

EU-LIFE Woman Postdoc Mentoring Programme

Short bios of mentors



Jacqueline Jacobs

Group leader

NKI (The Netherlands Cancer Institute)

Amsterdam, The Netherlands

Jacqueline Jacobs studied Biology, with specialization in Medical Biology, at the University of Nijmegen in the Netherlands, which included two research stays of 6-9 months each, including at the Uppsala University in Sweden. She obtained her BSc+MSc degree in 1996 with highest honors (cum laude, top 1% in the Netherlands).

From 1996-2000 she performed her PhD studies at the department of Molecular Carcinogenesis of the Netherlands Cancer Institute (NKI) in Amsterdam, the Netherlands, with Dr. Maarten van Lohuizen, working on mammalian Polycomb-group genes and the control of oncogenic transformation and cellular senescence, as well as on functional genetic screens in mammalian cells. She received her PhD degree in 2000 from the University of Utrecht, with highest honors (cum laude, top 5% in the Netherlands).

In 2000 and 2001 she stayed 2 years longer as a postdoc with Prof. dr. Maarten van Lohuizen at the NKI. At the start of 2002 she moved to New York, USA, for a postdoctoral fellowship position with Prof. dr. Titia de Lange at the Rockefeller University, NY, USA, fully funded by a personal fellowship from the Dutch Cancer Society. In July 2004 she returned to the Netherlands Cancer Institute to complete the remaining half year of her 3-year fellowship at the department of Molecular Genetics.

From 2005 to 2008 she was appointed as Postdoctoral research associate at the NKI, funded by own grant support.

As of June 2008 she was appointed as NKI Junior Group Leader (assistant professor level, tenure-track), also fully funded by own grant support. In September 2012 she was awarded with tenure and appointed as Group Leader (associate professor level) and permanent staff member, first at the department of Molecular Oncology and since May 2017 at the department of Oncogenomics of the NKI.

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Cancer Society, the Dutch Research Council and the European Union's Horizon 2020 research and innovation program (Marie-Sklodowska-Curie ITN grant).

Jacqueline Jacobs (born 1973, in the Netherlands) is mother of 3 children, first one born in 2003 during her postdoc in the US, the 2nd born in 2005 during her research associate position at NKI, and the 3rd born in 2008 during the start of her tenure track at NKI. Since 2016 she is a single parent.

Summary scientific achievements

Early in her career, Jacqueline Jacobs made key discoveries on how Polycomb-group and T-box transcriptional repressors control cellular senescence and impact cancer development, and how telomere deprotection induces senescence (1-4). Since independence, the Jacobs lab made seminal contributions to the current understanding of DNA repair at telomeres and DNA double-strand breaks, and the mechanisms underlying cancer therapy resistance. These include identifying crucial roles of the ubiquitin ligase RNF8, the HORMA domain protein MAD2L2, and the shieldin complex (5-9). In addition, the lab revealed key aspects of how chromatin controls DNA repair at telomeres and DSBs (10-12), and more recently discovered how MAD2L2, as part of POL η , protects stalled replication forks (13).

Expertise: Molecular biology, Cell biology, Genetics, Functional genetic screens

Current focus areas: Genome stability, Telomeres, DNA repair, DNA replication.