



amU Institut Marseille maladies rares Aix Marseille Université

MarMaRa' actions & PhD program

Réunion rentrée ED658 - Friday, 28th November 2025

Marie-Cécile Gaillard, Ph.D

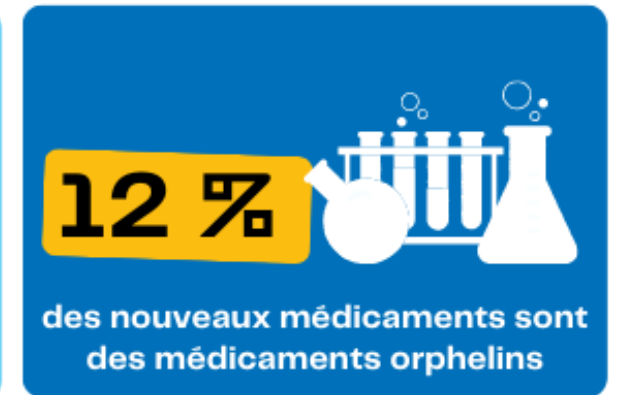
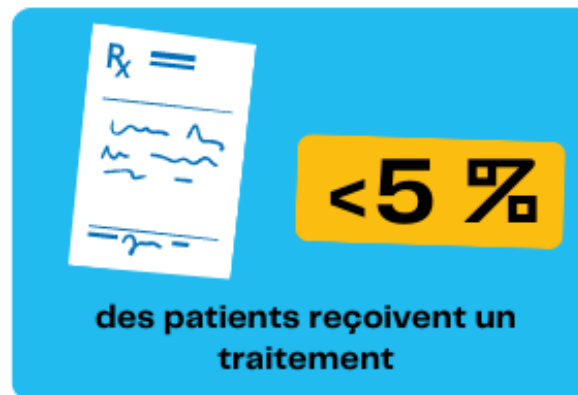
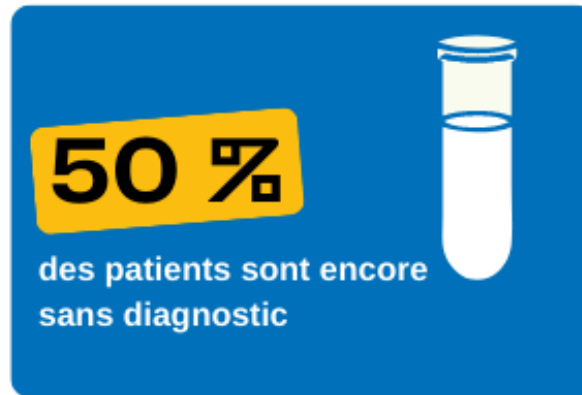
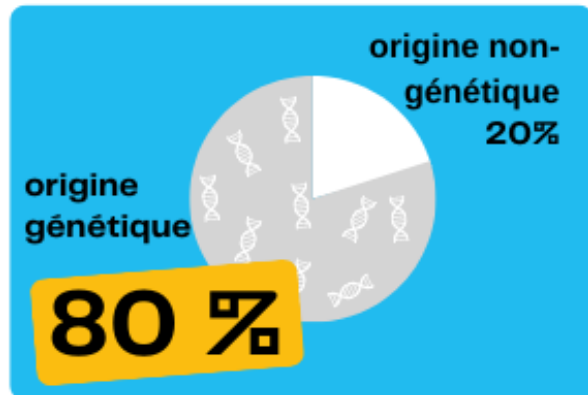
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Marseille Maladies Rares

Why focusing on Rares Diseases?

