BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Jean-Pierre Gillet	Staff Scientist, National Cancer Institute, Bethesda, MD

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Namur-Namur-Belgium	Bachelor	2000	Molecular Biology
University of Namur-Namur-Belgium	PhD	2001-2006	Molecular & Cellular Biology
NIH-NCI, CCR-LCB, Bethesda-MD-USA	Postdoctoral fellow	2006-2011	Multidrug Resistance Mechanisms in Cancer

A. Positions and Honors.

Positions

1/2001 -9/2001 Research Associate, Eppendorf Array Technologies (Namur, Belgium)
Elaboration of a Low Density DNA Microarray to detect Multidrug Resistance in Human Tumor by Expression Profiling of ATP-Binding Cassette Transporter Genes.

2001-2006 Ph.D. Student, University of Namur (Namur, Belgium), Dept of Cell Biology, Pr J. Remacle
Microarray-based Detection for Multidrug Resistance in Human Tumors by Expression Profiling of ABC Transporter Genes and for Small B-cell non Hodgkin's Lymphoma Characterization

2006-2011 Visiting Fellow, NIH-NCI (Bethesda, Maryland, USA), Laboratory of Cell Biology, Center for Cancer Research, Multidrug Resistance Section. Dr. M.M. Gottesman.

2011- Staff Scientist NIH-NCI (Bethesda, Maryland, USA), Laboratory of Cell Biology, Center for Cancer Research, Multidrug Resistance Section. Dr. M.M. Gottesman.

Honors

1999 Erasmus European Mobility Grant (University Claude Bernard of Lyon, France)

2001-2003 Pathology and Molecular Onco-Hematology Research Grant (IPG, Loverval, Belgium)

2004-2006 Eppendorf Array Technologies Research Grant (Namur, Belgium)

2005 Award winner of the Adrien Bauchau Fund (Namur University, Belgium)

2005 Award winner of the Cycle for Life Fund (Roche Oncology, Belgium)

2006-2011 Postdoctoral visiting fellowship, National Institutes of Health (Bethesda, MD, USA)

2008 FEBS Youth Travel Fund (YTF) grant (2nd FEBS Special Meeting "ATP-Binding Cassette Proteins: From Multidrug Resistance to Genetic Disease" Innsbruck, Austria, 2008)

2009 NIH Exceptional Pay Increase Award

2010 2010 Director's Intramural Innovation Award, Career Development Award

2010 Federal Technology Transfer Award

B. Selected peer-reviewed publications (in chronological order).

Research Articles

1. **Gillet JP***, Efferth T*, Steinbach D, Hamels J, de Longueville F, Bertholet V, and Remacle J. Microarray-based Detection of Multidrug Resistance in Human Tumor Cells by Expression Profiling of ATP-binding Cassette Transporter Genes. ***Cancer Research***. 2004 Dec 15; 64(24):8987-93.

2. **Gillet JP***, Schneider J*, Bertholet V, de Longueville F, Remacle J, and Efferth T. Microarray Expression Profiling of ABC Transporters in Human Breast Cancer. ***Cancer Genomics & Proteomics***. 2006 Mar-Apr; 3(2): 97-106.

3. Steinbach D*, **Gillet JP***, Sauerbrey A, Gruhn B, Dawczynski K, Bertholet V, de Longueville F, Zintl F, Remacle J, Efferth T. Expression profiling of ABC-transporters in childhood acute myeloid leukemia reveals ABCA3 as a possible cause of drug resistance. ***Clinical Cancer Research***. 2006 July 15; 12(14): 4357-4363.

4. Efferth T*, **Gillet JP***, Sauerbrey A, Zintl F, Bertholet V, de Longueville F, Remacle J, and Steinbach D. Expression profiling of ATP-Binding Cassette Transporters in childhood acute lymphoblastic leukemia. ***Molecular Cancer Therapeutics***. 2006 Aug; 5(8): 1986-94.

5. van de Ven R, Scheffer GL, Reurs AW, Lindenberg JJ, Oerlemans R, Jansen G, **Gillet JP**, Glasgow JN, Pereboev A, Curiel DT, Scheper RJ and de Gruijl TD. A role for multidrug resistance protein 4 (MRP4; ABCC4) in human dendritic cell migration. ***Blood***. 2008 Sep 15; 112(6):2353-9.

6. **Gillet JP**, Molina TJ, Jamart J, Gaulard P, Leroy K, Briere J, Theate I, Thieblemont C, Bosly A, Herin M, Hamels J and Remacle J. Evaluation of a Low Density DNA Microarray for Small B-Cell non-Hodgkin's Lymphoma Differential Diagnosis. ***Leukemia and Lymphoma***. 2009 March 50(3): 410-418.

7. Orina JN, Calcagno AM, Wu CP, Varma S, Shih JH, Lin M, Eichler G, Weinstein JN, Pommier Y, Ambudkar SV, Gottesman MM and **Gillet JP**. Generation of a drug discovery repository using high-throughput Taqman low density arrays. ***Molecular Cancer Therapeutics***. 2009 Jul; 8(7):2057-66.

