
Open position

Bioinformatician (100%) in the Functional Cancer Genomics Group Directed by Prof. Jean-Philippe Theurillat Institute of Oncology Research (IOR) Bellinzona, Switzerland

www.ior.usi.ch

The Institute of Oncology Research (IOR) in Bellinzona, Switzerland, is a rapidly evolving, leading center for basic and translational research in oncology in Europe. IOR is affiliated to the Università della Svizzera italiana (USI) and its Faculty of Biomedical Sciences, as well as to other leading Swiss Universities and Research Centers.

The IOR is now located in a brand-new, high-tech research building that hosts about 20 different research groups, with state-of-the-art labs and facilities, multicultural environment and daily occasions of interaction with world leaders in the fields of cancer, basic immunology and cancer immunology.

Together with the Institute for Research in Biomedicine (IRB), the IOR is member of **Bios+**, a recently established non-profit association aiming to promote, support and coordinate scientific research and teaching activities of its members (www.biosplus.ch).

We are now looking for a motivated and enthusiastic

Bioinformatician

interested in working in a very active environment at competitive projects in the area of **Functional Cancer Genomics, directed by Prof. Jean-Philippe Theurillat**. The highly collaborative lab has ongoing projects with groups at Harvard, MIT and ETHZ, among others.

Job Description

The successful candidate will work as part of an international team that is dedicated to understanding how new driver alterations culled from cancer genome characterization studies promote tumorigenesis, and how gathered insights can be exploited to develop precision medicines. The position offers excellent scientific opportunities in a highly stimulating and interdisciplinary environment involving close interactions between medical and basic scientists. Investigations range from projects related to:

- Integrated analysis of genomic, transcriptomic, and proteomic expression changes related to prostate cancer progression
- Single-cell RNAseq analysis related to drug perturbations
- Silent somatic mutations as a surrogate for cancer dependencies

Candidate's profile

- The successful candidate is determined to solve important and challenging questions in biology/medicine
- Master or Ph.D. in bioinformatics
- Experience in the analysis of DNA, RNA, and ChIP sequencing data
- Interested or experience in artificial intelligence/machine learning

Application

We are looking forward to receiving your comprehensive digital application in English in a single PDF-File.

Application will include curriculum vitae (with training, working experience and publications), two reference letters, and a statement of research interest (maximum one page).

Please submit your application to: humanresources@ior.usi.ch

Reference in the object: **JPT_Biolnf_2022**

Applications sent to different contacts, in other formats or after the deadline will not be considered.

More information about the Institute and Prof. Jean-Philippe Theurillat is available at following link: <https://www.ior.usi.ch>

For inquiry regarding this job or submission of complete application including two references please contact Prof. Jean-Philippe Theurillat via email:

jean-philippe.theurillat@ior.usi.ch

Employment

Salary will follow the standard of IOR salary scale that is in line with the rest of Switzerland.

Initial appointment: 1 year - 100%.

Deadline

December 19, 2021

Starting date

Early 2022

Selected recent publications:

1. Bolis M, Bossi D, Vallerga A, Ceserani V, Cavalli M, Rito Ld, Zoni E, Mosole S, Rinaldi A, Mestre RP, D'Antonio E, Ferrari M, Stoffel F, Jermini F, Sommer SG, Bubendorf L, Schraml P, Moch H, Spahn M, Thalmann G, Julio MK, Rubin M, Theurillat JP. Dynamic prostate cancer transcriptome analysis delineates the trajectory to disease progression. **Nat Commun** **2021**, accepted for publication (NCOMMS-21-08764), DOI: 10.21203/rs.3.rs-296396/v1 (IF: 14.9)
2. Canale FP, Basso C, Antonini G, Perotti M, Li N, Sokolovska A, Neumann J, James MJ, Geiger S, Jin W, Theurillat JP, West KA, Leventhal DS, Lora JM, Sallusto F, Geiger R. Metabolic modulation of tumours with engineered bacteria for immunotherapy. **Nature** **2021**, Oct 6. doi: 10.1038/s41586-021-04003-2. Online ahead of print. (IF: 49.9)
3. Pernigoni N, Zagato E, Calcinotto A, Troiani M, Mestre RP, Cali B, Attanasio G, Troisi J, Minini M, Mosole S, Revandkar A, Pasquini E, Elia AR, Bossi D, Rinaldi A, Rescigno P, Flohr P, Hunt J, Neeb A, Buroni L, Guo C, Welti J, Ferrari M, Grioni M, Gauthier J, Gharaibeh RZ, Palmisano A, Lucchini GM, D'Antonio E, Merler S, Bolis M, Grassi F, Esposito A, Bellone M, Briganti A, Rescigno M, Theurillat JP, Jobin C, Gillissen S, de Bono J, Alimonti A. Commensal bacteria promote endocrine resistance in prostate cancer through androgen biosynthesis. **Science** **2021**, Oct 8;374(6564):216-224. doi: 10.1126/science.abf8403. Epub 2021 Oct 7. (IF: 47.7)
4. Bernasocchi T, El Tekle G, Bolis M, Mutti A, Vallerga A, Brandt LP, Spriano F, Svinkina T, Zoma M, Ceserani V, Rinaldi A, Janouskova H, Bossi D, Cavalli M, Mosole S, Geiger R, Dong Z, Yang CG, Albino D, Rinaldi A, Schraml P, Linder S, Carbone GM, Alimonti A, Bertoni F, Moch H, Carr SA, Zwart W, Kruithof-de Julio M, Rubin MA, Udeshi ND, Theurillat JP. Dual Functions of SPOP and ERG Dictate Androgen Therapy Responses in Prostate Cancer. **Nat Commun** **2021**, 12:734 (IF: 14.9)
5. Bernasocchi T, El Tekle G, Unni AM, Bertoni F, Rossi D, Rubin MA, Theurillat JP. Co-occurrence and mutual exclusivity: what cross-cancer mutation patterns can tell us. **Trends Cancer** **2021**, online ahead of print. (IF: 14.2)
6. Formaggio N, Rubin MA, Theurillat JP. Loss and revival of androgen receptor signaling in advanced prostate cancer. **Oncogene** **2021**, 40:1205-1216. (IF: 7.9)
7. Karkampouna S, La Manna F, Benjak A, Kiener M, De Menna M, Zoni E, Grosjean J, Klima I, Garofoli A, Bolis M, Vallerga A, Theurillat JP, De Filippo MR, Genitsch V, Keller D, Booij TH, Stirnimann CU, Eng K, Sboner A, Ng CKY, Piscuoglio S, Gray PC, Spahn M, Rubin MA, Thalmann GN, Kruithof-de Julio M. Patient-derived xenografts and organoids model therapy response in prostate cancer. **Nat Commun** **2021**, 18;12:1117. (IF: 14.9)
8. Albino D, Falcione M, Uboldi V, Temilola DO, Sandrini G, Merulla J, Civenni G, Kokanovic A, Stürchler A, Shinde D, Garofalo M, Mestre RP, Constâncio V, Wium M, Burrello J, Baranzini N, Grimaldi A, Theurillat JP, Bossi D, Barile L, Henrique RM, Jeronimo C, Zerbini LF, Catapano CV, Carbone GM. Circulating extracellular vesicles release oncogenic miR-424 in experimental models and patients with aggressive prostate cancer. **Commun Biol** **2021**, 26;4:119. (IF: 12.1)
9. Nabais Sá MJ, El Tekle G, de Brouwer APM, Sawyer SL, del Gaudio D, Parker MJ, Kanani F, van den Boogaard MJH, van Gassen K, Van Allen MI, Wierenga K, Purcarin G, Elias ER, Begtrup A, Keller-Ramey J, Bernasocchi T, Wiel L, Gilissen C, Venselaar H, Pfundt F, Vissers LEL, Theurillat JP+, de Vries BBA+. De Novo Gain-of-function and Loss-of-function Variants in SPOP Cause Two Clinically Distinct Neurodevelopmental Disorders. **Am J Hum Genet** **2020**, 106:405-411. (IF: 9.0)

