

CURRICULUM VITAE

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PRESENT POSITION

Head of the laboratory for Esophageal Cancer Characterization at IRIBHM, "Université Libre de Bruxelles" (ULB) Brussels (Belgium)

EDUCATION

2007: PhD *summa cum laude* in biomedical sciences: "*Involvement of the calcium permeable TRP channels in the regulation of human keratinocyte growth*".

Laboratory of Cell Physiology INSERM U1003 (Pr Natalia Prevarskaya).

Université des Sciences et Technologies de Lille (USTL), Villeneuve d'Ascq (France).

2003: Master degree graduated with honors - *magna cum laude*. Honor thesis: "*Role of the chloride channels in the cholinergic regulation of human keratinocyte growth*".

Laboratory of Cell Physiology INSERM U800 (Pr Roman Skryma), USTL (France).

2002: Undergraduate Education in "Cellular Biology and Physiology", USTL (France).

WORK HISTORY

Since 2015: Research Associate at FNRS (Fonds de la Recherche Scientifique), IRIBHM, ULB (Belgium).

2014-2015: Associate research worker at FNRS, IRIBHM, ULB (Belgium). Topic: "*characterization of esophageal cancer progression and response to therapy*".

2010-2014: Postdoctoral Researcher at FNRS, Pr C. Blanpain's lab, IRIBHM, ULB (Belgium). Topic: "*Role of the microenvironment in the regulation of cancer stem cell in mouse skin squamous cell carcinoma*".

2008-2010: Postdoctoral Researcher, Pr C. Blanpain's lab, IRIBHM, ULB (Belgium). Topic: "*Isolation and characterization of cancer stem cells in a mouse model of skin squamous cell carcinoma*".

2007-2008: Postdoctoral Researcher, Pr N. Prevarskaya's lab, USTL (France).

2003-2007: PhD student, Pr Natalia Prevarskaya's lab INSERM U1003, USTL (France)

GRANTS / FELLOWSHIPS

- Fonds *Paul Génicot* (Apr. 2017)
- ARC Consolidator (Action de Recherche Concertée, Oct. 2017)
- Worldwide Cancer Research (Oct. 2016)
- Fonds *Emile Defay* (Jun. 2016)
- Mandat d'impulsion scientifique (FNRS, Jan. 2016)
- Chercheur qualifié (FNRS, Jul. 2015)
- Collaborateur scientifique (FNRS, Jul. 2014)
- Chargé de recherche (FNRS, Jul. 2010)
- FRM (Fondation pour la Recherche Médicale, Jul. 2006)
- MENRT (Ministère de l'Éducation Nationale et de la Recherche, Oct. 2003)

