

**International from the beginning – support of internationalization**

Project is cofinanced by the Polish National Agency for Academic Exchange under the STER Programme

## SCIENCE FOR A SUSTAINABLE NOW AND FUTURE



## SCHEDULE

### Spring school for doctoral students and Master's students

University of Silesia in Katowice, Poland

Katowice 7.04.2025-11.04.2025

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| <b>Monday 7.04.2025</b>   |   |
|---|---|
| <b>Block A</b><br>spinPLACE, Katowice, Bankowa 5  |   |
| <b>9:00 - 10:30 AM</b><br><br><i>The role of commensal bacteria and next-generation probiotics- lecture (Joana Barbosa)</i>           |   |
| <b>10:30 – 11:00 AM coffee break</b>  | <b>Block B</b><br>B216 room,<br>Katowice, Bankowa 9   |
| <b>11:00 AM - 12:30 PM</b><br><br><i>Antibacterial peptides and resistance genes: a broader perspective - lecture (Joana Barbosa)</i> | <b>11:00 AM - 12:30 PM</b><br><br><i>Selected issues of unsupervised learning: clustering, association rules – lecture and workshop</i><br>(Małgorzata Przybyła-Kasperek) |
| <b>12:30 – 1:15 PM</b><br><b>Lunch break, spinPLACE</b>   |   |
| <b>1:15 – 2:45 PM</b><br><br><i>Microbiome - Our Personal Bodyguard – interactive lecture (Katarzyna Duda)</i>                        | <b>1:15 – 3:45 PM</b><br><br><i>AI Tools for Literature Review</i><br>(Małgorzata Przybyła-Kasperek) - lecture and workshop<br><br>[Coffee break in the middle]           |
| <b>2:45 – 3:00 AM</b><br><b>Coffee break</b>  |   |
| <b>3:00-4:30 PM</b><br><br><i>Allergy: Epidemic of the 20th Century. More Than Allergens? – interactive lecture (Katarzyna Duda)</i>  |   |

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| <b>Thursday 8.04.2025</b>   |   |  |
|---|---|--|
| <b>Block A</b><br><b>SPIN-Lab Centre for</b><br><b>Microscopic Research on</b><br><b>Matter,</b><br>Chorzów, 75 Pułku Piechoty 1a | <b>Block B</b><br><b>SPIN-Lab Centre for</b><br><b>Microscopic Research on</b><br><b>Matter,</b><br>Chorzów, 75 Pułku Piechoty 1a | <b>Block C</b><br>spinPLACE, Katowice,<br>Bankowa 5  |
| <b>9:00 AM-12:00 PM</b><br>Workshop (6 people): <i>Scanning Electron Microscope (SEM AmberX)</i>                                  | <b>9:00 AM-12:00 PM</b><br>Workshop (6 people): <i>Microcomputed tomograph (UniTOM HR, Tescan)</i>                                | <b>9:30 - 12:00 AM</b><br><i>Selected issues of supervised learning: decision trees, k-nearest neighbors. Evaluation of models - lecture and workshop (Małgorzata Przybyła-Kasperek)</i> |
| <b>12:00 – 1:00 PM coffee break</b>   |   | <b>12:00– 1:00 PM coffee break</b>   |
| <b>1:00 – 4:00 PM</b><br>Workshop (6 people): <i>Workshop on transmission electron microscope (F200, Jeol)</i>                    | <b>1:00 – 4:00 PM</b><br>Workshop (6 people): <i>Workshop on confocal light microscope (Stellaris 8, Leica)</i>                   | <b>1:00 AM - 2:30 PM</b><br><i>Tools for machine learning - lecture and workshop (Małgorzata Przybyła-Kasperek)</i>  |
|   |   | <b>2:45 – 4:15 PM</b><br><i>Exploring bacterial genomes for AMPs- lecture (Joana Barbosa)</i>  |
| <b>sightseeing of the Silesian Museum and dinner</b>  |   |  |

