

**Propostes TFM curs 2021-22**

<b>Project:</b>	<b>Drug screen in induced pluripotent stem cell derived model of Friedreich Ataxia</b>
<b>Keywords</b>	friedreich ataxia; degenerative disease; mitochondria; sensory neurons, induced pluripotent stem cells
<b>Supervisor/s</b>	Fabien Delaspre
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<b>Group</b>	Bioquímica de l'estrès oxidatiu
<b>PhD</b>	Yes

<b>Project:</b>	<b>NRG1-ErbBs signalling pathway in C-Type cholinergic synapses of motor neurons: implications in the physiopathology and therapy in animal models of Amyotrophic Lateral Sclerosis.</b>
<b>Keywords</b>	Amyotrophic Lateral Sclerosis, C-bouton, Neuregulin-1, SOD1
<b>Supervisor/s</b>	Sara Hernandez, Anna Casanovas
<b>E-mail</b>	<a href="mailto:sara.hernandez@udl.cat">sara.hernandez@udl.cat</a>
<b>Group</b>	Grup de Patologia Neuromuscular Experimental
<b>PhD</b>	Yes

<b>Project:</b>	<b>Drug repurposing to tackle Crohn's disease progression: Screening of a FDA-approved drug library against TNF-<math>\alpha</math>-driven cell death in autophagy-deficient genetic models</b>
<b>Keywords</b>	Crohn, Autophagy, cell death, FDA-approved drugs, TNF-alpha, inflammation
<b>Supervisor/s</b>	Judit Ribas i Fortuny
<b>E-mail</b>	<a href="mailto:judit.ribas@udl.cat">judit.ribas@udl.cat</a>
<b>Group</b>	Farmacologia de l'estrès Cel·lular (Unitat de Farmacologia)
<b>PhD</b>	Yes

<b>Project:</b>	<b>Modelling metastasis in adult Drosophila: Identification of the mechanisms underlying successful cell migration</b>
<b>Keywords</b>	Drosophila, metastasis, colorectal cancer, EMT, Snail
<b>Supervisor/s</b>	Andreu Casali
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<b>Group</b>	Drosophila models of disease
<b>PhD</b>	Yes

<b>Project:</b>	<b>Targeting calcium signaling against glioblastoma</b>
<b>Keywords</b>	autophagy, ER stress, hypoxia, neurospheres, patient-derived cultures
<b>Supervisor/s</b>	Judit Herreros / Carles Cantí
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<b>Group</b>	Senyalització per calci
<b>PhD</b>	Yes

<b>Project:</b>	<b>Spinal Muscular Atrophy: molecular mechanisms and new therapeutic strategies</b>
<b>Keywords</b>	human iPSC motoneuron differentiation, survival motor neuron protein, intracellular survival/death pathways, autophagy
<b>Supervisor/s</b>	Rosa M Soler/Ana Garcerá
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<b>Group</b>	Neuronal Signaling Unit
<b>PhD</b>	Yes

<b>Project:</b>	<b>Study design simulations</b>
<b>Keywords</b>	study design - computational simulations - R - Shiny
<b>Supervisor/s</b>	Ester Vilaprinýó Terré
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<b>Group</b>	Biología de sistemas y métodos estadísticos para la investigación
<b>PhD</b>	Yes

<b>Project:</b>	<b>Identification and validation of candidate genes involved in cellular senescence by a CRISPR/Cas9 screening</b>
<b>Keywords</b>	Cellular Senescence, CRISPR/Cas9
<b>Supervisor/s</b>	Supervisor/s: Mario Encinas
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<b>Group</b>	Developmental and Oncogenic Signaling
<b>PhD</b>	Yes

<b>Project:</b>	<b>Membrane contact sites in the pathophysiology of age-related neurodegenerative diseases</b>
<b>Keywords</b>	ER stress, mitochondria, respirometry, motor neuron, lipid metabolism
<b>Supervisor/s</b>	Manuel Portero-Otin
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<b>Group</b>	Metabolic Pathophysiology
<b>PhD</b>	Yes

<b>Project:</b>	<b>Iron as a determining factor in the participation of sphingolipid metabolism in the regulation of autophagy.</b>
<b>Keywords</b>	yeast, iron, sphingolipid, autophagy
<b>Supervisor/s</b>	M <sup>a</sup> Angeles de la Torre
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<b>Group</b>	Cell Signalling in Yeast
<b>PhD</b>	Yes

<b>Project:</b>	<b>Determinació del paper de BCAT1 en la carcinogènesi endometrial</b>
<b>Keywords</b>	Càncer endometri, BCAT1, Cultius 3D, CRISPR/Cas9 lentivirus, assaig molecular in vitro

Supervisor/s	Núria Eritja
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Group	Patologia oncològica ( <a href="https://www.irballeida.org/ca/recerca/16/patologia-oncologica">https://www.irballeida.org/ca/recerca/16/patologia-oncologica</a> )
PhD	Yes

Project:	<b>Precision medicine in patients with sleep apnea and acute coronary syndrome: Predictive model of response to treatment</b>
Keywords	Sleep apnea; Personalized Medicine; Biomarkers.
Supervisor/s	Manuel Sánchez de la Torre
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Group	Precision Medicine in Chronic Diseases Group ( <a href="http://www.irballeida.org/en/research/40/precision-medicine-in-chronic-diseases-group">http://www.irballeida.org/en/research/40/precision-medicine-in-chronic-diseases-group</a> )
PhD	Yes

Project:	<b>Role of cyclin D3 in the regulation of mitochondrial function and oxidative stress in pancreatic beta cells. Studies in autoimmune diabetes.</b>
Keywords	Autoimmune diabetes, cyclin D3, redox-balance, inflammation, apoptosis
Supervisor/s	Conchi Mora
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Group	Grup de Recerca en Immunologia i Immunopatologia
PhD	Yes

Project:	<b>Pathogenic mechanisms underlying Spinal Muscular Atrophy: the role of neuroinflammation</b>
Keywords	SMA, motoneuron, glia, spinal cord
Supervisor/s	Jordi Calderó/Olga Tarabal
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Group	Grup de Patologia Neuromuscular Experimental
PhD	Yes

Project:	<b>Dissecting the role of SNCA in the development of experimental acute kidney injury.</b>
Keywords	SNCA, kidney, proximal tubular cells, inflammation, oxidative stress
Supervisor/s	Milica Bozic/Jose M. Valdivielso
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Group	Vascular and Renal Translational Research Group
PhD	Yes