

Miriam Molina Arcas

Principal Laboratory Research Scientist
The Francis Crick Institute
1 Midland Road, NW1 1AT London
+442037963313
miriam.molina@crick.ac.uk

EDUCATION

- 1999-2005 PhD in Biomedicine**, University of Barcelona, Spain
Role of equilibrative nucleoside transporters in the sensitivity to antineoplastic drugs.
Supervisors: Prof. Marçal Pastor-Anglada and Dr. F. Javier Casado
- 1994-1999 BSc Biochemistry**, University of Barcelona, Spain

RESEARCH AND PROFESSIONAL EXPERIENCE

- June 2016- present Senior Laboratory Research Scientist**, Oncogene Biology Laboratory, The Francis Crick Institute. Prof. Julian Downward.
Studied combination approaches that improve the efficacy of KRAS inhibitors and reduce resistance mechanisms.
- March 2015- May 2016 Postdoctoral Fellow**, Lung Cancer Team, Institute of Cancer Research. Prof. Julian Downward.
Designed and optimized a whole-genome shRNA screen to identify synthetic lethal interactions with MEK and IGF1R inhibitors.
- Sep 2008- Feb 2015 Postdoctoral Fellow**, Signal Transduction Laboratory, Cancer Research UK- London Research Institute. Prof. Julian Downward
Using RNA interfering and drug screens, identified new therapeutic strategies to treat tumours harbouring KRAS mutations
- 2006- Aug 2008 Postdoctoral Fellow**, University of Barcelona, Spain
Prof. Marçal Pastor-Anglada
Studied the role of membrane transporters in nucleoside-derived drug response in cancer and HIV.

TEACHING AND MENTORING EXPERIENCE

- 2018-2021 Honorary Research Associate** in the School of Life & Medical Sciences, University College London, part of the Certificate in Core Teaching Practices.
- 2007-2008 Part-time lecturer** of Biochemistry and Molecular Biology (University of Barcelona). 180h of theory and practical lessons.
- 2003-2005 Teaching assistant** of Biochemistry and Molecular Biology (University of Barcelona). 60h of practical lessons.
- September 2019 Co-supervisor of MSc Experimental Pharmacology and Therapeutics Research** of Pablo Romero Clavijo at the University College London.
- July 2009 Co-supervisor of PhD in Biomedicine** of Laia Trigueros Motos at University of Barcelona.
- June 2008 Co-supervisor of Experimental master** of Lorena Medina Pulido at the University of Barcelona.

AWARDS AND HONOURS

2011-2012 Marie Curie Individual Fellowship (FP7-PEOPLE-2009-IEF)
 2002-2005 Pre-doctoral Fellowship. Ministerio de Educación Cultura, Spain
 2000 Oncology research fellowship. AECC (Spanish Association against Cancer)

SELECTED RESEARCH PUBLICATIONS

Catherine F Houlihan, Nina Vora, Thomas Byrne,... , Charles Swanton, **Crick COVID-19 Consortium**; Andrew Hayward, Eleni Nastouli, SAFER Investigators. Pandemic peak SARS-CoV-2 infection and seroconversion rates in London frontline health-care workers. **Lancet**. **2020**, 396(10246)

Molina-Arcas M, Moore C, Rana S, van Maldegem F, Mugarza E, Romero-Clavijo P, Herbert E, Horswell S, Li L, Janes MR, Hancock DC, Downward J. Development of combination therapies to maximize the impact of G12C KRAS inhibitors in lung cancer. **Sci Transl Med**. **2019**, 11(510).

Lionarons D, Hancock DC, Rana S, East P, Moore C, Murillo MM, Carvalho J, Spencer-Dene S, Herbert E, Stamp G, Damry D, Calado DP, Rosewell I, Fritsch R, Neubig R, **Molina-Arcas M***, Downward J*. The melanoma oncogene RAC1^{P29S} induces a mesenchymal phenotypic switch via serum response factor to promote tumor development and therapy resistance. **Cancer Cell**. **2019**, 36(1):68-83. * *corresponding authors*

Coelho MA, de Carné Trécesson S, Rana S, Zecchin D, Moore C, **Molina-Arcas M**, East P, Spencer-Dene B, Nye E, Barnouin K, Snijders AP, Lai WS, Blackshear PJ, Downward J. Oncogenic RAS Signaling Promotes Tumor Immuno-resistance by Stabilizing PD-L1 mRNA. **Immunity**. **2017**, 19;47(6):1083-1099

Castellano E, **Molina-Arcas M**, Krygowska AA, East P, Warne P, Nicol A, Downward J. RAS signalling through PI3-Kinase controls cell migration via modulation of Reelin expression. **Nat Commun**. **2016**, 13;7:11245.

Molina-Arcas M*, Hancock DC*, Sheridan C, Kumar MS, Downward J. Coordinate Direct Input of Both KRAS and IGF1 Receptor to Activation of PI3 kinase in KRAS-Mutant Lung Cancer. **Cancer Discov**. **2013**, 3(5):548-63. * *equally contributed*

Steckel M*, **Molina-Arcas M***, Weigelt B, Marani M, Warne PH, Kuznetsov H, Kelly G, Saunders B, Howell M, Downward J, Hancock DC. Determination of synthetic lethal interactions in KRAS oncogene-dependent cancer cells reveals novel therapeutic targeting strategies. **Cell Res**. **2012**, 22(8):1227-45. * *equally contributed*

Kumar MS, Hancock DC*, **Molina-Arcas M***, Steckel M, East P, Diefenbacher M, Armenteros-Monterroso E, Lassailly F, Matthews N, Nye E, Stamp G, Behrens A, Downward J. The GATA2 Transcriptional Network Is Requisite for RAS Oncogene-Driven Non-Small Cell Lung Cancer. **Cell**. **2012**, 149(3):642-55. * *equally contributed*