

Ex Post Analysis of the *Spontaneous Tumours Programme* (2011-2014)

The *Spontaneous Tumours Programme* was set by ITMO Cancer-Aviesan and INCa in the frame of the 2nd Cancer Plan (2009-13). It aimed at fostering collaborations between researchers and clinicians both in human and veterinary medicine. It also promoted new tools or approaches usefull in animals care with translatable human applications. This document presents key learnings coming from the ex post analysis of the Programme realised in November 2018.

Key figures

- 30 submitted projects
- 10 projects funded
- Selection rate : median 33%
- 8 PI
- 17 partners
- €3.43M
- PI age: median 47 y.o.

A Small Research Community in France

Outcomes*

- 16 personnel hired
 - 6 international collaborations
 - 11 original articles
- *as mentioned in the final reports

Only 30 projects were submitted over the four-year period. This low mobilisation indicates that the research community working on spontaneous tumour models in France was restricted to a handful of actors. However, the objective of the Programme to foster interdisciplinarity has been partially reached, as 60% of funded consortia were involving at least one veterinary clinician.

Advances in Knowledge but Few Tools and Outcomes

Despite their objectives to develop experimental alternatives to preclinical trials, funded projects have led only to few tools, exclusively on the canine model. Advances in knowledge were more numerous. Thus, the pertinence of some spontaneous tumour models was confirmed and new oncogenesis-associated signalling pathways were identified. A clinical trial on dogs was intended as a way to continue the development of an antibody for therapeutic purposes, and further developments of an oncolytic virus were also considered. No economical valorisation nor leverage effect of the Programme have been observed so far. However, positive impacts on the PI have been reported as new collaborations have been established. The Programme led to 11 publications, mainly in peer-reviewed journals ranked in the 1st quartile in their field.

Tools and Knowledge*

- Antibodies for therapeutic or diagnosis purpose
- Sample collections of lymphoma and melanoma
- Comparison and characterisation of canine, sheep or goat tumours and their human counterparts
- Identification of new cancer pathways (e.g., protein, autocrine loop, oncogenetic virus infectivity)
- Characterisation of the immune response to cancer

*as mentioned in the final reports

The size of the French research community on spontaneous tumour models appeared too small to continue the Programme after 2014. However, the knowledge gathered in the projects confirmed the relevance of spontaneous tumour models in cancer research. This topic is thus one of the fields covered by the new call for projects entitled "Development and integration of new experimental models for research on cancer: Optimizing the 3R rule" launched in 2019 by ITMO Cancer-Aviesan. The scope of this new call goes beyond spontaneous tumour models and includes other types of models in oncology, animal or not, induced or spontaneous and should gather a broader scientific community.