Image Analysis and Platform Development for Automated Phenotyping in Cytomics

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List of Publications

Benedetti, G., Fokkelman, M., Yan, K., Fredriksson, L., Herpers, B., Meerman, J., Van de Water, B., et al. (2013). The NF-κB family member RelB Facilitates Apoptosis of Renal Epithelial Cells Caused by Cisplatin/TNFα Synergy by Suppressing an EMT-like Phenotypic Switch. *Molecular Pharmacology*.

De Graauw, M., Cao, L., Winkel, L., Martine, M. H. A. M., Le Dévédec, S. E., Klop, M., Yan, K., et al. (2013). Annexin A2 depletion delays EGFR endocytic trafficking via cofilin activation and enhances EGFR signaling and metastasis formation. *Oncogene*. doi: 10.1038/onc.2013.219. [Epub ahead of print]

Larios, E., Zhang, Y., Yan, K., Di, Z., Le Dévédec, S., Groffen, S., & Verbeek, F. (2012). Automation in Cytomics: A Modern RDBMS Based Platform for Image Analysis and Management in High-Throughput Screening Experiments. *Conf. Health Information Science 2012*. Springer.

Le Dévédec, S., Geverts, B., De Bont, H., Yan, K., Verbeek, J. F., Houtsmuller, A., & Van de Water, B. (2012). The residence time of focal adhesion kinase (FAK) and paxillin at focal adhesions in renal epithelial cells is determined by adhesion size, strength and life cycle status. *Journal of cell science*.

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Yan, K., & Verbeek, J. F. (2012). Segmentation for High-throughput Image Analysis: Watershed Masked Clustering. *ISoLA 2012, Part II, LNCS* (Vol. 7610, pp. 25–41). Heidelberg: Springer.

Qin, Y., Stokman, G., Yan, K., Ramaiahgari, S., Verbeek, F., De Graauw, M., Van de Water, B., et al. (2011). Cyclic AMP signalling protects proximal tubule epithelial cells from cisplatin-induced apoptosis via activation of Epac. *British Journal of Pharmacology*.

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Damiano, L., Le Dévédec, S. E., Di Stefano, P., Repetto, D., Lalai, R., Truong, H., Xiong, J. L., Yan, K., et al. (2011). p140Cap suppresses the invasive properties of highly metastatic MTLn3-EGFR cells via impaired cortactin phosphorylation. *Oncogene*, *30*(5), 624–33. doi:10.1038/onc.2011.257

Yan, K., Larios, E., LeDevedec S. van de Water, B., Verbeek FJ (2011), Automation in Cytomics: Systematic Solution for Image Analysis and Management in High Throughput Sequences. *Proc. IEEE Conf. Engineering and Technology (CET 2011)*, Vol 7. Shanghai 2011, 195-198

Qin, Y., Stokman, G., Yan, K., Ramaiahgari, S., Verbeek, F., van de Water, B., Price, L.S., (2010), "Activation of Epac-Rap Signaling Protects against Cisplatin-induced Apoptosis of Mouse Renal Proximal Tubular Cells, *Drug Metabolism Reviews*, vol. 42, pp. 31-31.

LeDévédec, S., Yan, K., De Bont, H., Ghotra, V., Truong, H., Danen, E., Verbeek, F. J., et al. (2010). A Systems Microscopy Approach to Understand Cancer Cell Migration and Metastasis. *Cellular and Molecular in Life Science*, *67*(19), 3219–3240.

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Curriculum Vitae

Kuan Yan was born on December 30th 1982, in Shanghai, the People's Republic of China. In 2002, he started his bachelor study in computer science at InHolland University of Applied Sciences in Amsterdam. He completed his bachelor degree in June 2006. His bachelor project focused on the platform design for Business-to-Consumer (B2C) online shopping. In 2006, he started a master study in Bioinformatics at Leiden University and completed his Master's degree in May 2008. His master thesis project focused on automated image analysis for the dynamic quantification of MTLn3 rat mammary tumor cell migration from image sequences. The master thesis project was accomplished under the supervision of Dr. Fons J. Verbeek in the section of Imaging and Bioinformatics of LIACS.

In June 2008 Kuan Yan started his PhD in the section Imaging and Bioinformatics of the Leiden Institute of Advanced Computer Science (LIACS) in Leiden University, under the supervision of Dr. Ir. Fons Verbeek; in collaboration with the Toxicology Department of Leiden Academic Center of Drug Research (LACDR); in a project within the BioRange program of the Netherlands Bioinformatics Centre (NBIC). The PhD research focused on the design of dedicated image and data analysis solutions for *in vitro* cancer phenotyping for dynamic HT/HC cell screening.

In 2012, he has been involved in other analysis pipelines for Toxicology Department of LACDR including actin fibers, endoplasmic reticula, mitochondria and nuclear membranes.

As of June 2013, he is employed by OCellO B.V. in the integrated bioinformatics analysis of the HT/HC screens.

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