Rare Diseases are numerous and various, thus require joint interdisciplinary actions to face challenges and federate experts and general population



*Aucune maladie n'est trop rare pour ne pas mériter attention.
Les maladies rares sont rares, mais les malades nombreux." - Orphanet*





Marseille Maladies Rares

The institute

MarMaRa' Institute



Frédérique MAGDINIER MMG
Responsable Scientifique et Technique



Denis PUTHIER TAGC, TGML, Polytech
Co-Directeur adjoint Formation



Diane FRANKEL MMG, AP-HM
Co-Directrice adjointe Formation, Référente médicale et scientifique



Laurent FASANO IBDM
Co-Directeur adjoint Recherche, co-responsable des appels d'offre



Françoise MUSCATELLI INMED
Co-Directrice adjointe Recherche, co-responsable des appels d'offre



Marie-Cécile GAILLARD MarMaRa
Responsable opérationnelle, référente scientifique



Maxime CLEMENT MMG
Responsable administratif & financier



New PhD students representatives joined us!



Imane Ben Daoud (*PhD student 2nd year, MMG*)

Modeling undiagnosed muscular dystrophies using induced pluripotent stem cells, under the supervision of Dr. Leslie Caron, within the Epigenetics and Nuclear Skeleton Dynamics in Rare Diseases team at the Marseille Medical Genetics, MMG (Timone campus)



Masha Meger (*PhD student 3rd year, INMED*)

assessing the effects of perinatal exposure to pyrethroids on the developing brain, with a focus on the interactions between genetic and environmental factors, under the supervision of Valéry Matarazzo, within Françoise Muscatelli's team at the laboratory of the Mediterranean Institute of Neurobiology, INMED (Luminy campus)



Involved structures

5 Doctoral Schools

Engineering sciences (DS 353)

Mathematics & Informatics (DS 184)

2 Faculties

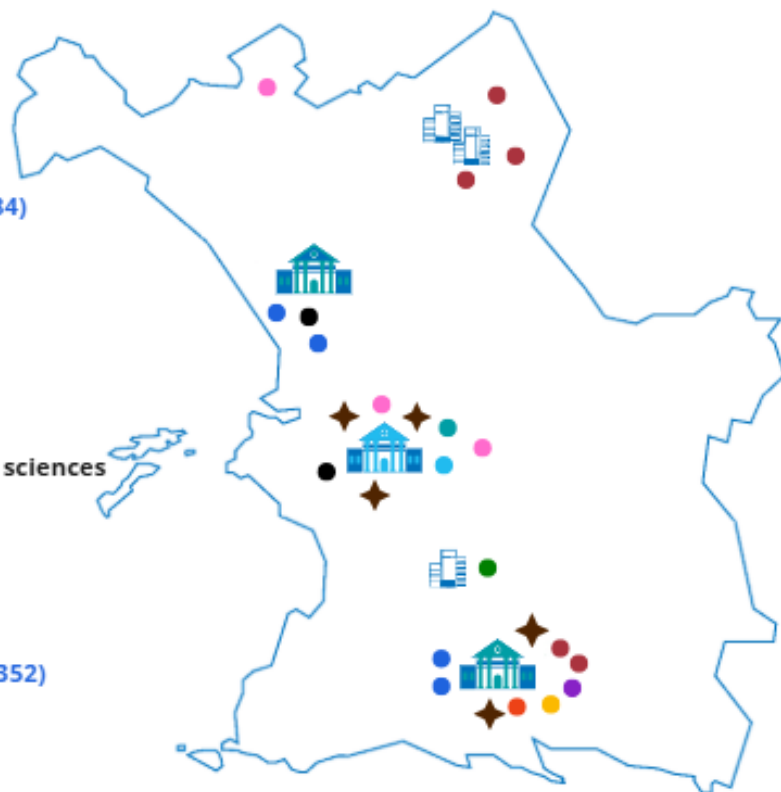
Faculty of sciences

Faculty of medical & paramedical sciences

Biomedical research (DS 659)

Life sciences (DS 658)

Physics and matter sciences (DS 352)



DS: Doctoral School
RU: Research Unit
MRU: Mixed Research Unit

13 Research Units / 36 Teams

ADES (MRU 7268)

Bio-cultural anthropology, law, ethics & health

IRPHE (MRU 7342)

Institute for Research on Out-of-Balance Phenomena

LMA (MRU 7031)

Mechanics & Acoustics Laboratory

FRESNEL institute (MRU 7249)

