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## **Genomics, Bioinformatics, Biomarker Discovery Manager**

DOB: Oct. 27<sup>th</sup> 1975  
Married  
Two children  
French

### **Professional Experience**

#### **Senior Bioinformatics Manager**

Since August 2006 – Cepheid SAS – Maurens-Scopont (81) – France

##### Missions:

- ✓ Bioinformatics Team Manager (up to 4 scientists)
- ✓ In-Silico Biomarker Discovery project leader: markers for Oncology Dx products
- ✓ BioIT Activities and project results reporting to US top management (Sunnyvale, CA)

##### Descriptions:

- ✓ Introduce NGS Activities in the company - Design of all sequencing experiments
  - Relation with external sequencing providers, researchers, technicians
  - Supervise software developments, data analysis and reporting
- ✓ Setup of the In-Silico Laboratory
  - Needs, negotiations, external providers and IT department relations
  - Manage acquisition and implementation of a 300 cpus cluster – 50 To storage
- ✓ Principal Investigator for Cepheid at The Cancer Genome Atlas (TCGA - USA)
  - Access granted (NIH) to sequencing experiments and patients' clinical data
    - Integration and analysis of more than 10.000 omics datasets
- ✓ Biomarker Discovery and function analysis - Oncology and Infectious diseases
  - Provide biological evidence of Biomarker to go to Lab. Pre-Validation (qRT-PCR)
  - Results reporting to US top management on a biweekly basis by video conf call
- ✓ Interface to both US and Swedish Cepheid colleagues for BioIT support
  - Management of the development of a knowledge tool integrating Lab. Exp.
- ✓ Relation with external BioIT contractors as well as external scientists

##### Skills:

Team management, project management, reporting, communication, biomarker discovery, genomics, bioanalysis, biological pathways, molecular biology, qRT-PCR, sequencing, Big Data, cluster computing, data mining, statistics (R, JMP), scripting (Perl, PHP, bash), MySQL

#### **R&D Bioinformatics Director & Co-Founder**

July 2003 to August 2006 Actigenics SA – Toulouse (31) – France

##### Missions:

- ✓ Company setup as well as research collaboration contracts initialization
- ✓ Team Management for all BioIT Developments (5 scientists) and biomarkers discovery

##### Accomplishments:

- ✓ Participation in negotiation of Actigenics' acquisition by Cepheid
- ✓ Setup and management of our miRNA pipeline prediction bringing IP value to the company
  - microRNA Discovery Tool & microRNA Target Analysis
- ✓ Manage all developments of our commercial microRNA analysis tool – miRgate
  - Scientific and technical support to customers (Gusev et al BMC Bioinf. 2007 Nov)

**Bioinformatics Project Leader Genoscope (now CEA), Evry (91) – France**  
Permanent contract – January 2002 to July 2003

- ✓ Responsible for Human and Mouse cDNA sequencing.
- ✓ Annotation, genes discovery (French cancer consortium) supervised by Jean Weissenbach.

**Bioinformatician – Pierre Fabre Pharmaceutical - St Julien En Genevois (74) – France**  
non permanent contract – March 2001 to September 2001

- ✓ Build pipeline for automatic database querying from ncbi to GCG format (Accelrys)
- ✓ Multi blast center allowing scientists to annotate their sequences of interest

### Others Jobs – Internships

- ✓ **Lecturer at University of Perpignan**
  - non permanent contract 2008-11
    - Sequences alignment / scripting (perl, bash) / Non coding RNA / NGS
- ✓ **BioAnalyst – LBME – French Ministry of Research – Toulouse (31) – France**
  - Internship – March 2000 - August 2000
    - Build a database dedicated to human non coding RNA.
- ✓ **Database Curator – LMGM – French Ministry of Research – Toulouse (31) – France**
  - non permanent contract March 2000 – November 2000
    - Manual curation of the Sequence Insertion (IS) and genome analysis
- ✓ **Research Internship – Institut Claudius Regaud – Toulouse July 1999 – September 1999**
  - Internship in the oncology lab. with Pr. Gilles Favre and Dr. Sophie Sixou
    - Relation between oestrogen stimulation and prenylation in MCF-7 cell lines
- ✓ **Supervisor at School and High School**
  - French Ministry of Education May 1995 to November 2000

### Education – Trainings

**Cepheid Internal Training Program (Vybrant) – Management and Coaching for Performance 2011-13**  
**Statistical Trainings for Genomic – INRA Toulouse 2013**  
**IP and Innovation – University of Strasbourg, Strasbourg France 2009-2010**  
**Master in Bioinformatics – University Paul Sabatier, Toulouse, France 2001**

### Hobbies – Interests

Playing with my kids, meeting my family and friends, cinema, walking, hiking.  
Sports in general, running, former rugby player (scrum-half, fly-half), Judo and Nihon-Tai-Jitsu.

### Publications – Patents

- ✓ Genome-wide sequencing of cellular microRNAs identifies a combinatorial expression signature diagnostic of sepsis.  
*Ma Y, Vilanova D, Atalar K, Delfour O, Edgeworth J, et al. 2013 PLoS ONE 8(10): e75918*
- ✓ Prediction of microRNA-based signatures for diagnosing cancers from TCGA database.  
*Delfour O, Ciuti J, Denoual F, Vilanova D, et al. Jobim Toulouse 2013*

- ✓ Alternative processing of the U2 small nuclear RNA produces a 19-22nt fragment with relevance for the detection of Non-Small Cell Lung Cancer in human serum.  
*Mazières J, Catherinne C, Delfour O, Gouin S, Rouquette I, et al. 2013 PLoS ONE 8(3): e60134*
- ✓ Assays based on XXXXXX, a mirtron hosted by the XXXX gene, a negative regulator of XXXXX survival signaling and of XXXXX inflammatory signaling (march 2013)
- ✓ Lung cancer screening assay based on XXXXX and XXXXX (march 2013)
- ✓ Methods of detecting lung cancer, US Provisional application 61/298,489
- ✓ Methods of detecting lung cancer, US application US20100233704
- ✓ Methods of detecting cervical cancer, US application US20100240049
- ✓ Methods of detecting sepsis, US application US20100227325
- ✓ Methods for analysis of microRNA, US application US20100017140
- ✓ Methods for the identification of microRNA and their applications in research and human health, US application US20090062135
- ✓ Cited for scientific and technical assistance by Gusev Y et al in: Computational analysis of biological functions and pathways collectively targeted by co-expressed microRNAs in cancer. BMC Bioinformatics. 2007 Nov 1;8 Suppl 7:S16.
- ✓ The Passionate Race for microRNA Detection and Function Deciphering.  
*Olivier Delfour, Vilanova David, Vera Atzorn, Bernard Michot. DNA Press 2007*
- ✓ The ERPIN server: an interface to profile-based RNA motif identification.  
*Lambert A, Fontaine JF, Legendre M, Leclerc F, Permal E, Major F, Putzer H, Delfour O, Michot B, Gautheret D. Nucleic Acids Res. 2004 Jul 1;32*
- ✓ Numerous novel annotations of the human genome sequence supported by a 5'-end-enriched cDNA collection.  
*Porcel BM, Delfour O, Castelli V, De Berardinis V, Friedlander L, Cruaud C, Ureta-Vidal A, Scarpelli C, Wincker P, Schächter V, Saurin W, Gyapay G, Salanoubat M, Weissenbach J. Genome Res. 2004*