

October 23, 2017

MilliporeSigma Announces \$10,000 Grand Prize Winners of 2017 Life Science Awards

- **Twelve student finalists awarded in three fields of life science: bioseparations, 3D printing and food and beverage safety**
- **Grand prize winners Steffen Zobel-Roos, Clausthal University of Technology, Germany, Alexandra Rutz, University of Cambridge, UK, and Ruben R. G. Soares, University of Lisbon, Portugal, selected based on research presentations at MilliporeSigma's new Life Science Center – Burlington, Massachusetts**

Burlington, Massachusetts, October 23, 2017 – MilliporeSigma has recognized a group of outstanding postgraduate students for their research and innovations in life science at an awards ceremony at the company's new Life Science Center in Burlington, Massachusetts.

Twelve student finalists from across the globe (four in each of the three awards categories: bioseparations, 3D printing and food and beverage safety) presented their research to an audience of MilliporeSigma leaders and guests. Steffen Zobel-Roos, Alexandra Rutz and Ruben R.G. Soares were each named winners of the \$10,000 grand prize in their respective categories.

"We are privileged to play a small role in advancing science and technology through these awards," said Udit Batra, CEO, MilliporeSigma. "I congratulate all of the winners on their projects. Their talents and imagination are already making an important contribution to the next generation of problem solvers."

In its third year, this international awards competition recognizes postgraduate students from universities in the U.S., Canada and Europe who demonstrate



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outstanding achievement, skill and commitment to excellence in the life science field through innovative, cutting-edge research. Previously open only to students researching bioseparations, the competition was expanded in 2017 to include awards categories for 3D printing and food and beverage safety. Winning projects in each category were chosen based on level of innovation, impact on the industry, scientific rigor and communication.

Following are the grand prize winners and their research topics:

- **Steffen Zobel-Roos**, Clausthal University of Technology, Germany, Modern Chromatography: A Novel Integrated Counter Current Chromatography Step Fully Automated with Inline Concentration Measurements, \$10,000 Grand Prize Winner, LS Award Bioseparations
- **Alexandra Rutz**, University of Cambridge, UK, Engineering Hydrogel Inks for 3D Tissue and Organ Printing, \$10,000 Grand Prize Winner, LS Award 3D Printing
- **Ruben R.G. Soares**, University of Lisbon, Portugal, Towards the Development of Single-Step and Sub-Minute Need Device for the Routine Monitoring of Mycotoxins in Food Feeds, \$10,000 Grand Prize Winner, LS Award Food and Beverage Safety

Other finalists and winners of \$1,500 prizes were:

Bioseparations:

- **Hasin Feroz**, The Pennsylvania State University, U.S., Purification and Post-Purification Strategies to Improve Yield of Functional Membrane Proteins
- **Petra Steppert**, University of Natural Resources and Life Sciences, Austria, Separation of Bionanoparticles by Convective Media
- **Shaojie Zhang**, University of Virginia, U.S., Understanding Process Performance Parameters in a Two-Step Monoclonal Antibody Chromatographic Purification Process

3D Printing:

- **Molly Kupfer**, University of Minnesota – Twin Cities, U.S., Myocardial Tissue Engineering with Cells Derived from Human-Induced Pluripotent Stem Cells and a Native-Like, High-Resolution, 3-Dimensionally Printed Scaffold
- **Malachy Maher**, University Medical Center Utrecht, The Netherlands, Cardiac Patches to Mend Broken Hearts

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- **Michelle Xuanyi Ma**, University of California San Diego, U.S., A 3D Printed Human iPSC Derived Hepatic Model that Helps Improve In Vitro Liver Functional Maturation

Food and Beverage Safety:

- **Ewa Brychcy-Rajska**, University of Environmental and Life Sciences, Poland, Possibilities of Application Acidic Electrolyzed Water and Bioactive Edible Protective Films as Quality Assurance Methods During Refrigerated Storage
- **Emily E. Jackson**, University of Nevada, Reno, U.S., Cronobacter Typing Methods
- **Courtney Tanabe**, University of California, Davis, U.S., Arsenic Analysis and Speciation of Wine: New Approaches of Food Safety

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About the Life Science Business of Merck KGaA, Darmstadt, Germany

The Life Science business of Merck KGaA, Darmstadt, Germany, which operates as MilliporeSigma in the U.S. and Canada, has 20,000 employees and 60 manufacturing sites worldwide, with a portfolio of more than 300,000 products enabling scientific discovery. Udit Batra is the global chief executive officer of MilliporeSigma.

Merck KGaA, Darmstadt, Germany completed its \$17 billion acquisition of Sigma-Aldrich in November 2015, creating a leader in the \$125 billion global life science industry.

Merck KGaA, Darmstadt, Germany is a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials. The company has five businesses – Biopharmaceuticals, Consumer Health, Allergopharma, Life Science and Performance Materials – and generated sales of €15 billion in 2016. Around 50,000 employees work in 66 countries to improve the quality of life for patients, to foster the success of customers and to help meet global challenges.

Merck KGaA, Darmstadt, Germany is the world's oldest pharmaceutical and chemical company – since 1668, the company has stood for innovation, business success and responsible entrepreneurship. Holding an approximately 70 percent interest, the founding family remains the majority owner of the company to this day. The company holds the global rights to the name and the trademark "Merck" internationally except for the United States and Canada, where the company operates as EMD Serono, MilliporeSigma and EMD Performance Materials.

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