

## *OncoBioTek*

### Spontaneous cancer in the dog as a new pre-clinical model for oncology R&D

#### Executive Summary

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■ **The PROBLEM:**

Productivity crisis in oncology R&D: increasing investments and unacceptable failure rate of compounds

■ **The MAIN CAUSE of the PROBLEM:**

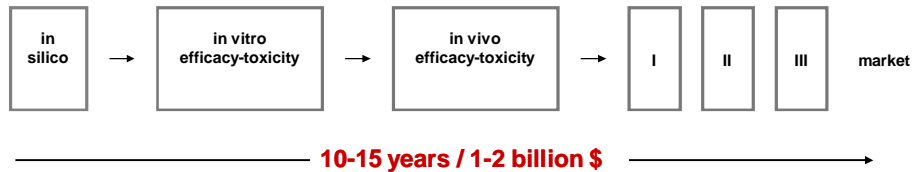
Poor performance and questionable clinical relevance of existing pre-clinical models (in vitro cell-based assays and rodent models)

■ **The OncoBioTek SOLUTION:**

An additional validation of experimental anti-cancer drugs in pet dogs presenting with spontaneous tumors

## The challenge

- ♦ **1- cancer: epidemiology, targeted therapies**
- ♦ **2- productivity crisis R&D oncology**



Current success rate: 3%

- ♦ **3- existing experimental models: relevance ?**

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## The OncoBioTek solution

**Some spontaneous tumors in the dog are excellent models for human cancer**

	Man	Dog	Rodent
Spontaneous non-clonal tumor	✓	✓	- / GEM
Genetic basis	✓	✓	+/-
Histology	✓	✓	+/-
Metastasis	✓	✓	rare
Response conventional therapies	✓	✓	+/-
Environment	✓	✓	N/A
Physiology/metabolism	✓	✓	+/-

- + genetic structure of the canine population
- + more rapid clinical course (survival endpoint)

**Validated models include:**

mammary, osteosarcoma, melanoma, lymphoma, soft tissue sarcoma etc

**N.B. the veterinary oncology market**

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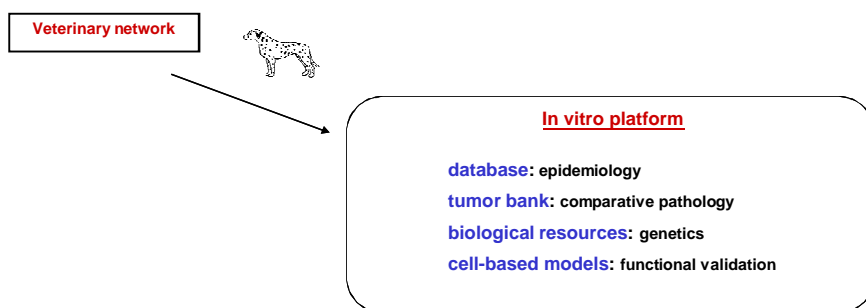
## A 2 step validation of cancer drugs

♦ **1 - in vitro validation: canine cells and tissues**

relevance of the canine model

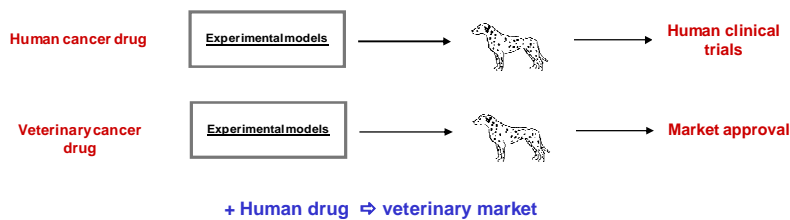
♦ **2 - in vivo validation: clinical trial in pet dogs**

efficacy, toxicity, treatment targeting / patient stratification



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## Human health and animal health



**Mixed business model:**

- full service CRO
- direct sale in vitro resources
- patent licences

**Global market:**

- 20-80 M Euros annually
- 2 direct competitors (both US)

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## Added value

### ♦ 1 – Big pharma

- efficacy and toxicity data in spontaneous tumor model
- lower cost / shorter duration of canine clinical trials
- treatment targeting and patient stratification

### ♦ 2 – Biotech companies

- increased value of the compound for sale to big pharma
- 2 markets: human and canine
- argument for investors / early stage clinical testing

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## Proof of concept

### ♦ « in vivo »:

- Merial: therapeutic vaccine melanoma
- AB Science: masitinib / mast cell tumor
- IDM Pharma: mifamurtide / osteosarcoma

### ♦ « in vitro »: OncoBioTek pilot project

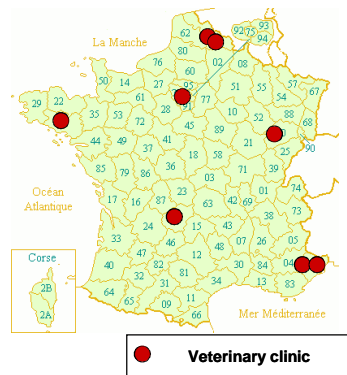
#### 1) technical and logistical feasibility:

veterinary network, sampling kits

#### 2) scientific feasibility:

comparative pathology  
in vitro applications

1st patent filed 07/2009 (myofibroblast technology)



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## Projected development and financial need

### OncoBioTek today:

- **SARL** launched in 2009
- Experienced **management team** (4 founders)

### Projected development and financial need:

	2010	2011	2012
Sales (k€)	69	402	1416
Net result (k€)	-107	-176	138
Financial need (k€)	300	500	

### **We seek 800 KEuros:**

- tissue culture laboratory
- recruit (clinical research director, laboratory personnel, BD...)
- in vitro models
- launch clinical research programs

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## Top 5 reasons to invest in OncoBioTek

- 1) Strong **market demand**
- 2) Unique, **innovative solution**
- 3) Favorable **competitive environment**
- 4) **Experienced management team**
- 5) **Validation:** medical, scientific, economic, proof of concept

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