**X-MICE® PATIENT-DERIVED XENOGRAFTS**

An array of opportunities for translational research

Progression towards targeted therapies and personalized medicine increases the need for highly representative and characterized models, as well as specific biomarkers to increase the efficiency of drug efficacy assessment. PDX have a high stability of the histological and molecular characteristics, and therefore offer an array of opportunities for translational research.

**Key Benefits**
- Integrative process from bedside to bench and back
- Better prediction of the clinical outcome, taking into account the diversity of each patient tumor phenotype and genotype
- Biomarker identification based on response to therapy to stratify patients for clinical trials
- Histological, molecular and pharmacological characterization of PDX available upon request
- Tumor samples available from patients resistant to multiple therapies

**Process for Developing Chi-Mice® PDX**
- Collection of fresh human solid tumors with full patient consent and serology health certificate
- Establishment of PDX models for multiple cancer pathologies
- Preparation of sample biobank for further customized characterization
- Preclinical studies in clinically annotated and characterized models with low passage numbers
- Correlation of the preclinical results with corresponding clinical data

**Pharmacological and molecular correlation**
- Translational outcome through the pharmacological and molecular correlation, relevance with patient pathological profile, and biomarker identification
- Characterization upon request: additional histological data, immunohistochemistry, CGH, transcriptome, gene sequencing, pharmacological data (reference drugs).
Chi-Mice® PDX Offering

An expanding collection of PDX models is now available (colon, breast, lung, bladder, AML...). Or ask for custom-PDX model generation, according to your target, gene expression, gene mutation, drug resistance, or histological subtype.

- Tumor grafting
- Custom-tailored development or shipment of existing models (delivery worldwide)
- Data available to guide model selection
- Guarantee of re-establishment of the models (P3 or later) from cryopreserved samples
- Optional characterization

Selection of the Best Models Based on Tumor Molecular Profile

The molecular profiles of the tumors address specific gene mutations (DNA sequencing), chromosome aberrations (Comparative Genomic Hybridization-array), gene or protein expression (transcriptomic, proteomic or metabolomic analysis). Such analyses guide the choice of the models in regard to the drug target(s), and help correlate the results with potential responsive patients.

In vivo Pharmacological Profile for Better Clinical Translation

Pharmacological evaluation demonstrates the correlation between preclinical and clinical drug response, enhancing the relevance of the patient-derived tumors to assess drug efficacy.

(Left) In vivo antitumor activity of Cetuximab on 2 subcutaneous colon PDX models.
(Below) Cetuximab shows clear survival benefit in mice bearing Wt KRAS tumors vs mutant KRAS tumors.

* These data have been generated with the contribution of the members of the CReMEC consortium

References Available on our Website in the Scientific Publication Section

- 2012 TAT Poster
- 2011 AACR Poster, #1598
- 2010 AACR Poster, #4169
- 2009 AACR Poster, #309

- Oncodesign - ☎: +33 (0)3.80.78.82.60
- ☉: businessdevelopment@oncodesign.com - www.oncodesign.com