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Regulation of actomyosin contraction as a driving force of invasive lobular breast cancer

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Curriculum vitae

Koen Schipper was born on February 21st 1989 in Rotterdam, The Netherlands. He grew up in Delft where he attended the Johannes Vermeer Montessori School. In 2001 he started at the Haags Monessori Lyceum in Den Haag from which he graduated in 2007. He then went on to take a gap year where he after having worked for half a year at the technical university of Delft spent 5 months traveling in New Zealand and Australia. In 2008 he enrolled in the bachelor Bio-pharmaceutical sciences at Leiden university from which he graduated in 2011. During the final internship of his bachelor studies Koen studied NFκB signaling in liver toxicity which sparked his interest in signal transduction. He then continued with a Research master in biopharmaceutical sciences. He performed his first internship in the department of toxicology at the Leiden academic center for drug research under the supervision of dr. Sylvia Le Dévédec and Prof. Bob van de Water, where he investigated the role of Src family kinases in triple negative breast cancer. For his second internship Koen went to Johns Hopkins university in Baltimore (USA) under the supervision of Kevin Cheung and Prof. Andrew Ewald, where he used patient derived organoids and mouse models to study breast cancer metastasis. Koen graduated cum laude from the master program In 2014. In June 2014, Koen joined the lab of Prof. Jos Jonkers at the Netherlands Cancer Institute as a PhD student. He studied the mechanisms underlying the development of invasive lobular breast cancer the results of which are the subject of this thesis.

List of publications

Cheung, K.J., Padmanaban, V., Silvestri, V., Schipper, K., Cohen, J.D., Fairchild, A.N., Gorin, M.A., Verdone, J.E., Pienta, K.J., Bader, J.S., et al. (2016). **Polyclonal breast cancer metastases arise from collective dissemination of keratin 14-expressing tumor cell clusters.** Proc Natl Acad Sci U S A. 113, E854-863.

Kas, S.M.*, de Ruiter, J.R.*, Schipper, K.*, Annunziato, S., Schut, E., Klarenbeek, S., Drenth, A.P., van der Burg, E., Klijn, C., Ten Hoeve, J.J., Adams, D.J., Koudijs, M.J., Wesseling, J., Nethe, M., Wessels, L.F.A., Jonkers, J. **Insertional mutagenesis identifies drivers of a novel oncogenic pathway in invasive lobular breast carcinoma.** Nat Genet. 2017 Aug;49(8):1219-1230. * *These authors contributed equally to this work*

Kas SM,* de Ruiter JR,* Schipper K, Schut E, Bombardelli L, Wientjens E, Drenth AP, de Korte-Grimmerink R, Mahakena S, Phillips C, Smith PD, Klarenbeek S, van de Wetering K, Berns A, Wessels LFA, Jonkers J. **Transcriptomics and Transposon Mutagenesis Identify Multiple Mechanisms of Resistance to the FGFR Inhibitor AZD4547.** Cancer Res. 2018 Oct 1;78(19):5668-5679. * *These authors contributed equally to this work*

Schipper K, Seinstra D, Drenth AP, van der Burg E, Ramovs V, Sonnenberg A, van Rheenen J, Nethe M, Jonkers J. **Rebalancing of actomyosin contractility enables mammary tumor formation upon loss of E-cadherin.** Nat Commun. 2019 Aug 23;10(1):3800.

Schipper K, Drenth AP, van der Burg E, Cornelissen S, Klarenbeek S, Nethe M, Jonkers J. **Truncated ASPP2 drives initiation and progression of invasive lobular carcinoma via distinct mechanisms.** Cancer Res. 2020 Apr 1;80(7):1486-1497.

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