

**Entity:** Vall d'Hebron Institut de Recerca (VHIR)

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**Research group, Unit or Department:** Cardiocirculatory Pathology-Experimental Cardiology Lab.

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**Student's tutor:** Antonio Rodríguez Sinovas

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**Positions available:** 1

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**Project description/ Research lines:**

Las líneas de investigación son las siguientes:

- Mechanisms of myocardial ischemia-reperfusion injury and cardioprotection, with special emphasis on the role played by connexin 43 (Cx43) and Pannexin 1 channels. In our lab we analyze the mechanisms involved in cell death during myocardial infarction and propose new therapeutic strategies aimed to reduce infarct size. Cx43 and pannexin 1 are two high conductance membrane channels present in the sarcolemma and mitochondria of cardiomyocytes that play essential roles in both cell death and endogenous cardioprotection. We use transgenic mice models and electrophysiological, immunohistological and biochemical techniques. Other possible therapeutic strategies also studied in the lab include inhibition of ROS production in mitochondria, remote ischemic conditioning, etc.
  - Translational approaches for myocardial protection. Using an in situ heart pig model we assess the cardioprotective effects, and the mechanisms involved, of several new therapeutic strategies that can be later translated to the clinical arena.
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**Period for the internship:** (second semester)

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**Requirements:**

- Good academic records, preferably over 2 (scale 1-4).
  - Good english knowledge
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**Where to apply:** Interested candidates please send *CV and academic records* to Antonio Rodríguez Sinovas ([antonio.rodriquez.sinovas@vhir.org](mailto:antonio.rodriquez.sinovas@vhir.org))

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