



Research Project Proposal

Academic year 2019-2020

Project Nº 41					
Title: <i>Cancer Immunotherapy using immunostimulatory aptamers</i>					
Department/ Laboratory <i>Department of Molecular Therapy. Aptamer lab. CIMA</i>					
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Summary <i>Short summary of the project with a maximum extension of 250 words, including the goals and the methodology that will be used.</i>					
<p>Immune-checkpoint blockade therapy is able to induce long-lasting antitumor responses in a fraction of cancer patients. Nonetheless, there is still room for improvement in the quest for new therapeutic combinations. Targeting tumor costimulation has been underscored as a possible target to include with immune-checkpoint blocking treatment. We propose to test a new costimulatory agonistic aptamer that potentiates T-cell activation, and could induce stronger antitumor responses when locally injected at the tumor site in combination with immune-checkpoint blockade therapy in different tumor models of melanoma and colon carcinoma. Furthermore, the agonistic aptamer could be engineered as a bi-specific tumor targeting aptamer in order to reach any disseminated tumor lesions after systemic injection. Treatment with the bi-specific aptamer in combination with immune-checkpoint blockade therapy will be tested. Thus, this work will likely provide evidence for the development of combinatorial therapies involving immune-checkpoint blockade and costimulatory agonist tumor-targeting agents.</p>					
<table border="1"> <tr> <td>yes</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>no</td> <td><input type="checkbox"/></td> </tr> </table>	yes	<input checked="" type="checkbox"/>	no	<input type="checkbox"/>	Does the project include the possibility of supervised animal manipulation to complete the training for animal manipulator?
yes	<input checked="" type="checkbox"/>				
no	<input type="checkbox"/>				