

Intellectual Property (IP) Valuation for Biotechnology and Pharmaceutical Industry Sector

Exercise

Skin Cancer Drug

Case Study

Valuation V2

Havana, Cuba
February 5 to 7, 2019

CASE STUDY

Theranostic (T - a theranostic system integrates some form of diagnostic testing to determine the presence of a molecular target for which a specific drug is intended) biotech is a biotech conducting R&D for different cancers treatments based on the development of Theranostic molecules in oncology through the exploitation of endemic plants on Reunion Island that must be functionalized to have properties for targeted actions on cancer cells via radiation activations.

The development concerns cancer treatment, skin cancer first and then other types of cancer, such as lung, pancreas and prostate, the patent applications contribution in kind is considered in this.

The Patent belongs to an academic lab with the first bricks of the technology T.

The patent needs to be negotiated with a Chinese partner who will provide funding in a Joint Venture (JV) for the exploitation of the first application in skin cancers only.

The purpose of the valuation is precisely to assess the value of the patent in the context of this negotiation context and then to use this value in the contribution in kind to the JV (lab will contribute with the value of the above mentioned patent to the establishment of the JV, while Chinese partner will invest financial resources).

The JV should concern only Europe, China and United State of America for exploitation, the rest of the world shall be exploited by another partner.

We assume that the treatment will be used only once and will be sold at about 10'000€.

We have gathered statistics on skin cancers as follows:

Territory	SKIN CANCER PREVALENCE		
	Melanome	Non Melanome	Total
USA	67,682	486,493	554,175
Europe	132,097	429,447	561,544
China	5,610	22,231	27,841

We also have information about the cost and duration of the Clinical Trials as well as the related risks, estimated at 11% in total cumulative risks from phase I to Marketing Authorization given by the health care authorities:

CLINICAL TRIALS COST & RISK			
Phases	Cost (millions)	Duration (Years)	Risk
Phase I	6.0	1	80%
Phase II	15.0	2	25%
Phase III	35.0	3	55%
		Cumulative risk	11%

The drug development entered in the phase I last month.

Diagnosis rate is at about 80%.

Capability of treatment is at about 20%.

Patent maintenance costs are up to 10'000 € until 2025 and will reach 15'000 € after patent expiration on the date of 21/01/2036.

Tax rate is 25%.

Discount rate: 18%

Manufacturing cost or Cost of Goods: 15% of the Gross Sales.

A benchmark study is provided.

Please use the risk adjusted Net Present Value (rNPV) method to valuate the above mentioned patent in its simplest way.