CEReSS (3279 RU)

Center for Studies & Research on Health Services
& Quality of Life

MMG (MRU 1251)

Marseille Medical Genetics

C2VN (MRU 1263)

CardioVascular & Nutrition Research Center

CRCM (MRU 7258)

Marseille Cancer Research Center

I2M (MRU 5295)

Institute of Mathematics of Marseille

LP3 (MRU 7341)

Lasers, Plasmas & Photonic Processes

IBDM (MRU 7288)

The Developmental Biology Institute of Marseille

INMED (MRU 1249)

Mediterranean Neurobiology Institute)

TAGC (MRU 1090)

Theories & approaches of genomic complexity

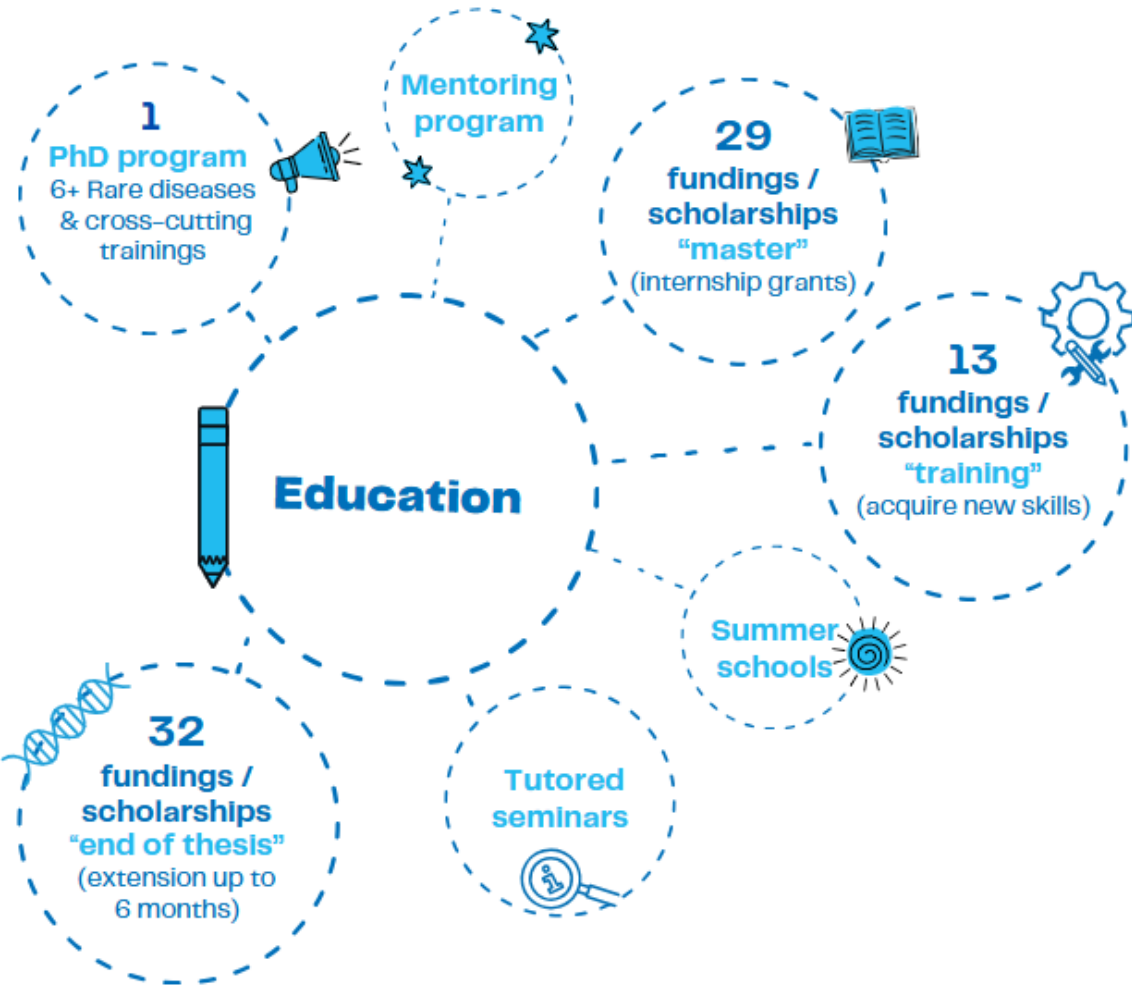
Tech core facilities

Marseille Stem Cells (MaSc) ◆

Genomic/Transcriptomics facilities (TGML; GBiM) ◆◆

Microscopy facilities (PICs; MMG) ◆◆

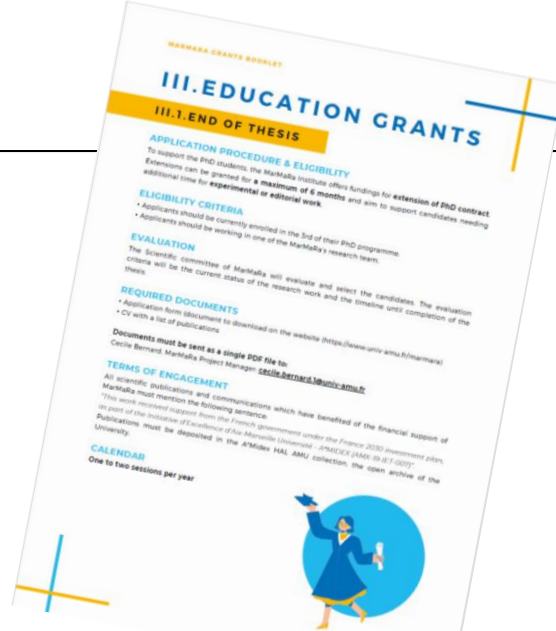






Marseille Maladies Rares

Actions for PhD students



Scholarship End of thesis



Scholarship Mission

dissemination

collaboration

Grant for training

CALLS FOR TENDERS

-FALL 2025-

research

INCENTIVE ACTION

RESEARCH/ASSOCIATION COLLABORATION

TRANSLATIONAL RESEARCH NEW

POST DOC

training

END OF THESIS

MASTER

Collaboration -
Dissemination -
MISSION

