

Frontier ‘Eco2Wine’ EU Horizon Europe Doctoral Training Network project set to boost innovation and communication in winemaking

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Stellenbosch University is part of a consortium of nine universities around the world that have successfully competed for a four-year EU Horizon Europe project that will invest in cutting-edge research, advanced doctoral training and public communication around novel approaches to wine-making.

The four-year ‘Eco2Wine’ project will kick off towards the end of 2023. About R10.4 million will be allocated to Stellenbosch University and will be used for the training of two PhD graduates – one each in wine science and science communication, as well as research and networking activities.. Two Stellenbosch researchers are involved: Professor Florian Bauer, SA Research Chair in Integrated Wine Science, and Dr Marina Joubert, science engagement researcher at the Centre for Research on Evaluation, Science and Technology (CREST).

Coordinated by the University of Milan, the Eco2Wine consortium partner universities are in wine-growing countries of the world including Italy, Germany, France, Georgia, Spain, Slovenia and South Africa. Industry partners in South Africa include Winetech, the Research, Development and Innovation partner of the local wine industry, as well as Reyneke Wines, a local wine farm and cellar that are pioneering environmentally sustainable approaches in the local wine industry.

The science objective of the Eco2Wine project is to harness the microbial interactions that occur during winemaking as tools for innovation. In doing so, the aim is to produce natural, eco-friendly wines, while improving vineyard management and giving consumers more wine choices.

“By manipulating the interactions between the multitude of fungi, yeasts and bacteria that are naturally involved in wine-making, we believe we can make the process more sustainable and produce excellent natural wines with novel characteristics,” explains Professor Bauer. “Our focus will be on delivering innovative wines of high quality that are produced in an environmentally friendly ways and that can compete on international markets. To do this, we need to map and understand the complex functions and interactions of microbes throughout the winemaking chain from vineyards to cellars”, Bauer adds.

In addition to science skills, the PhD candidates trained via this project will acquire advanced skills in science communication and community engagement. “This is an interesting new approach to combining a science focus with science communication, thereby allowing natural and social scientists to join forces,” notes Lizel Senekal of the Division for Research Development at Stellenbosch University. “We believe that this will become the norm in future projects of this nature.”

According to Dr Joubert the study of the dynamics within communities of microbes is known as ‘microbiomics’. “This is a cutting-edge and complex field of science and it can be challenging to make new advances and applications relevant and accessible to industry members and consumers,” she explains. “However, these novel wines can only succeed with support from all stakeholders along the winemaking chain. Therefore, ongoing and pro-active engagement and dialogue with all relevant role players will be essential, including co-creation of new solutions and approaches with wine-makers.”

“As far as consumer preferences go, we know that nowadays people are looking for high-quality wines that also satisfy an emotional need, for example a positive change of mood,” Professor Bauer adds. “This means that they choose wines that match their personal values and preferences, and consumers are increasingly seeking natural and eco-friendly options.”

In line with the novel scientific approach, the Eco2Wine project will focus on novel and creative approaches to public communication and engagement, including digital storytelling, virtual displays and science-art linkages, as well as efforts to involve relevant groups in co-creation of new ideas and knowledge. The team will also ensure ongoing sharing of progress and outcomes via mainstream and social media.

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Photo caption: *Toasting to the future success of ‘Eco2Wine’: Dr Marina Joubert (public engagement, Stellenbosch University); Professor Florian Bauer (wine science, Stellenbosch University) and Dr Karien O’Kennedy (knowledge transfer, Winetech)*