ISIS@MACH ITALIA

Science and Technology Facilities Council
ISIS Neutron and Muon Source

Experiment Proposal

Experiment number GP2022016

Principal investigator	Dr Stefania Marcuzzo, Carlo Besta Neurological Institute , ITALY
Co-investigator (*)	Dr Daniela Gaglio, CNR, ITALY
Co-investigator	Dr Giovanni Romanelli, University of Rome Tor Vergata, ITALY
Co-investigator	
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Co-investigator	
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Experiment title	Metabolic characterization of ALS neurosphere
SRF Instrument	**Metabolomics**
Access Route	Rapid Access
Science Areas	Biology and Bio-materials
Sponsored Grant	None
Grant Title	-
Start Date	-
Similar Submission?	-
Industrial Links	-

Days requested: 5
Previous GP Number: -
DOI: -
Sponsor: -
Grant Number: -
Finish Date: -

Non-Technical Abstract

Amyotrophic lateral sclerosis (ALS) is a fatal progressive neurodegenerative disorder primarily characterized by selective degeneration of both the upper motor neurons in the brain and lower motor neurons in the brain stem and the spinal cord. The exact mechanism for the selective death of neurons is unknown. Many patients with ALS exhibit metabolic changes such as hypermetabolism and body weight loss. Despite these whole-body metabolic changes being observed in patients with ALS, the origin of metabolic dysregulation remains to be fully elucidated. Therefore, in this proposal we will perform metabolomics analysis using both untargeted and targeted approaches in order to better understand causes of metabolic dysfunction and subsequent neurodegeneration, able to identify new therapeutic strategies in ALS.

Publications -

Instruments	
Access Route	
Science Areas	
Sponsored Grant	
Grant Title	
Start Date	
Similar Submission?	
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Sample record sheet

Principal contact Dr Daniela Gaglio, CNR, ITALY
SRF Instrument **Metabolomics** **Days Requested:** 5
Special requirements:

SAMPLE

Material	animal tissues and cell culture	-	-
Formula	Labeling performed using 13C6 Glucose	-	-
Forms	Solid		
Volume	cc		
Weight	300 mg		
Container or substrate	-	-	-
Storage Requirements	liquid nitrogen and dry ice	-	-

SAMPLE ENVIROMENT

Temperature Range	- K	-	-
Pressure Range	- mbar	-	-
Magnetic field range	- T	-	-
Standard equipment	-	-	-
Special equipment	-	-	-

SAFETY

Prep lab needed	Yes	-	-
Sample Prep Hazards	-	-	-
Special equip. reqs	-	-	-
Sensitivity to air	No	-	-
Sensitivity to vapour	No	-	-
Experiment Hazards	-	-	-
Equipment Hazards	-	-	-
Biological hazards	-	-	-
Radioactive Hazards	-	-	-
Additional Hazards	-	-	-
Additional Details	-	-	-
Sample will be	Disposed by IS	-	-