LIST OF PUBLICATIONS

1. M. Latil *et al.*, Cell-Type-Specific Chromatin States Differentially Prime Squamous Cell Carcinoma Tumor-Initiating Cells for Epithelial to Mesenchymal Transition. *Cell stem cell*. (Oct, 2016)
2. C. Adriaens *et al.*, p53 induces formation of NEAT1 lncRNA-containing paraspeckles that modulate replication stress response and chemosensitivity. *Nat Med*. (Jul 4, 2016).
3. G. Bidaux *et al.*, Epidermal TRPM8 channel isoform controls the balance between keratinocyte proliferation and differentiation in a cold-dependent manner. *Proc Natl Acad Sci U S A* 112, E3345 (Jun 30, 2015).
4. **B. Beck** *et al.*, Different levels of Twist1 regulate skin tumor initiation, stemness, and progression. *Cell Stem Cell* 16, 67 (Jan 8, 2015).
5. M. Raphael *et al.*, TRPV6 calcium channel translocates to the plasma membrane via Orai1-mediated mechanism and controls cancer cell survival. *Proc Natl Acad Sci U S A* 111, E3870 (Sep 16, 2014).
6. S. Boumahdi *et al.*, SOX2 controls tumour initiation and cancer stem-cell functions in squamous-cell carcinoma. *Nature* 511, 246 (Jul 10, 2014).
7. **B. Beck**, C. Blanpain, Unravelling cancer stem cell potential. *Nat Rev Cancer* 13, 727 (Oct, 2013).
8. G. Lapouge *et al.*, Skin squamous cell carcinoma propagating cells increase with tumour progression and invasiveness. *EMBO J* 31, 4563 (Dec 12, 2012).
9. G. Driessens, **B. Beck**, A. Caauwe, B. D. Simons, C. Blanpain, Defining the mode of tumour growth by clonal analysis. *Nature* 488, 527 (Aug 23, 2012).
10. G. Bidaux *et al.*, Regulation of activity of transient receptor potential melastatin 8 (TRPM8) channel by its short isoforms. *J Biol Chem* 287, 2948 (Jan 27, 2012).
11. **B. Beck**, C. Blanpain, Mechanisms regulating epidermal stem cells. *EMBO J* 31, 2067 (May 2, 2012).
12. A. Van Keymeulen *et al.*, Distinct stem cells contribute to mammary gland development and maintenance. *Nature* 479, 189 (Nov 10, 2011).
13. J. Bonnefont *et al.*, Primate-specific RFPL1 gene controls cell-cycle progression through cyclin B1/Cdc2 degradation. *Cell Death Differ* 18, 293 (Feb, 2011).
14. A. Bondue *et al.*, Defining the earliest step of cardiovascular progenitor specification during embryonic stem cell differentiation. *J Cell Biol* 192, 751 (Mar 7, 2011).
15. **B. Beck** *et al.*, A vascular niche and a VEGF-Nrp1 loop regulate the initiation and stemness of skin tumours. *Nature* 478, 399 (Oct 20, 2011).
16. K. K. Youssef *et al.*, Identification of the cell lineage at the origin of basal cell carcinoma. *Nat Cell Biol* 12, 299 (Mar, 2010).
17. M. Flourakis *et al.*, Orai1 contributes to the establishment of an apoptosis-resistant phenotype in prostate cancer cells. *Cell Death Dis* 1, e75 (2010).
18. A. Bavencoffe *et al.*, The transient receptor potential channel TRPM8 is inhibited via the alpha 2A adrenoceptor signaling pathway. *J Biol Chem* 285, 9410 (Mar 26, 2010).
19. **B. Beck** *et al.*, TRPC channels determine human keratinocyte differentiation: new insight into basal cell carcinoma. *Cell Calcium* 43, 492 (May, 2008).
20. V. Lehen'kyi *et al.*, TRPV6 is a Ca²⁺ entry channel essential for Ca²⁺-induced differentiation of human keratinocytes. *J Biol Chem* 282, 22582 (Aug 3, 2007).
21. G. Bidaux *et al.*, Prostate cell differentiation status determines transient receptor potential melastatin member 8 channel subcellular localization and function. *J Clin Invest* 117, 1647 (Jun, 2007).
22. **B. Beck** *et al.*, Prospects for prostate cancer imaging and therapy using high-affinity TRPM8 activators. *Cell Calcium* 41, 285 (Mar, 2007).
23. F. Vanden Abeele *et al.*, Ca²⁺-independent phospholipase A2-dependent gating of TRPM8 by lysophospholipids. *J Biol Chem* 281, 40174 (Dec 29, 2006).
24. F. Vanden Abeele *et al.*, Functional implications of calcium permeability of the channel formed by pannexin 1. *J Cell Biol* 174, 535 (Aug 14, 2006).
25. S. Thebault *et al.*, Differential role of transient receptor potential channels in Ca²⁺ entry and proliferation of prostate cancer epithelial cells. *Cancer Res* 66, 2038 (Feb 15, 2006).
26. M. Flourakis *et al.*, Passive calcium leak via translocon is a first step for iPLA2-pathway regulated store operated channels activation. *FASEB J* 20, 1215 (Jun, 2006).
27. **B. Beck** *et al.*, TRPC7 is a receptor-operated DAG-activated channel in human keratinocytes. *J Invest Dermatol* 126, 1982 (Sep, 2006).
28. A. Zholos *et al.*, Ca(2+)- and volume-sensitive chloride currents are differentially regulated by agonists and store-operated Ca²⁺ entry. *J Gen Physiol* 125, 197 (Feb, 2005).