

Nom	Grup de recerca	Empresa Matriu	Disponibilitat	Descripció projecte
				JOB POSITION: Research Consultant Internship PREFERRED PROFILES APPLYING: Professional background and/or education in either Life Sciences or Management consulting (interest in the field is also of value) REQUIRED SKILLS: Willingness to learn, ability to build relationships, empathy, communication skills LANGUAGE/S: Proficiency in English and a second European language (not Spanish) highly desired DUTIES OF THE JOB: 1. Identification of potential Key Opinion Leaders (KOLs) worldwide that could join the IIS Network(SM) (belonging to top Hospitals, Medical Societies, etc..) 2. Participate in client (Pharmaceutical, Biotech, Medical Device industry) projects 3. Perform Primary Research Studies (interviews, questionnaires, surveys,...) with global life sciences experts and Key Opinion Leaders (KOLs) 4. Perform desk research leveraging IIS databases and internet search tools for client projects
Itziar Escudero	Insights in Life Sciences (IIS)	Insights in Life Sciences (IIS)	Jul+Aug+Sept	
Marco Milán/Lara Barrio	Development and Growth Control laboratory	IRB Barcelona	Jul+Aug+Sep	Morphogens and tissue growth: Morphogens are signalling molecules expressed in restricted domains that spread to the rest of the tissue to form a concentration gradient. A complex set of interactions between morphogens and their corresponding signalling pathways contributes to organizing limb growth along the dorsal-ventral, anterior-posterior and proximal-distal axes. We are currently analyzing how these morphogens and their gradients regulate wing growth.
Marta Marin Argany	Laboratory of Molecular Biophysics	IRB Barcelona	Jul+Sep	The student will join the project led by Dr. Marta Marin at the time of the program to learn specific techniques and be responsible of a part of the project. Basically, the student will be introduced into the basic techniques used in our laboratory in order to characterize protein structure and protein-protein interactions. Therefore, the student will learn how to express and purify recombinant protein in E.coli by using different chromatographies, and how to characterize the protein by different biophysical techniques as Circular Dichroism, Fluorescence, and NMR spectroscopies.
Jordi Fonollosa	Signal and information processing for sensing systems	IBEC	Jul+Sep	Sensors that measure air composition (gas sensors) have been proposed to monitor continuously home activity. These systems, unlike video cameras or microphones, do not rise privacy concerns when installed at home. Hence, they are better suited for monitor home activity and, for example, postpone the moving of the elderly to assisted living facilities. The student will be provided with preliminary data of the sensory system installed in a home setting. Main task will be building algorithms to identify different activities, such as cooking, bathroom visits, waking up, ventilation, etc. Other tasks will include searching for the best location to install the system at home, sensor calibration, gather new data or optimize sensory system.
Xavier Trepap	Integrative Cell and Tissue Dynamics	Institute for Bioengineering of Catalonia	Jul+Aug+Sep	The overall goal of our project is to understand how cells move during cancer invasion and tissue regeneration. The student will contribute to this goal using new nanotechnologies developed in our laboratory together with advanced techniques in cell biology, biophysics and microscopy.
Pau Gorostiza	Nanoprobes and Nanoswitches	Institute for Bioengineering of Catalonia (IBEC)	Jul+Aug+Sep	Nanoscale Electrical Characterization of Redox and Photosynthetic Proteins: We use Electrochemical Scanning Tunneling Microscopy and Spectroscopy in order to characterize electron transfer in redox and photosynthetic proteins at the single molecule level. Our aim is twofold: to understand the mechanisms of electron transfer between partner proteins in quasi-physiological conditions, and to apply this knowledge to develop novel nanodevices for molecular electronics and energy photoconversion.
