



# MESI-STRAT

Systems Medicine of Metabolic-Signaling networks -  
A New Concept for Breast Cancer Patient Stratification



## Newsletter Nr. 7 – September 2022

*This year in March, the MESI-STRAT partners have met in person in Norway to discuss their latest results and the organisation and measurement of patient samples resulting from clinical trials.*

*Moreover, the University of Innsbruck is organizing the ISGSB (International Study Group for Systems Biology) conference in Innsbruck, Austria. This event will be a great opportunity to interact with other modelers, biologists and clinicians coming from all over the world.*

*Continuing our series of portraying the PhD students and PostDocs of MESI-STRAT, Cecilia Barile, who works in the group of Kathrin Thedieck at the University of Innsbruck (Austria) presents herself.*

### MESI-STRAT Annual Meeting in Norway

In March we had our annual MESI-STRAT meeting. The meeting took place in person at the University of Bergen (Norway). With clinical studies approaching their end and many samples to measure, there was a lot to discuss. The combination of talks in small focus groups as well as big sessions with all partners participating resulted in fruitful discussions and new action plans.



The MESI-STRAT partners at the annual meeting hosted this year by the University of Bergen in Norway. (Foto: R.Sers)

We are especially happy that Anne-Lise Børresen-Dale of our advisory board was able to join us in Bergen, giving us the opportunity to have great discussions with her, a well-known expert in the breast cancer field.

Among all the topics of interest, a special focus was given to the clinical samples of the endocrine therapy termination trial (ETT), collected from breast cancer patients at diagnosis and in follow-up exams after the termination of

endocrine therapy treatment for of up to 5 years. Metabolites in these samples will be measured to confirm computational predictions made by our modellers.

A big thanks to Mathias Ziegler and his team at UiB for the organisation of the meeting!

### The ISGSB conference in Innsbruck

The *International Study Group for Systems Biology (ISGSB)* includes a number of international researchers interested in advancing the biological sciences through exploring the interplay between theory and empirical experiments.

This scientific community meets once every two years with the purpose to share the latest discoveries or technology achievements and to explore new ways to combine experimental results (obtained in the lab) with the power of computers. The aim is to use theoretical approaches to find new hypotheses that can then be confirmed by practical experiments.

This year's conference will take place in beautiful Innsbruck and will be hosted by Univ.-Prof. Dr. Kathrin Thedieck and Prof. Dr. Ines Heiland. The conference includes sessions on systems medicine, signal transduction, metabolism and other interdisciplinary topics.

In addition to the main conference, the young scientists (master students, PhD students and Post Docs) have the opportunity to meet up and interact with each other within a dedicated wing of the ISGSB called YSGSB (Young International Study Group for System Biology). This smaller conference will be organized by PhD students



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from Innsbruck with the aim to create a platform for young scientists to learn, discuss and share ideas among each other and collaborate for future research projects. We are looking forward to exciting discussions and new inspirations!

**Cecilia Barile, MSc.**  
PhD student  
University of Innsbruck, Austria



Cecilia Barile, MSc.,  
PhD student at the University of Innsbruck, Austria

When I was a child, I discovered my passion for biology thanks to watching documentaries about dinosaurs. While growing up, I preserved this passion but moved it in a slightly different direction: during my master studies at the faculty of Molecular Biology and Genetics (Pavia, Italy), I worked on my thesis on structural biology with a special focus on cancer development mechanisms. It was so interesting, that I decided to continue my studies in a more cancer-focused field and in another country. Therefore, I looked for a PhD position and when I received the email telling me that I was chosen to join the MESI-STRAT consortium, I did not hesitate one second before replying “yes, I accept”.

Currently, I am a PhD student at the Institute of Biochemistry (University of Innsbruck, Austria) and I am working on breast cancer cells to investigate their response to endocrine therapy and other treatments in the context of MESI-STRAT.

The aim of my research is to find molecular mechanisms that can determine when and why the cancer cells develop resistance to the treatment in patients, in order to guide medical doctors to more suitable therapies for each patient.

I am very grateful and happy to be part of the MESI-STRAT consortium, and being able to learn and collaborate with so many partners from different scientific fields and European countries.

### MESI-STRAT Survey

We have already analysed the first results of our new questionnaire and found interesting differences between cancer patients and the general population. However, we still need more responses to further deepen these findings and to use them to tailor our communication to the needs of patients. If you have not yet taken part, we look forward to your participation and would be grateful if you would share the link with your friends.



Link: [Survey in English](#)

Visit [www.mesi-strat.eu](http://www.mesi-strat.eu) to learn more about our consortium and follow us on twitter [@MesiStrat](#) for the latest news of our project!

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