8. Calcagno AM, Salcido CD, **Gillet JP**, Wu CP, Fostel JM, Mumau MD, Gottesman MM, Varticovski L, Ambudkar SV. Prolonged drug selection of breast cancer cells and enrichment of cancer stem cell characteristics. ***Journal of National Cancer Institute*** 102: 1637-52, 2010.

9. **Gillet JP**, Wang J, Calcagno A, Green L, Varma S, Bunkholt Elstrand M, Trope C, Ambudkar S, Davidson B, Gottesman M. Clinical Relevance of Multidrug Resistance Gene Expression in Ovarian Serous Carcinoma Effusions. ***Molecular Pharmaceutics***. 2011. Dec 5; 8(6):2080-8.

10. Mothanje BL, Handley M, **Gillet JP**, Wu CP, De Donatis GM, Cauda R, Gottesman MM. Exposure to HIV-Protease Inhibitors Selects for Increased Expression of P-glycoprotein (ABCB1) in Kaposi´s Sarcoma Cells. ***British Journal of Cancer***. 2011 Aug 9;105(4):513-22.

11. **Gillet JP**, Calcagno AM, Varma S, Marino M, Green LJ, Vora M, Patel C, Orina JN, Eliseeva E, Singal V, Padmanabhan R, Davidson B, Ganapathi R, Sood AK, Rueda BR, Ambudkar SV, Gottesman MM. Redefining the Relevance of Established Cancer Cell Lines to the Study of Mechanisms of Clinical Anti-Cancer Drug Resistance. ***Proceedings of the National Academy of Sciences USA.*** *2011 Nov 15;108(46):18708-13*, and ***Highlights***: This week in PNAS. *2011 108 (46): 18567-18568*.

12. Rottenberg S, Vollebergh MA, de Hoon B, de Ronde JJ, Schouten PC, Kersbergen A, Zander SA, Pajic M, Jaspers JE, Jonkers M, Loden M, Sol W, van der Burg E, Wesseling J, **Gillet JP**, Gottesman MM, Gribnau J, Wessels L, Linn SC, Jonkers JJ, Borst P. Impact of intertumoral heterogeneity on predicting chemotherapy response of BRCA1-deficient mammary tumors. ***Cancer Research***. 2012 Mar 6. [Epub ahead of print]

* both authors contributed equally to this work

Reviews

1. **Gillet JP**, de Longueville F, Remacle J. DualChip microarray as a new diagnostic tool in cancer research. ***Expert Review of Molecular Diagnostics***. 6(3) (2006) 295-306.

2. **Gillet JP**, Efferth T and Remacle J. Chemotherapy-Induced Resistance by ATP-Binding Cassette Transporter Genes. ***Biochimica Biophysica Acta-Reviews on Cancer***. 2007 Jun; 1775(2):237-62.

3. Chen KG, Valencia JC, **Gillet JP**, Hearing VJ, Gottesman MM. Involvement of ABC transporters in melanogenesis and the development of multidrug resistance of melanoma. ***Pigment Cell Melanoma Research***. 2009 Dec; 22(6):740-9.

4. **Gillet JP**, Gottesman MM. Advances in the Molecular Detection of ABC Transporters Involved in Multidrug Resistance in Cancer. ***Current Pharmaceutical Biotechnology*** 12: 686-92, 2011.

5. Shaffer BC, **Gillet JP**, Patel C, Baer MR, Bates SE, Gottesman MM. Drug resistance: Still a daunting challenge to the successful treatment of AML. ***Drug Resistance Updates****, in press.*

Special Issue – Guest Editor

Overcoming Multidrug Resistance in Cancer: 35 years after the discovery of ABCB1. Guest Editors: Jean-Pierre Gillet & Michael M. Gottesman. ***Drug Resistance Updates****, in press.*

Editorial: **Gillet JP**, Gottesman MM.

Book Chapters

1. **Gillet JP**, Kimchi-Sarfaty C, Shinar S, Licht T, Lee C, Hafkemeyer P, Hrycyna CA, Pastan I and Gottesman MM. Selectable Markers for Gene Therapy. In *Gene and Cell Therapy, 3rd Edition*, Nancy Smyth Templeton (Ed.), Marcel Dekker Inc.: New York, NY, USA, 2008. 555-580.

2. **Gillet JP**, Macadangdang B, Fathke RL, Gottesman MM and Kimchi-Sarfaty C. The Development of Gene Therapy: From Monogenic Recessive Disorders to Complex Diseases such as Cancer. In *Cancer Gene Therapy*, *2nd Edition,* Wolfgang Walther, Ulrike Stein (Eds.), Humana Press, Totowa, NJ, USA, 2009. 5-54.

