



SYSCID – A Systems medicine approach to chronic inflammatory diseases

SYSCID Christmas E-Newsletter: 4/2018

We are pleased to present the fourth edition of our e-newsletter providing you with a short update of our work and news from the team. Next to progress in sample collection and analysis, the second half of 2018 was characterized by multiple conferences such as the IHEC annual meeting, UEG week and the ICPeMed meeting.

Wishing you all happy holidays we look forward to an interesting and productive year 2019.

This newsletter includes the following topics:

- [SYSCID work progress](#)
- [Publications](#)
- [SYSCID at scientific conferences and meetings](#)
- [Upcoming events](#)
- [News from the team](#)

SYSCID work progress

With our first project report submitted we have prepared a detailed summary of our work progress and are happy to share the most important trends:

A main goal which we successfully reached was the selection of patient and control populations for several large scale experiments aiming to address predictors and mechanisms of disease severity and outcome across CID and response to targeted therapies with >170 newly treated patients at multiple time points for longitudinal multi-Omics analysis. Several additional smaller cohorts (for example early arthritis prediction or disease liability in “healthy” control cohorts) are currently underway. Clinical data and scoring systems have been harmonized between participating clinicians and a data/metadata matrix has been set up.

To ensure comparable high quality data, the production centres have implemented SOP-like protocols for cell purification, sample extraction, quality controls and production of molecular data. A pipeline for uploading to the central data repository has been established. The quality control steps include inter-lab variation testing and extraction controls.

Using this harmonized production pipeline, the consortium partners have extracted, prepared and analysed >2300 samples by RNA sequencing and >1400 samples by EPIC array (DNA methylation). The data is currently assembled for integrative analysis while pilot analyses have successfully been finished and have led to first joint publications.

As the project still is in an early phase, a lot of the work was in preparation for the large-scale analytical tasks. However we are pleased to be on track and confident to have a solid basis for the work ahead.

Publications

- Zaghlool et al.: [Deep molecular phenotypes link complex disorders and physiological insult to CpG methylation](#)
- Howell et al.: [DNA Methylation and Transcription Patterns in Intestinal Epithelial Cells From Pediatric Patients With Inflammatory Bowel Diseases Differentiate Disease Subtypes and Associate With Outcome](#)
- Nikolaus et al.: [Evaluation of interleukin-6 and its soluble receptor components sIL-6R and sgp130 as markers of inflammation in inflammatory bowel diseases](#)
- Momozawa et al.: [IBD risk loci are enriched in multigenic regulatory modules encompassing putative causative genes](#)
- Gudelj et al.: [Low galactosylation of IgG associates with higher risk for future diagnosis of rheumatoid arthritis during 10 years of follow-up](#)
- Kosicek et al.: [N-glycome of the lysosomal glycoalyx is altered in Niemann-Pick Type C disease \(NPC\) model cells](#)
- Liu et al.: [The association between subclass-specific IgG Fc N-glycosylation profiles and hypertension in the Uygur, Kazak, Kirgiz, and Tajik populations.](#)
- Zeissig et al.: [Vedolizumab is associated with changes in innate rather than adaptive immunity in patients with inflammatory bowel disease](#)

SYSCID at scientific conferences and meetings

Back from a well-deserved summer break, young researchers from Kiel kicked off the “promotion tour” by presenting SYSCID to the broad public at the European Researchers Night which is traditionally held on the last Friday in September.

But it was October which was the busiest month regarding international events. On the 23rd of October we were happy to invite the GI community present at this year’s United European Gastroenterology (UEG) Week in Vienna to a joint breakfast session in order to discuss the project’s aims and approach linking our initiative to others.

Only a week later, this year’s IHEC meeting took place from October 26-28 in Hong Kong. During one internal and two open days, the international epigenome community came together to share results and set the course for the next year. As one of two European initiatives SYSCID was represented by our coordinator Philip Rosenstiel as well as Jörn Walter and Gilles Gasparoni from the Saarland University.

The tour was completed by Vibeke Andersen from the University of Southern Denmark who represented SYSCID for the second time at the ICPeMed meeting in Berlin from November 21st-22nd in Berlin.

Upcoming events

- [Keystone Symposia: Host and the Environment in IBD - Scientific Advances Leading to New Therapeutics](#), January 13-17, 2019 Taos, New Mexico
- [Cell Symposia: Single Cells Technology to Biology](#), February 24-26, 2019 Singapore
- [Digestive Disease Week](#), May 18-21, 2019 San Diego, CA

News from the team

In the second half of 2018 our lab series followed BRFAA researcher Anastasia Filia on her three day visit to the Luxembourg team for an introduction and hands on training in the generation of disease maps. In order to develop comprehensive representations of disease mechanisms and build a collection of interconnected signaling, metabolic and gene regulatory pathways relevant to each disease this is an important task within SYSCID.

To read more about her training, please visit the news section on our [website](#).

Your contact persons

Should you have questions or suggestions for our newsletter, please get in touch with:

Project Coordination

Kiel University, Institute of Clinical Molecular Biology

Prof. Dr Philip Rosenstiel

Phone: +49(0)431 / 500 15111

[Email](#)

Project Management

European Research and Project Office GmbH (Eurice)

Eva Kluchert

Phone: +49 (0)30 / 374415838

[Email](#)



SYSCID has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 733100.

This newsletter was sent by Eurice GmbH - Science Park 1 - 66123 Saarbrücken (Germany) on behalf of the SYSCID Consortium.

[Click here to unsubscribe](#) - [Imprint](#) - [Privacy policy](#)