

**USE OF NEW EXOSOMES FOR THE DIAGNOSIS AND TREATMENT OF NEOPLASIAS**

**SUMMARY**

Use of new extracellular vesicles (EVs), preferably exosomes, easy to prepare and obtain, in combination with radioactive isotopes for the diagnosis and/or monitoring of tumours as well as their treatment.

**DESCRIPTION**

The Na<sup>+</sup>/I<sup>-</sup> transporter (NIS) has been used for molecular imaging (PET or SPECT depending on the isotope used) or as a therapeutic agent if the isotope used is a high-energy isotope (e.g. therapy with radioiodine <sup>131</sup>I).

The expression of NIS in exosomes and the accumulation of these in neoplasias can serve (i) to visualize neoplasias and (ii) for therapy. An additional advantage is its fewer side effects due to its high tumour selectivity. In the case of this invention, the new exosomes that express NIS represent an important advance because their production and obtaining are simple and efficient. Moreover, this new exosomes have shown in trials a 50% reduction in tumour growth.

**COMPETITIVE ADVANTAGES**

- Easy to prepare and obtain.
- Priority patent application (April 2020).

**INNOVATIVE ASPECTS**

- High tropism towards tumour areas.
- Fewer side effects.
- Greater specificity.

**KEYWORDS**

- Exosomes
- NIS
- Radioiodine
- Cancer and/or neoplasias

**MAIN ACTIVITY SECTOR**

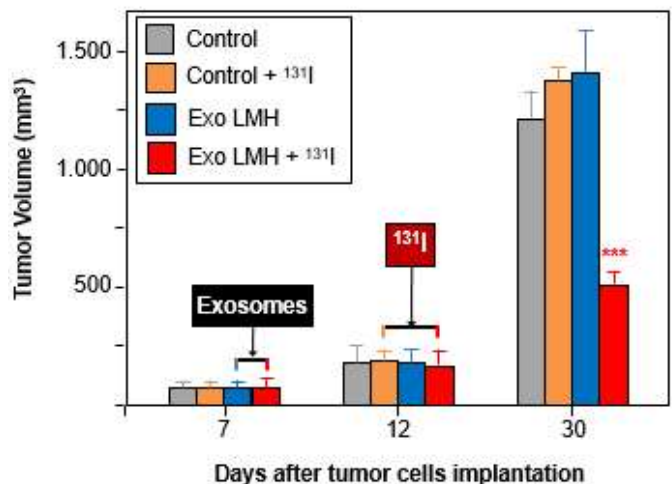
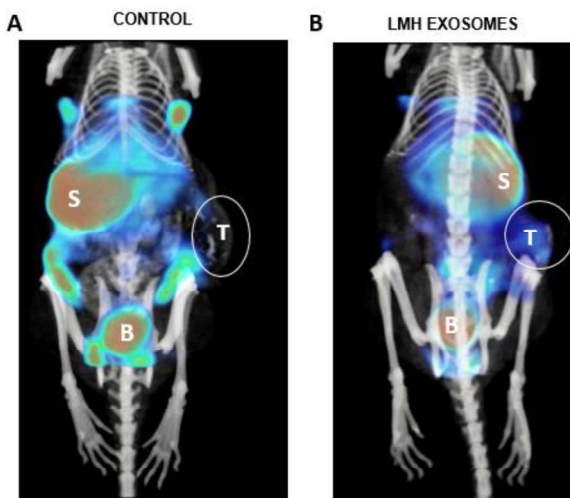
Oncology: diagnosis and treatment of different neoplasias.

**DEGREE OF DEVELOPMENT**

Tested in vitro and in animal model.

**COLLABORATION EXPECTED**

Licenseses of the patent application or interested in licensing and collaboration agreements for the development of the technology are sought.



**DATOS DE CONTACTO**

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