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| <b>Wednesday 9.04.2025</b>  |  |   |
|---|--|---|
| <b>Block A</b><br><b>SPIN-Lab Centre for Microscopic Research on Matter</b>   | <b>Block B</b><br><b>SPIN-Lab Centre for Microscopic Research on Matter</b>  | <b>Block C</b>  |
| <p><b>9:00 AM-12:00 PM</b></p> <p>Workshop (6 people): <i>Scanning Electron Microscope (SEM AmberX)</i></p>               | <p><b>9:00 AM-12:00 PM</b></p> <p>Workshop (6 people): <i>Microcomputed tomograph (UniTOM HR, Tescan)</i></p>              | <p><b>9:00 - 11:30 AM</b><br/>spinPLACE, Katowice,<br/>Bankowa 5</p> <p><i>The microbiome in chronic lung disease – interactive lecture (Katarzyna Duda)</i></p>      |
| <p><b>12:00 – 1:00 PM Lunch break</b></p>   |  | <p><b>11:30 – 11:45 AM</b><br/><b>Coffee break</b></p>  |
| <p><b>1:00 – 4:00 PM</b></p> <p>Workshop (6 people): <i>Workshop on transmission electron microscope (F200, Jeol)</i></p> | <p><b>1:00 – 4:00 PM</b></p> <p>Workshop (6 people): <i>Workshop on confocal light microscope (Stellaris 8, Leica)</i></p> | <p><b>11:45 AM - 1:15 PM</b><br/>spinPLACE, Katowice,<br/>Bankowa 5</p> <p><i>Discovery of Novel Microbial Metabolites – interactive lecture (Katarzyna Duda)</i></p> |
|   |  | <p><b>1:15 – 2:15 PM Lunch break, spinPLACE</b></p> <p>+ time for transfer</p>  |
|   |  | <p><b>2:15 – 4:45 PM</b><br/>Bankowa 9, Katowice<br/>(12 people)</p> <p><i>Plant mycosphere - lecture and laboratory classes (Monika Malicka)</i></p>                 |

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| <b>Thursday 10.04.2025</b>   |   |
|--|---|
| <b>Block A</b><br>spinPLACE, Katowice, Bankowa 5   | <b>Block B</b><br>Bankowa 9, Katowice   |
| <b>9:00 - 10:30 AM</b><br><br><i>Exploring bacterial genomes for ARGs: Horizontal gene transfer and dissemination of resistance genes</i><br>- lecture (Joana Barbosa) | <b>9:15 AM - 12:15 PM</b><br>(12 people)<br><br><i>Isolation and characterization of fungal endophytes from plant roots - laboratory classes</i> (Monika Malicka) |
| <b>10:30 – 10:45 AM Coffee break</b>   |   |
| <b>10:45 AM - 12:15 PM</b><br><br><i>Advanced application and future directions</i> - lecture (Joana Barbosa)  |   |
| <b>12:15 – 1:00 PM</b><br><b>Lunch break, Lunch break, spinPLACE</b>   |   |
| <b>1:00 – 3:30 PM</b>  | <b>Students' presentations</b><br>(10 people, 10+5 min)   |

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| <b>Friday 11.04.2025</b>  |   |
|---|---|
| <p style="text-align: center;"><b>9:00 AM – 10:30 AM</b></p> <p style="text-align: center;">spinPLACE, Katowice, Bankowa 5</p> <p><i>Non-typable <i>Haemophilus influenzae</i> - an important player in chronic lung disease – interactive lecture (Katarzyna Duda)</i></p> | <p style="text-align: center;"><b>9:00 AM – 11:30 AM</b></p> <p style="text-align: center;">Bankowa 9<br/>(12 people)</p> <p><i>Analysis of the morphology and development of arbuscular mycorrhiza – workshop (Monika Malicka)</i></p> |
| <p><b>12:00 – 1:00 PM</b></p>   | <p><b>Lunch break, spinPLACE</b></p>  |