



COST Action CA20117

Converting molecular profiles of myeloid cells into biomarkers for inflammation and cancer

## Call for Applications to Training School

*Application deadline:* 12<sup>th</sup> August 2022

*Send applications to:* Dr Annika Bruger, Grant Awarding Coordinator  
[annika.bruger@uclouvain.be](mailto:annika.bruger@uclouvain.be)

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### Training Schools in brief:

- An event organized by the COST Action, bringing together relevant participants either in face-to-face or virtual by virtual or hybrid means and providing highly specialized training.
- **This call is:**
  - for young researchers
  - to learn to use a variety of text mining and OMICS tools
  - to apply tools on selected publication and genomic datasets
  - at University of Granada, Granada, Spain

## What are Training Schools?

Training Schools can help COST Actions to share knowledge and support collaboration. Training Schools aim to facilitate capacity building on a topic relevant to the theme of the respective COST Action through the delivery of intensive training on a new or emerging subject. They can also offer familiarisation with unique equipment or expertise and are typically, although not exclusively, considered to be for the benefit of ECI and PhD students. They are not intended to provide general training.

Training Schools in Mye-InfoBank should specifically contribute to the scientific objectives of the COST Action (please also refer to Memorandum of Understanding (MoU)).

## Training School

# CALL - Mastering text-mining and OMICS tools

## Using text mining tools for the thorough analysis of myeloid cell diseases publications

<b>Host Institution:</b>	Universidad de Granada, Granada, Spain
<b>Trainers:</b>	Ioannis Iliopoulos, Theodosios Theodosiou, Costas Bouyioukos, Georgios Pavlopoulos and Ismini Baltsavia
<b>Timeframe:</b>	28 <sup>th</sup> September 2022
<b>Trainees:</b>	15 – 21 onsite (5 senior, 10 junior), 6 virtual

### Purpose:

WG 2 members uploaded a selection of their own papers and papers published by other groups that reflect the state-of-the art and their own interest in myeloid cells and diseases associated with chronic inflammation (infection, inflammation, cancer).

These papers, plus additional papers featured on PubMed (selected by the trainers), will serve as our database. The original collection is about 600 articles and the expanded one is estimated to be around 6000 articles.

Additionally, genomic data will be extracted from the two aforementioned collections of articles. They will serve as a dataset to be analyzed with different text mining and gene enrichment tools.

Finally, an RNA seq dataset from GEO database, related to the scientific interests of the COST Action that is expected to be produced by WG1, will provide another dataset for auto ML prediction and further validation of novel biomarkers.

The main tools that will be demonstrated are the following:

1. UniReD. UniReD is a tool for protein-protein interaction prediction via text mining. It can also be used for ranking a set of potential biomarkers that will be produced by an auto ML tool.
2. BioTextQuest. This is a tool that analyzes a collection of articles from PubMed (up to 10.000) and clusters them according to the co-occurrence of different bio entities such as proteins, diseases, cell types etc. The different bio-entities can be extracted from the clusters and further analyzed.
3. FLAME. Flame is a tool for gene enrichment analysis. Genes that will be extracted with biotextquest from the two collections of articles will be analyzed using the different features of FLAME tool.
4. Darling. Darling is a tool that takes as input PubMed articles from different databases and generates relations and networks between the different bio-entities existing in these articles.
5. Arena 3D. A tool for visualization of associations.

### Requirements:

- Be available from 9am to 6pm on 28<sup>th</sup> September
- Own notebook to download and run the required software

[www.mye-infobank.eu](http://www.mye-infobank.eu)

[info@mye-infobank.eu](mailto:info@mye-infobank.eu)

Grant Awarding Coordinator: Dr Annika Bruger, [annika.bruger@uclouvain.be](mailto:annika.bruger@uclouvain.be)



## Who is eligible?

The Training School applicant must be engaged in an official research programme as a PhD Student or postdoctoral fellow or can be employed by, or affiliated to, an institution, organisation or legal entity which has within its remit a clear association with performing research.

The Training School application will be evaluated and selected based on the following criteria:

- Excellence of the written proposal.
- Geographical and gender balance issues are taken into consideration and ECIs will be privileged.
- Priority is given to applicants from inclusiveness target countries, but others will be considered as well.
- The country of origin and the host country must be members of the Mye-InfoBank network (not the host or origin institution).

The application will then be assessed by the formally delegated persons in the Core Group against the perceived contribution that the proposed visit will make against the scientific objectives outlined in the Action's Memorandum of Understanding.

## Financial support

Training School f2f participants will be reimbursed for their travel, accommodation and meals expenses in accordance with the COST Rules for Travel Reimbursement. Due to budget limitations, the daily allowance for the Training School has been set at € 150 a day per person, and long-distance travel costs should be kept as low as possible ( c. € 300, if possible) and may not exceed € 1 000.

Participants are welcome to join the subsequent Mye-InfoBank Meeting but will **not** be reimbursed for incurred expenses.

## How to apply?

To apply, fill out the application form and return it to the Grant Awarding Coordinator, Dr Annika Bruger by e-mail ([annika.bruger@uclouvain.be](mailto:annika.bruger@uclouvain.be)).

Selected applicants will be notified and receive official invitations to join through COST.