Assises de Génétique Humaine et Médicale 2026 -
MISSION - SPECIAL NEW

TRAINING

All the details about the calls on MarMaRa' website

<https://institut-marmara.univ-amu.fr/en/calls-for-projects-offers/our-opportunities>

Annual scientific symposium

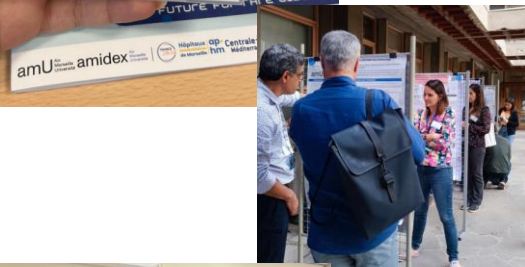
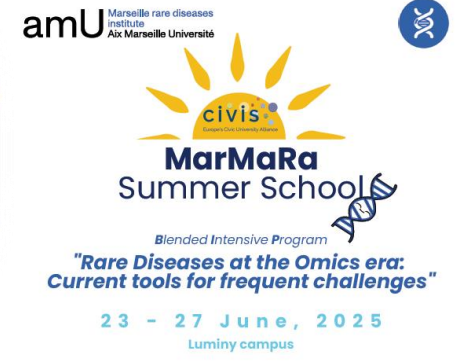


BIP CIVIS Summer schools

JIMR – Forum BiotechnoSUD – Festival Arts & Sciences - Interdisciplinary seminars, afterworks, ...

AI & RD (2025)
Bioengineering applications (2026)

Rare Diseases at the 'omics era: current tools for frequent challenges



Who? all PhD students (*priority to PhD students affiliated to a MarMaRa's team*) open to Master 2 students, engineers, researchers if room available

When? January to September 2026

Language: **English EN**

Format: mostly **remote or hybride**

Registration: free, open, via AMU form, commitment to participate

Validation: certificate of attendance delivered to participants upon request > up to 7 hours / ED (ADUM)



The Marseille Rare Diseases Institute launches its 2026 PhD program
Discover below the first trainings open for registration !

