UNIVERSITE PARIS DESCARTES
Les Sciences de l'Homme et de la Santé

Applications of droplet-based digital PCR approaches in cancer research

Scientists involved: *Gitta Boons, Ouriel Caën, Jerome Durand-Labrunie, Fanny Garlan, Sonia Garrigou, Hélène Guermouche, Heng Lu, Solveig Meles, Roberta Menezes, Dr Philippe Nizard, Corinne Normand, Dr Daniel Pietrasz, Dr Karla Perez-Toralla, Dr Shufang Renault, Dr Eleonora Zonta*

Scientists involved previously: *Evelyne Liuu, Jean-François Bartolo, Zakaria El Harrak, Deniz Pekin, Thevy Hor*

Droplet-based digital procedure presents high potentialities for cancer research. Consequently in parrallel to the development of highly sensitive quantitative microfluidic tools for cancer biomarkers detection, part of our research is dedicated to their validation. Multiplex strategies were thus developped and validated for the analysis of DNA integrity (Didelot *et al.*, Clin. Chem. 2013) as well as the detection of the seven most frequent *KRAS* mutations within patient samples including plasma (Taly *et al.* , Clin. Chem. 2014) and tumors (Laurent-Puig et al. submitted).

Future projects of the team are aiming at evaluating the use of circulating tumor DNA as a potential marker for patient follow-up and investigating the role of low frequency subclones for cancer treatment. Our main focuss is directed against colorectal cancer (collab. Pr. P. Laurent-Puig) and lung cancers (collab. Dr H. Blons), we are also developing tools and strategies for other cancers through collaborative projects.

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COLLABORATORS

Pr Pierre Laurent-Puig (UMRS1147, hEGP hospital)

Pr Hélène Blons (UMRS1147, hEGP hospital)

Pr Elisabeth Fabre (UMRS1147, hEGP hospital)

Dr Nicolas Pecuchet (UMRS1147, hEGP hospital)

Dr Aziz Zaanan (UMRS1147, hEGP hospital)

Dr Jean-Baptiste Bachet (UMRS1147, Pitié Salpetrière Hospital)

Dr Anne-Sophie Bats (UMRS1147, hEGP hospital)

Dr Charlotte Ngo (UMRS1147, hEGP hospital)

Pr Jean Donadieu (AP-HP, Trousseau Hospital, Paris)

Dr Sebastien Héritier (AP-HP, Trousseau Hospital, Paris)

Pr Jean-François Emile (AP-HP, Ambroise Paré Hospital, Paris)

Dr Olivier Kosmider (AP-HP, Cochin Institute, Paris)

Pr Iradj Sobahni (AP-HP, UPEC, Henri-Mondor Hospital, Paris)

Pr Marc Sanson, (Brain and Spine Institute, ICM, Paris)

Dr Yannick Marie, (Brain and Spine Institute, ICM, Paris)

Pr. Paul Hofman (CHU Nice)

Pr. Elena Paillaud, Dr Evelyne Liuu (Henri Mondor Hospital, Créteil, AP-HP)

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