3. **Gillet JP**, Okabe M and Gottesman MM. The Hepatocyte and the Cancer Cell: Dr. Jekyll and Mr. Hyde. In *The liver: Biology and Pathobiology, 5th Edition*, Irwin M. Arias, Nelson Fausto, James L. Boyer, Francis V. Chisari, David A. Shafritz (Eds.), Wiley-Blackwell, Oxford, England, 2009, 1075-1090.

4. **Gillet JP** and Gottesman MM. Mechanisms of multidrug resistance in cancer. In *MultiDrug Resistance in Cancer*, Jun Zhou (Ed). Humana Press, Totowa, NJ, USA. 2010, 47-76.

Published Abstracts

1. Steinbach D*, **Gillet JP***, Sauerbrey A, Gruhn B, Dawczynski K, de Longueville F, Bertholet V, Zintl F, Remacle J and Efferth T, (Intr. by Sayer HG). Expression Profiling of ABC-Transporters in Childhood AML Reveals ABCA3 as a Potential Cause of Drug Resistance. ***Blood*** (ASH Annual Meeting Abstracts) 2004 Nov 16; 104(11): Abstract# 1177.

2. **Gillet JP***, Efferth T*, Steinbach D, de Longueville F, Bertholet V and Remacle J, (Intr. by Sayer HG). ABCChips as New Diagnostic Tool to Monitoring Multidrug Resistance in Human Tumor Cells to Chemotherapeutics Agents by Expression Profiling of ATP-Binding Cassette Transporter Genes. ***Blood*** (ASH Annual Meeting Abstracts) 2004 Nov 16; 104(11): Abstract# 4360.

3. Efferth T, **Gillet JP**, Steinbach D, Sauerbrey A, Gruhn B, Dawzcynski K, de Longueville F, Bertholet V, Zintl F, Remacle J. Expression profiling of ATP-binding cassette (ABC) transporter genes by a low density microarray to detect drug resistance of tumors. ***European Journal of Cell Biology*** (German Society for Cellular Biology Meeting) 2005; 84(Suppl.55): Abstract# S2-48.

4. **Gillet JP**, Molina TJ, Gaulard P, Leroy K, Briere J, Theate I, Thieblemont C, Bosly A, Herin M, Hamels J and Remacle J. DualChip Human Low Grade B-Cell Lymphoma: a specialized Low Density DNA Microarray for the differential diagnostic of SMALL B-Cell non-Hodgkin's Lymphoma. ***Annals of Oncology*** (9th International Conference on Malignant Lymphoma) 2005; 16(Suppl.5): Abstract# 384.

5. **Gillet JP**, Efferth T, Molina TJ, Steinbach D, Gaulard P, Briere J, Theate I, Leroy K, Thieblemont C, Schneider J, Bosly A, Hamels J, Herin M, and Remacle J. Low Density DNA Microarray as New Routine Tool for Diagnosis in Hematological Malignancies. ***International Journal of Molecular Medicine*** (10th World Congress on Advances in Oncology and 8th International Symposium on Molecular Medicine) 2005; 16(Suppl.1): Abstract# 115.

6. Patel C, **Gillet JP**, Stenke L, Lindberg M, Bjorkholm M, Sjoberg J, Viktorsson K, Lewensohn R, Landgren O, and Gottesman MM. Individualized Multidrug Resistance In Acute Myeloid Leukemia. ***Blood*** (ASH Annual Meeting Abstracts) 2010 Nov 19; 116(21): Abstract# 2491.

* both authors contributed equally to this work

Oral Presentations

1. **2nd Annual North American ABC Genetic Workshop 2005**, Frederick, Maryland, USA, September 29-30. Expression profiling of ABC-transporters in leukemic children identifies two gene candidates (ABCA2 & ABCA3) involved in chemotherapy-induced resistance.

2. **10th World Congress on Advances in Oncology and 8th International Symposium on Molecular Medicine 2005**, Hersonissos, Crete, October 13-15. Low Density DNA Microarray as New Routine Tool for Diagnosis in Hematological Malignancies.

3. **4th Annual North American ABC Genetic Workshop 2007**, Frederick, Maryland, USA, October 04-05. Gene expression profiling of multidrug resistance mechanisms in ovarian cancer using TaqMan Low Density Arrays.

4. **5th Annual North American ABC Genetic Workshop 2008**, Frederick, Maryland, USA, September 24-26. ABCB5, a poorly characterized ABC transporter highly expressed in Melanoma.

5. **Gordon Research Conference 2009**, Galveston, TX, March 22-27**.** Multi-Drug Efflux Systems. The characterization of ABCB5 reveals a full length transporter mediating multidrug resistance.

6. **AACR annual meeting 2009**, Denver, CO, April 18-22**.** Characterization of ABCB5, a poorly studied ABC transporter highly expressed in melanomas.

7. **6th Annual North American ABC Genetic Workshop 2009**, Frederick, Maryland, USA, September 24-25. Multifactorial multidrug resistance correlates with overall survival in ovarian primary serous carcinoma.