

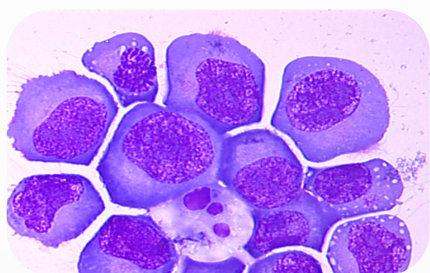


Expert Company devoted to Hematological Cancers

- ❑ **Our Mission:** Provide Efficient Treatment Solutions for Patients with **Precision Medicine Approaches**.
- ❑ **Our Strengths:** >20 Years Expertise in **Multiple Myeloma, Unique Cellular Models, Patented Methodologies** to the Identification of **Predictive Biomarkers**, and **Customized Services**.

OUR MODELS

Panel of Unique Hematological Cancer Cell Lines

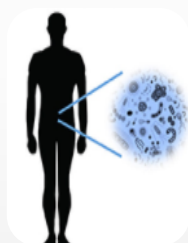


➤ Multiple Myeloma (MM) (40 cell lines):

- Representative of the Heterogeneity of MM Disease^{1,A}.
- Characterized by RNAseq, Exome seq, ChIPseq, SNP...
- Profile of Response to 20 Molecules: IC50s.
- Fully Characterized Panel of Treatments Resistant Cell Lines.

➤ Diffuse Large B-Cell Lymphoma (DLBCL) (20 cell lines)

➤ Acute Myeloid Leukemia (AML) (10 cell lines)



Collection of Primary Cells from Patients

- MM samples
- All Hematological Malignancies

- Diagnosis and Relapse.
- Biological and Clinical Data.
- Bone Marrow, Blood, Plasma, RNA, DNA of Normal and Tumoral Cells.
- Gene Expression Profiling of Tumoral Cells.

Unique *in vitro* Model of Human Plasma Cell Differentiation



- Multi Step Culture^{2,3,4} Characterized (Memory B cells, Pre-Plasmablasts, Plasmablasts, Plasma cell, Long lived Plasma cell).
- Drug Effect in Normal Plasma Cell Generation⁵.

Development of Predictive Biomarkers



- 1 *In vitro* Treatment of Cell Lines.
- 2 RNAseq and Analysis of Deregulated Genes.
- 3 Integration of Genomic and Clinical Data.
- 4 *In vitro* Biomarker Validation using Primary Cells.

Published^{6,7,8,9,10,11}
And Patented^{B,C,D,E,F,G,H,I,J}

Patents/Publications

Patents: A. n°10305892, 2010; B. EP12306141.8, 2012, WO2014056928; C. EP12306225.9, 2012, WO20144044848; D. EP14305404, 2014; E. EP14306201, 2014; F. EP16305682, 2016; G. EP16305651, 2016; H. EP16306436.3, 2016; I. EP17306503.8, 2017; J. EP18305136, 2018.

Publications: 1. Moreaux et al. Haematologica, 2011; 2. Jourdan et al. Blood, 2009; 3. Jourdan et al. Blood, 2010; 4. Kassambara et al. NAR, 2017; 5. Jourdan et al. Oncotarget, 2016; 6. Moreaux et al. Mol Cancer Ther, 2012; 7. Moreaux et al. BJC, 2013; 8. Moreaux et al. BJH, 2013; 9. Kassambara et al. Oncotarget, 2014; 10. Bret et al. Oncotarget, 2012; 11. Bruyer et al. BJC, 2018.

❑ Pharmaceutical Companies ❑ Biotechnology Companies ❑ CROs ❑ Academics

Find and Validate New Therapeutic Targets



In vitro Cytotoxicity Studies



Biomarkers



Analyze of your Targets Expression

- **Genomic Analyzes in Different Cohorts** of Patients with Hematological Malignancies (Genomic and Clinical Data).
- Analysis of the **Prognostic Value** of your targets (Survival Analysis).
- **Validation at the Protein Level** using Flow Cytometry.

In Hematological Cell Lines

- **Drug Screening**
- **In vitro Cell Growth Inhibition (IC50).**
- **Cell Cycle, Apoptosis, Clonogenic Assays.**
- **Synergistic Drug Combinations.**
- Effect on **Drug Resistant** Cell Lines.
- Correlation of the Drug Response with **Mutations and Gene Expression Profiling.**

In Primary Samples of Patients with Hematological Malignancies

- **In vitro Viability of Primary Tumor Cells** co-cultured with their **Bone Marrow Microenvironment.**
- Flow Cytometry Assays to Investigate **NK mediated Lysis** of your **Antibody.**

In Normal Human Plasma cell Generation

- Effect in Normal Plasma Cells and in Different Stages (pre-Plasmablasts, Plasmablasts, Plasma Cells).

Biomarkers to Predict Drug Response

- **RNAseq and Gene Expression Profiling.**
- **Integration of Genomic and Clinical Data** from Patients Cohorts.
- **Identification of Biomarkers.**
- **In vitro Validation using Primary Samples** from Patients.

