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Department of Molecular and Cellular Medicine
KU Leuven

MSc Biotechnology, Universidad Politecnica Valencia (Spain), 2011

Current Position

PhD student Biomedical Sciences at KU Leuven
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Current Project Members

Postdoctoral scientist: Frederik De Smet, PhD

PhD student: Evelyne Naus, MSc

Keywords

Protein aggregation – p53 – cancer – immunofluorescence - clinical outcome

Science

P53 is a tumor suppressor and a master regulator of the cellular homeostasis, being the most frequently mutated gene in human cancers. Mutant p53 develops a dominant negative activity and oncogenic gain of function and its accumulation is a hallmark of many tumors. Aggregation has been proposed as a novel mechanism to explain this, based on the exposure of an aggregation stretch in mutant p53 that co-aggregates with wild-type but also with p63 and p73. This suggests that not mutation of p53 but its folding status is the key to develop p53 as a biomarker. Current clinical methods for the detection of p53 correlate poorly with the clinical outcome so my work is focused on the development of immunofluorescence methods to detect p53 aggregation and stratify tumors according to their aggregation status. This classification will be useful to select those patients that could benefit from the promising and emerging anti-aggregation therapies.

Recent Fellowships

Onderzoekstoelage from KU Leuven - PhD Fellowship
Period: 01.10.2012 – 01.10.2016
Title: 'The aggregation status of the p53 protein in human cancer: a novel prognostic marker?`
Role: PhD student