

Following the schedule program of the third grant period of the COST Action CA15135, the Training School dedicated to multi-target biophysical tests has been organized in Hamburg at the Fraunhofer-IME from December 5 to 7 2018. This is the first activity explicitly organized by the WG2, thanks to the effort of Dr. Sheraz Gul, that has more than ten years of experience in this modern research institute. The purpose of this School was to explore the principles underlying target identification, biochemical and cell-based assay development, small molecule screening and *in-vitro* ADME-Tox profiling as part of lead optimization to endow compounds with multi-targeting activity. The center and more specifically the organizer have a lot of familiarity with this kind of formative activities, serving also other COST Action with similar programs. The call to participate to the School, limited in the number of participants in order to guarantee the quality of the theoretical-practical goals, was announced to all COST Action participants in last previous meetings (march 2018 in Tenerife and October 2018 in Malta) and sending and invitation to the complete list of CA15135 email contacts on October 29 2018. At the deadline of November 16 2018, we have collected more participation requests than available slots. So, considering also the opportunity to get extra budget from the COST Association, as announced in Malta by the Science Officer Lucia Forzi, the decision to split the School in two edition was done. In the former 20 students were selected ranking their submitted curricula. 19 were supported as COST trainees and one, coming from a very qualified Japanese group, was added as external participant. The MuTaLig countries involved were 11 (Belgium, Bosnia and Herzegovina, Estonia, Germany, Italy, Poland, Portugal, Slovenia, Spain, Switzerland, Turkey) and the participants from Inclusiveness Target Countries (ITC) were quite consistent (13 of 19). Also the gender balance was very good with 10 females out of 19 COST participants. The latter (second edition) will be held in March 2019.

The structure of the Training School was carefully organized by Dr. Gul, starting with an introduction lecture with general topics related to the drug discovery process and specific issues such as biochemical assay development, cell based assay development, analysis of High Content Screening assay data. Group activities were carried out by practical sessions, related to the Assay Development & Screening using the most advanced tools available at the Fraunhofer-IME laboratories. The participants received a Training School kit with all slides and information necessary to follow the theoretical and practical work. They were splitted in three groups, each of them treating its own case study. In the last day the Chair of the COST Action Stefano Alcaro gave an overview lecture dedicate to the MuTaLig activities, emphasizing the networking tools especially for young investigators, such as STSM and ITC grant tools currently running in the third grant period. Then, some other topics were discussed, such as methods to analyse *in-vitro* biological assay data, analysis of images from of High Content Screening assays and design of project critical paths in drug discovery. At the end the group activities concluded with a discussion about “Compare results and identify learnings from practical course and presentations”.

The very good level of satisfaction of all participants was clearly found also in the nice opportunity to interact to each other within each working group, due to competence of the training team and the limited number of students. So also next edition with about the same number of participants is expected to be successful too.

Catanzaro, December 13th 2018


Prof. Stefano Alcaro

Chair of COST Action CA15135

Photo gallery of the 3rd Training School of COST Action CA15135
Hamburg, 5-7 December 2018



The Fraunhofer-IME institute, location of the 3rd MuTalig Training School



Dr. Sheraz Gul, organizer of the Training School, during one lecture at the classroom in the Fraunhofer-IME institute



The Fraunhofer-IME institute High Throughput Screening laboratory



Prof. Stefano Alcaro, during one lecture at the classroom giving an overview of the MuTaLig COST Action



Group Photo



Mu.Ta.Lig. COST Action speeds up the European Drug Discovery process