The laboratory of David Suter (UPSUTER) at the Ecole Polytechnique Fédérale de Lausanne (EPFL) is **looking for a Post-doctoral researcher** to work on a project involving quantitative, live single cell analysis of transcription factor concentrations and activity in embryonic stem cells.

EPFL is a world-leading engineering school situated at the shore of Lake Geneva in Switzerland, and fosters interdisciplinarity across basic and engineering science. The Suter lab uses in vivo approaches to understand how transcription factors regulate gene expression and cell identity of embryonic stem cells.

This project is part of a Sinergia Consortium funded by the Swiss National Science Foundation, and will involve interdisciplinary collaboration with our partner labs experts in microfluidics and in vitro transcription factor characterization (Maerkl lab, EPFL), and computational modelling of biological networks (van Nimwegen lab, University of Basel). The project will involve cutting edge approaches such as genome editing, quantitative and genome-wide measurements/analysis of transcription factor binding. The overarching goal of this project is to reach a quantitative understanding of how transcription factor networks control cell identity.

If you have a strong background in molecular/cell biology and bioinformatics and are interested in this project, send a cover letter, CV and the contact information of 3 referees to david.suter@epfl.ch. For more information please visit https://www.epfl.ch/labs/suter-lab/sinergia-project/ or contact me using the email address given above.

References:

Mitotic chromosome binding predicts transcription factor properties in interphase.
Raccaud M, Alber AB, Friman ET, Agarwal H, Deluz C, Kuhn T, Gebhardt JCM, Suter DM.
Nature Communications 2019 Jan 30

Endogenous fluctuations of OCT4 and SOX2 bias pluripotent cell fate decisions.
Strebinger D*, Deluz C*, Friman ET*, Govindan S, Alber AB, Suter DM†. *Equal contribution; †Corresponding author.
Molecular Systems Biology 2019 September 25

Dynamic regulation of chromatin accessibility around the cell cycle by pioneer transcription factors.
Friman ET, Deluz C, Mehreles-Filho A, Govindan S, Gardeux V, Deplancke B, Suter DM†. †Corresponding author.
eLife, in press (also see bioRxiv version: doi:10.1101/698571)

Single Live Cell Monitoring of Protein Turnover Reveals Intercellular Variability and Cell-Cycle Dependence of Degradation Rates.
Alber AB*, Paquet ER*, Biserni M, Naef F, Suter DM.
Molecular Cell 2018 Aug 23.

A role for mitotic bookmarking of SOX2 in pluripotency and differentiation.
Deluz C, Friman ET, Strebinger D, Benke A, Raccaud M, Callegari A, Leleu M, Manley S, Suter DM.
Genes & Development 2016