

# Industry News

## Winners of three 2023 IULTCS Young Leather Scientist Grants for research announced

The Executive Committee of the IULTCS is pleased to announce the winners of the 2023 IULTCS Research Commission (IUR) Young Leather Scientist Grants. The research grants are awarded to three young scientists, under the age of 35. The monetary awards help support the work of young talent in the leather sector.

This is the ninth year of the grants which have been generously supported by industry. The Selection Committee of IUR, chaired by Professor Dr Michael Meyer, is pleased to announce the following recipients:

### Tyson Foods: Young Leather Scientist Grant 2023 Basic Research

Tyson Foods has provided the sponsorship of a €1,500 grant for Basic Research to **Dr Ilaria Quaratesi** from the Leather and Footwear Research Institute (ICPI), Bucharest, Romania. The title of the project is 'Non-toxic and biodegradable supramolecular additive with flame retardant and antimicrobial properties for the tanning industry'.

The project's main objective is to develop an antimicrobial flame retardant, which can as well be used in the leather industry basing on hydroxyl apatite and cyclodextrines using an ultrasound assisted continuous flow process. Flame retardancy and antimicrobial activity will be tested according to standardised procedures.

### Erretre: Young Leather Scientist Grant 2023 Machinery / Equipment

Erretre has provided the sponsorship of a €1,000 grant for Machinery / Equipment research to PhD candidate **Vasanth Swaminathan** from SRM Institute of Science and Technology, Chennai, India. The title of the project is 'Reduction of carbonization and gas emissions using mechanotronics based intelligent laser beam machining, with machine learning, for cutting leather with better environmental measures for operator health'.

The project's main objective is to optimise leather cutting by variation of the distance and pulse width of a laser diode assisted machining. Effects on different parameters as carbonization, rate of material removal, kerf width and emission rate will be investigated, and carbonization will be followed by using image processing.

### Dr Mike Redwood: Young Leather Scientist Grant 2023 Sustainability / Environmental Award

Leather Naturally has provided the sponsorship of a €1,000 grant for Sustainability / Environment research to **Dr Yue Yu** from Sichuan University, Chengdu, China. The title of the project is 'Controllable oxidation and degradation of lignin via  $H_2O_2/O_3$  from biomass into a retanning agent for sustainable leather manufacturing'.

The project's main objective is to develop a light-coloured, lignin-based retanning agent which can be used as a green substitute for aromatic syntans using  $H_2O_2/O_3$  synergistic oxidation technology. The oxidation mechanism has to be investigated, followed by research about the interaction mechanism between oxidized lignin and Cr-tanned leather. Finally a new retanning process is to be developed and its environmental impact will be evaluated.

The grants have been very successful and well received by industry. Referring to the awardees of the 2023 grants Dr Meyer said "All three project proposals show technological knowledge at a very high level and demonstrate the competitiveness of the leather industry with other industries worldwide. We are very happy that the profile of the Young Leather Scientist Grants continues to grow and thank our sponsors for the support that they continue to give. It will enable our young scientists to contribute their scientific knowledge, to the benefit of the leather community. We look forward to seeing the research outcomes of the projects we are supporting and wish them every success as they contribute to expanding our industry knowledge."

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