

Speaker Abstracts - Tuesday 4 December

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Deciphering belowground microbe-microbe and plant-microbe chemical communication

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Research on soil and plant microbiomes has increased exponentially over the last ten years, revealing the tremendous diversity of microbial communities. At the same time, our knowledge concerning the chemical interactions in the soil, between microbes and between microbes and plants is still rudimentary. Plant and microbe derived compounds play an important role in belowground interactions, e.g. in signalling and interference competition. Both plants and microorganisms produce and secrete a wide variety of primary and secondary metabolites including volatile organic compounds (VOCs) and non-volatile exudates. In my talk, I will present our recent discovery of the ecological role of VOCs in the long-distance belowground microbe-microbe and microbe-plant interactions. Furthermore, in this presentation I will reveal the importance of microbial VOCs in soil fungistasis and disease suppressiveness.