📌 The Marseille Rare Diseases institute - MarMaRa - PhD program 2026

These trainings are opened in priority to PhD students but Master students, engineers and researchers are welcomed. Our trainings are in English (unless all participants are French-speaking) and almost all are remote. European and international students are welcome!

After each training you will receive a certificate of attendance and PhD students from amU can validate up to 7h/training by their doctoral schools



Models and Pre-clinical Development for Rare Diseases (coord. S. Zaffran & F. Rochais – MMG)

On site; Hybrid; 6 hours seminar sessions (half days x2); overview of the different **experimental models** (cardio, neuro, muscular) and **pre-clinical studies used in therapeutic approaches**.

Fundamental notions of Medical Genetics in prenatal diagnosis (coord. M. Abaji– MMG)

remote; half day; **basic concept in genetics, clinical cases in molecular genetics** (with emphasis on **diagnosis and diagnostic errance**)



Biomedical ethics (coord. Annagrazia Altavilla – Espace éthique méditerranéen)

Remote webinars (3 x2 hours); **legal framework and the principle of biomedical ethics; Access to orphan drug and innovative therapies; Research with health data: ethical and regulatory issues (case of research with genetics data)**



Workshop Single cell RNA seq (coord. D. Puthier - TAGC)

remote; 1 day; **Single cell data analysis** using Seurat, **preprocessing** (QC, normalization); data scaling; **dimensionality reduction methods**; clustering to visualize cellular landscapes; **downstream differential gene expression analysis with R**



Introduction to microscopy for cell and tissue imaging (coord. M. Mavrakis - Institut Fresnel)

On site; 1 day, understanding **light-material interactions** leading to the generation of cell and tissue pictures in a microscope; **key concepts of optics** to understand images forming; overview of **the main microscopy techniques used in biology and their applications** in cellular and tissular imaging

Fluorescent labeling(coord. M. Mavrakis – Institut Fresnel)

Remote/on site; 2hours; organic fluorophore; **immunolabeling**, fluorescent proteins; **genetic labeling**

From research data to a start up project (coord. F. Rochais – MMG, Neocor Therapeutics)

Round table; half a day; with *Impulse inc.*, *Eurobiomed*; *Pépité Provence*, *SATT Sud Est*, *Cisam+*, from **research data management to technology transfert & entrepreneurship**, start up creation; business model in science

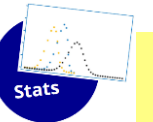


Continuous statistics in genetics (coord. A. Gonzalez – TAGC)

Distance; 1 day; introduction to **methods and tests used in genetics**; **linear regression**; **continuous probability distribution and hypothesis test procedures**; R language

Statistics for genomics: discrete probability distributions (coord. D. Puthier – TAGC)

Distance; 1 day; introduction to **methods and tests used in genomics**; **discrete probability distributions and hypothesis tests**; examples from biology and R practical sessions



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MarMaRa Website



https://www.linkedin.com/company/marmara_amu//



École Doctorale
Recherches biomédicales
ED 659

Mailing list MarMaRa
Mailing list for MarMaRa' PhD students



Marie-Cécile Gaillard, Project officer, marie-cecile.gaillard@univ-amu.fr
Denis Puthier & Diane Frankel (co Deputy directors for Academic training)

➤ MarMaRa NEWSLETTER

1000+ followers
vous êtes plus de 1000
à nous suivre !
MERCI !

Thank you

amU MarMaRa
Aix Marseille Université





THANKS for your attention!

Research Units



amU composantes



Doctoral schools

ED658 (Sciences de la Vie et de la Santé)

ED659 (Recherches biomédicales)

ED353 (Sciences pour l'Ingénieur)

ED352 (Physique et sciences de la matière)

ED184 (Mathématiques et Informatique)

