Bioinformatics position

The "Laboratoire de Biologie Moléculare et Cellulaire du Cancer" (LBMCC) is a cancer research lab with a team of 15 researchers dedicated to basic and applied research in the field of cancer and inflammation. The lab has four main research interests:

- Natural products
- Anemia and Cancer
- Epigenetics
- Cell death and inflammation

Recent publications can be found below [1-7]. For in-depth information about the lab, please visit: https://lbmcc.mysciencework.com

The applicant will actively contribute to the functional analysis of gene expression (microarray, RNA seq) and proteomics data in close collaboration with the scientists of the lab.

Applicants should demonstrate proficiency in statistics and analysis using R and Bioconductor, and be able to use data from public repositories such as TCGA or GEO. The candidate should have a strong experience in using software tools for functional analysis based on Gene Ontology, KEGG pathway and TFBS motif enrichment analysis, as well as network analysis software Cytoscape.

Furthermore, a good biological background related to the lab's research topics is required for the interpretation of data in close collaboration with the researchers of the lab. The candidate will also support lab members with the statistical analysis of experiments. Knowledge of GraphPad Prism would be considered as an advantage.

The candidate will help to maintain the lab's Mac computers and interact with the hospital's IT department.

Candidates should have a Ph.D. degree. Excellent communication and writing skills are required. The lab's working language is English.

This is a one-year fixed-term contract which can be renewed and become a permanent contract.

Please send a letter of interest, CV with list of publications and the contact information of three references by email to:

Prof. Marc Diederich
Fondation Recherche Cancer et Sang
Laboratoire de Biologie Moléculaire et Cellulaire du Cancer (LBMCC)
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Recent papers:

[1] A. Mazumder, J.Y. Lee, O. Talhi, C. Cerella, S. Chateauvieux, A. Gaigneaux, C.R. Hong, H.J. Kang, Y. Lee, K.W. Kim, D.W. Kim, H.Y. Shin, M. Dicato, K. Bachari, A.M. Silva, B. Orlikova, M. Diederich, Hydroxycoumarin OT-55 kills CML cells alone or in synergy with Imatinib or Synribo: involvement of ER stress and DAMP release, **Cancer Lett.** in press (2018).

[2] J.Y. Lee, O. Talhi, D. Jang, C. Cerella, A. Gaigneaux, K.W. Kim, J.W. Lee, M. Dicato, K. Bachari, B.W. Han, A.M.S. Silva, B. Orlikova, M. Diederich, Cytostatic hydroxycoumarin OT52 induces ER/Golgi stress and STAT3 inhibition triggering non-canonical cell death and synergy with BH3 mimetics in lung cancer, **Cancer Lett.** 416 (2018) 94-108.

[3] E. Yagdi Efe, A. Mazumder, J.Y. Lee, A. Gaigneaux, F. Radogna, M.J. Nasim, C. Christov, C. Jacob, K.W. Kim, M. Dicato, P. Chaimbault, C. Cerella, M. Diederich, Tubulin-binding anticancer polysulfides induce cell death via mitotic arrest and autophagic interference in colorectal cancer, **Cancer Lett.** 410 (2017) 139-157.

[4] C. Cerella, A. Gaigneaux, A. Mazumder, J.Y. Lee, E. Saland, F. Radogna, T. Farge, F. Vergez, C. Recher, J.E. Sarry, K.W. Kim, H.Y. Shin, M. Dicato, M. Diederich, Bcl-2 protein family expression pattern determines synergistic pro-apoptotic effects of BH3 mimetics with hemisynthetic cardiac glycoside UNBS1450 in acute myeloid leukemia, **Leukemia** 31(3) (2017) 755-759.

[5] F. Radogna, C. Cerella, A. Gaigneaux, C. Christov, M. Dicato, M. Diederich, Cell type-dependent ROS and mitophagy response leads to apoptosis or necroptosis in neuroblastoma, **Oncogene** 35(29) (2016) 3839-53.

[6] C. Cerella, F. Muller, A. Gaigneaux, F. Radogna, E. Viry, S. Chateauvieux, M. Dicato, M. Diederich, Early downregulation of Mcl-1 regulates apoptosis triggered by cardiac glycoside UNBS1450, **Cell Death Dis.** 6 (2015) e1782.

[7] C. Cerella, A. Gaigneaux, M. Dicato, M. Diederich, Antagonistic role of natural compounds in mTOR-mediated metabolic reprogramming, **Cancer Lett.** 356(2 Pt A) (2015) 251-62.