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| Sommario/riassunto | Biosurfactants are structurally diverse group of bioactive molecules produced by a variety of microorganisms. They are secondary metabolites that accumulate at interfaces, reduce surface tension and form micellar aggregates. This research topic describes few novel microbial strains with a focus on increasing our understanding of genetics, physiology, regulation of biosurfactant production and their commercial potentials. A major stumbling block in the commercialization of biosurfactants is their high cost of production. Many factors play a significant role in making the process cost- effective and the most important one being the use of low-cost substrates such as agricultural residues for the production of biosurfactants. With the stringent government regulations coming into effect in favor of production and usage of the bio-based surfactants, many new companies aim to commercialize technologies used for the production of biosurfactants and to bring down costs. This Research Topic covers a compilation of original research articles, reviews and research commentary submitted by researchers enthusiastically working in the field of biosurfactants and highlights recent advances in our knowledge of the biosurfactants and understanding of the biochemical and molecular mechanisms involved in their production, scale-up and industrial applications. Apart from their diverse applications in the field of bioremediation, enhanced oil recovery, cosmetic, food and medical industries, biosurfactants can also boast off |

their unique eco-friendly nature to attract consumers and give the chemical surfactants a tough competition in the global market. This biosurfactant focused research topic aims to summarize the current achievements and explore the direction of development for the future generation of biosurfactants and bioemulsifiers. Some of the biosurfactant optimization processes presented are well-structured and already have a well-established research community. We wish to stimulate on-going discussions at the level of the biosurfactant production including common challenges in the process development, novel organisms and new feedstock and technologies for maximum benefit, key features of next generation biosurfactants and bioemulsifiers. We have compiled the research outputs of international leaders in the filed of biosurfactant particularly on the development of a state-of-the-art and highly-efficient process platform.