10. Oberhuber M, Pecoraro M, Ruzs M, Oberhuber G, Wieselberg M, Haslinger P, Gurnhofer E, Schleederer M, Limberger T, Lagger S, Pencik J, Kodajova P, Högler S, Stockmaier G, Grund-Gröschke S, Aberger F, Bolis M, Theurillat JP, Wiebringhaus R, Weiss T, Haitel A, Brehme M, Wadsak W, Griss J, Mohr T, Hofer A, Jäger A, Pollheimer J, Egger G, Koellensperger G, Mann M, Hantusch B, Kenner L. STAT3-dependent analysis reveals PDK4 as independent predictor of recurrence in prostate cancer. **Mol Syst Biol.** 2020, 16:e9247. (IF: 8.9)
11. Alajati A, D'Ambrosio A, Troiani M, Mosole S, Pellegrini L, Chen J, Revandkar A, Bolis M, Theurillat JP, Guccini I, Losa M, Calcinotto A, De Bernardis G, Pasquini E, D'Antuono R, Sharp A, Figueiredo I, Nava Rodrigues D, Welti J, Gil VS, Yuan W, Vljajnic T, Bubendorf L, Chiorino G, Gnetti L, Torrano V, Carracedo A, Campese L, Hirabayashi S, Canato E, Pasut G, Montopoli M, Rüschoff JH, Wild P, Moch H, De Bono J, Alimonti A. CDCP1 overexpression drives prostate cancer progression and can be targeted in vivo. **JCI** 2020, 130:2435-2450. (IF: 12.3)
12. Pietrzak K, Kuzyakiv R, Simon R, Bolis M, Bär D, Aprigliano R, Theurillat JP, Sauter G, Santoro R. TIP5 primes prostate luminal cells for the oncogenic transformation mediated by PTEN-loss. **PNAS USA** 2020; 117:3637-3647. (IF: 9.6)
13. Janouskova H°, El Tekle G°, Bellini E, Udeshi ND, Rinaldi A, Ulbricht D, Bernasocchi T, Civenni G, Losa M, Svinkina T, Bielski CM, Kryukov GV, Cascione L, Napoli S, Enchev R, Mutch DG, Carney ME, Cerchuck A, Winterhoff BJN, Broaddus RR, Schraml P, Moch H, Bertoni F, Catapano CV, Peter P, Carr SA, Garraway LA, Wild PJ, Theurillat JP. Cancer Type-Specific SPOP Mutants Alter BET Protein Levels and Inhibitor Responses. **Nat Med** 2017; 9: 1046-1054. (IF: 30.3)
16. Groner AC, Tribolet-Hardy J, Bernasocchi T, Cato L, Melchers D, Houtman R, Cato ACB, Tschopp P, Gu L, Corsinotti A, Quing Z, Fankhauser C, Fritz C, Poyet C, Garraway LA, Wild PJ, Theurillat JP+, Brown M+. TRIM24 is an oncogenic transcriptional activator in prostate cancer. **Cancer Cell** 2016; 29: 846-858. (IF: 26.5)