



Effect of heterogeneity of cancer cells on collective invasion

Fact Sheet

Project Information

HeteroCancerInvasion

Grant agreement ID: 708651

[Project website](#) 

DOI

[10.3030/708651](https://doi.org/10.3030/708651) 

Project closed

EC signature date

4 March 2016

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1 May 2016

End date

30 April 2018

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EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 195 454,80

EU contribution

€ 195 454,80

Coordinated by

THE FRANCIS CRICK INSTITUTE
LIMITED

 United Kingdom

Objective

Recent live cell imaging studies have demonstrated that cancer cells invade either as single cell or as cell group retaining cell-cell adhesion. In contrast to the well-documented single cell movement, little is known about collective cancer cell invasion. Given that a single tumour tissue contains various types of cancer cells and the collective movement of cancer cells is sum of the behavior of phenotypically different cells, we hypothesised that intratumour heterogeneity affect collective invasiveness. Careful dissection of the movement of diverse cancer cells is required to study the nature of collective invasion because different behaviour of heterogeneous cancer cells causes complication to understand the movement of

whole cancer cell collective. In this study we will utilise and combine the single-cell resolution live cell imaging of 3D collective invasion assay with different types of cancer cell line generated by gene editing and mathematical modelling of invasion assay, which enable us to set up a lot of different possible starting configurations, to test our hypothesis.

This project not only advance our current understanding of collective invasion of heterogeneous cancer cell population, but also will be beneficial to design better strategies to limit the invasion and metastasis of cancer.

Fields of science (EuroSciVoc)

[medical and health sciences](#) > [medical biotechnology](#) > [genetic engineering](#) > **[gene therapy](#)**

[medical and health sciences](#) > [clinical medicine](#) > [oncology](#) > [skin cancer](#) > **[squamous cell carcinoma](#)**

[natural sciences](#) > [biological sciences](#) > **[cell biology](#)**

[medical and health sciences](#) > [medical biotechnology](#) > [cells technologies](#) > **[stem cells](#)**

[natural sciences](#) > [mathematics](#) > [applied mathematics](#) > **[mathematical model](#)**



Programme(s)

[H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions](#)

MAIN PROGRAMME

[H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility](#)

Topic(s)

[MSCA-IF-2015-EF - Marie Skłodowska-Curie Individual Fellowships \(IF-EF\)](#)

Call for proposal

[H2020-MSCA-IF-2015](#)

[See other projects for this call](#)

Funding Scheme

[MSCA-IF-EF-ST - Standard EF](#)

Coordinator



THE FRANCIS CRICK INSTITUTE LIMITED

Net EU contribution

€ 195 454,80

Total cost

€ 195 454,80

Address

1 MIDLAND ROAD

NW1 1AT London

 **United Kingdom** 

Region

London > Inner London — West > Camden and City of London

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

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