

A vaccine with gold nanoparticles loaded with a Listeria peptide for the treatment and prevention of melanoma



Available to license: a vaccine with gold nanoparticles loaded with a Listeria peptide

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Human melanoma is a malignant tumour of melanocytes and an aggressive skin cancer that has registered a 3% increase in annual incidence in Northern Spain. Melanoma is one of the most rapidly growing cancers worldwide but yet there is no satisfactory treatment except for surgery, either in the early stages or when it has advanced to metastatic disease. Pharmacological treatment with small molecule inhibitors such as vemurafenib leads to resistance and has major cutaneous effects, but fails to induce lasting responses, which has turned the focus to immunotherapy.

The fast advance of cancer immunology has produced several new methods of treatment that increase the potential immunological responses against tumours.

A vaccine with gold nanoparticles loaded with a Listeria peptide for the treatment and prevention of melanoma is proposed. This vaccine achieves a tumor regression of 90% and it also prevents in more than 95% the formation of metastases in the lungs. This vaccine might be a useful alternative treatment for advance melanoma, alone or in combination with other therapies.

Competitive advantages

The main competitive advantages of the vaccine are:

- This therapeutic vaccine, inoculated in solid cutaneous melanoma or metastatic soft melanoma, inhibits their growth and prevent the metastases to other locations.
- It is a safe and totally synthetic non-invasive therapy for melanoma treatment, alone or in combination with other therapies in patients with resistant melanomas to other therapies or non-responders.

Supporting Data

Results tested in mice. Currently, the vaccine is being developed at Valdecilla Biomedical Research Institute– IDIVAL.

Market insight

By 2023, GlobalData projects melanoma sales to rise to \$5.64 billion in the 8MM, at a robust Compound Annual Growth Rate (CAGR) of 15.5%.

This technology will be of interest to companies involved in the development of cancer immunotherapy treatments.

Patent Protection

A patent application covering this technology has been filed through Spanish patent application ES201600160. IDIVAL would like to talk to companies interested in commercializing this vaccine or in a research cooperation agreement to develop it.



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