The relationship between cristae shape and mitochondrial protein import in mitochondrial disease models

Fact Sheet

Project Information

CRIMIPRIM
Grant agreement ID: 891550

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

DOI
10.3030/891550

Closed project

Total cost
€ 171 473,28

EU contribution
€ 171 473,28

Coordinated by
UNIVERSITA DEGLI STUDI DI PADOVA
Italy

Project description

Mitochondria cristae remodeling and protein import machinery

The majority of mitochondrial proteins, including mitochondrial matrix and mitochondrial inner membrane (IM) proteins, are imported from the cytosol into the organelle through mitochondrial protein import pathways. The process is facilitated by mitochondrial IM and outer membrane (OM) contact sites. Recent studies have shown that overexpression of the dynamin-related optic atrophy 1 (OPA1) protein protects against IM proton electrochemical gradient loss and is involved in respiratory chain complex stabilisation and cristae remodelling while also present in
IM and OM contacts. The EU-funded CRIMIPRIM project hypothesises that OPA1 directly affects mitochondrial protein import pathways. This research will create the possibility to target the import machinery in mitochondria through cristae remodelling as an alternative to treat mitochondrial disorders.

Fields of science

natural sciences > biological sciences > biochemistry > biomolecules > proteins
natural sciences > physical sciences > optics > microscopy > electron microscopy

Keywords

Mitochondria  mitochondria biogenesis  protein import
mitochondria inner membrane  mitochondria outer membrane
respiratory chain complex  electrochemical gradient

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions
H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)

MSCA-IF-2019 - Individual Fellowships

Call for proposal

H2020-MSCA-IF-2019

See other projects for this call

Funding Scheme

MSCA-IF - Marie Skłodowska-Curie Individual Fellowships (IF)
UNIVERSITA DEGLI STUDI DI PADOVA

Net EU contribution
€ 171 473,28

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Region
Nord-Est > Veneto > Padova

Activity type
Higher or Secondary Education Establishments

Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

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