerability in motor neuron disease. *Mol Cell Neurosci*. 2006 May-Jun;32(1-2):102-17. Epub 2006 May 3.
- Niclou SP, Ehlert EM, Verhaagen J. Chemorepellent axon guidance molecules in spinal cord injury. *J Neurotrauma*. 2006 Mar-Apr;23(3-4):409-21. Review.
- Majed HH, S. Chandran, SP. Niclou, RS. Nicholas, A. Wilkins, MG. Wing, KE. Rhodes, M. Spillantini & A. Compston. A novel role for Sema3A in neuroprotection from injury mediated by activated microglia. *J. Neurosci*. 26(6):1730-1738, 2006.
- Hu Y, Leaver SG, Plant GW, Hendriks WT, Niclou SP, Verhaagen J, Harvey AR, Cui Q. Lentiviral-mediated transfer of CNTF to schwann cells within reconstructed peripheral nerve grafts enhances adult retinal ganglion cell survival and axonal regeneration. *Mol Ther*. 11(6):906-15, 2005.
- Sinnreich M., M. Meins, S.P. Niclou, H.S. Suidan, and D. Monard. Prothrombin overexpressed in postnatal neurons requires blood factors for activation in the mouse brain. *J. Neurochem*. 88(6):1380-8, 2004.
- B.Y. Ahmed, S. Chakravarthy, R. Eggers, W.T.J.M.C. Hermens, J.Y. Zhang, S.P. Niclou, C. Levelt, F. Sablitzky, P.N. Anderson, A.R. Lieberman and J. Verhaagen. Efficient delivery of Cre-recombinase to neurons in vivo and stable transduction of neurons using adeno-associated and lentiviral vectors. *BMC Neuroscience* 5:4, 2004.
- Shearer M.C., S.P. Niclou, D. Brown, R.A. Asher, A. Holtmaat, J. Verhaagen and J.W. Fawcett. The astrocyte/meningeal cell interface is a barrier to neurite outgrowth which can be overcome by manipulation of inhibitory molecules or axonal signalling pathways. *Mol. Cell. Neurosci*. 24: 913-925, 2003.
- Niclou S.P., E.H.P. Franssen, E.M.E. Ehlert, M. Taniguchi and J. Verhaagen. Meningeal cell-derived Semaphorin3A inhibits neurite outgrowth. *Mol. Cell. Neurosci*. 24: 902-912, 2003.
- Harvey A.R., W. Kamphuis, R. Eggers, N.A. Symons, B. Blits, S.P. Niclou, G.J. Boer and J. Verhaagen. Intravitreal injection of adeno-associated viral vectors results in the transduction of different types of retinal neurons in neonatal and adult rats: a comparison with lentiviral vectors. *Mol. Cell. Neurosci*. 21(1):141-57; 2002.
- Ruitenber M.J., G.W. Plant, C.L. Christensen, Blits B., S.P. Niclou, A.R. Harvey, G.J. Boer and J. Verhaagen. Viral vector-mediated gene expression in olfactory ensheathing glia implants in the lesioned rat spinal cord. *Gene Therapy* 9(2):135-46. 2002.
- Niclou S.P., L. Jia and J.A. Raper. Slit2 is a repellent for retinal ganglion cell axons. *J. Neurosci*. 20: 4962-4974, 2000.
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- Suidan H.S.*, S.P. Niclou*, J. Dreessen, N. Beltraminelli and D. Monard. The thrombin receptor is present in myoblasts and its expression is repressed upon fusion. *J. Biol. Chem*. 271: 29162-29169, 1996. (* these authors contributed equally)
- Suidan H.S., S.P. Niclou and D. Monard. The thrombin receptor in the nervous system. *Review. Sem. Throm. Hemostat*. 22 (2): 125-133, 1996.
- Suidan H.S., K.J. Clemetson, M. Brown-Luedi, S.P. Niclou, J.M. Clemetson, J. Tschopp and D. Monard. The serine protease granzyme A does not induce platelet aggregation but inhibits responses triggered by thrombin. *Biochem. J*. 315 (3): 939-945, 1996.
- Niclou S.P., H.S. Suidan, M. Brown-Luedi and D. Monard. Expression of the thrombin receptor mRNA in rat brain. *Cell. Mol. Biol*. 40: 421-428, 1994.