Montserrat López	Nanoprobes and Nanoswitches	Institute for Bioengineering of Catalonia (IBEC)	Jul+Aug+Sep	Development and applications of synthetic photoswitches to manipulate physiological processes with light. We design and synthesize small molecules with pharmacological activity that is regulated with light. We test them using multiple assays, from fluorescence imaging and electrophysiology in vitro, to high-throughput in vivo experiments. Recent examples include vision restoration, spatiotemporally precise photomanipulation of neuronal activity in brain slices, and remote control of physiology and behavior in small animals.
Xavier Verdager	URSA (Riera group)	IRB Barcelona	Jul+Sep	The student will be involved in the synthesis of chiral iridium catalysts and its applications in the asymmetric hydrogenation of imines.
Antoni Riera / Albert Cabré	Name of the research group. Asymmetric Synthesis unit	IRB Barcelona	Jul+Sep	Brief description of the project in which the student will participate. Asymmetric synthesis using organometallic catalysts with P-stereogenic ligands.
Dr. Eduard Torrents	Bacterial Infections: Antimicrobial Therapies	Institute for Bioengineering of Catalonia (IBEC)	Jul+Aug+Sep	El treball que realitzarà l'estudiant es centraran en entendre com el factor transcripcional, NrdR, regula diferencialment la transcripció del gens que codifica per les diferents RNR en P. aeruginosa durant el procés d'infecció o creixement en forma de biofilm i sota diferents tensions d'oxigen. L'estudiant utilitzarà diferents tècniques de microbiologia clàssica, tècniques de bioquímica de proteïnes, de biologia molecular i de genètica bacteriana.
Antonio Zorzano	Complex metabolic diseases and mitochondria	IRB Barcelona	Jul+Aug+Sep	In our lab, we are interested in the role of mitochondrial dysfunction as the origin of pathology. Mitofusin 2, is a mitochondrial protein involved in mitochondrial fusion. The aim of this project is to evaluate transcriptional and protein expression changes in different cell lines deficient in mitofusin 2. Specifically, we aim 1) to prepare knock down cells of mitofusin 2 using lentivirus, 2) to study transcriptional changes in these cells through qPCR experiments and luciferase assays and 3) to study the expression of proteins encoded by some of the genes that show transcriptional alterations. The candidate will join Prof. Zorzano group at IRB Barcelona to perform a 3-month project (July, August and September) in a stimulating environment. The candidate will learn several lab skills including: bench work, experimental organization and writing and communication skills.
Maria Macias	Structural Characterization of Macromolecular Assemblies	IRB Barcelona	Jul+Aug+Sep	Different applications of biophysical and molecular biology techniques in structural biology, cloning and protein purification, NMR of peptides and proteins, ITC, and EMSA assays
Eric Aragon	Structural characterization of macromolecular assemblies	IRB Barcelona	Jul+Aug+Sept	Different applications of biophysical and molecular biology techniques in structural biology, cloning and protein purification, NMR of peptides and proteins, ITC, and EMSA assays
Gerardo Jiménez	Gene expression and signaling	IBMB-CSIC	Jul+Aug+Sep Jul+Aug Jul+Sep	During animal development, the formation of tissues, organs and all body structures is under strict control by signaling pathways, transcription factors and effector genes. We are investigating these regulatory processes using the fruit fly Drosophila, a powerful experimental model for genetic and molecular studies. We are particularly focusing on mechanisms of transcriptional repression and Ras-MAPK signaling, all of which depend on highly conserved molecules that are implicated in human diseases, including cancer. The student will be exposed to these projects and the use of advanced technologies such as CRISPR and confocal microscopy.
Josep Vilardell	pre-mRNA splicing	IBMB	Jul + Sep (Jul + Aug + Sep may be possible)	Understanding how exons are properly identified by the spliceosome, including instances where the identification is regulated, and how this identification changes depending on environmental changes, epigenetics, and ageing.
Modesto Orozco	Molecular Modeling & Bioinformatics	Institute for Research in Biomedicine	Jul+Aug+Sep	The candidate will be involved in the development and application of a code created in our group, that enables to predict the conformational space of B-DNA based on its essential dynamics.