

Title: The role of chemical engineering fundamentals in biomedical engineering

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Abstract: There may be two sides of "classical" biomedical engineering. One that deals with medical devices and the other that is more likely to follow tissue engineering approaches. The latter can be seen as a natural extension of chemical engineering education since its fundamentals are also the basis for biological engineering processes. We will call attention to critical points where the chemical engineering science may be used to successfully analyze and design gene, cell, tissue and organ therapies on behalf of efficiency and quality of tissue engineering applications..

Biography: Luismar Marques Porto holds post-doctoral internships in the areas of Biomedical Engineering, Biological Engineering and Biomaterials, respectively in the Division of Health Science and Technology (HST) at Harvard University and Massachusetts Institute of Technology - MIT (USA), at the University of Queensland (Australia) and Friedrich-Alexander- Universität Erlangen-Nürnberg (Germany). He has a Ph.D. in Chemical Engineering from Northwestern University (USA), and has a master's degree in Physical Chemistry (Catalytic Reactors) from UFSC / COPPE-UFRJ, and a degree in Chemical Engineering from FURB (Blumenau, SC). He served as a visiting professor at the National Autonomous University of Mexico (UNAM) and Université de Cergy-Pontoise (France). He is a full professor (retired) and works as a volunteer at the Federal University of Santa Catarina (UFSC), with the Graduate Program in Chemical Engineering (CAPES Level 7/7). He is the founder of Tubanharon Process Engineering Ltd. (tubanharon.com) and BioCellTis Biotecnologia S.A. (biocelltis.com). He was the recipient of several awards, including the Protagonist of Innovation (Stemmer Award - FAPESC), Santa Catarina Innovation Fair, and CREA-SC / CONFEA award for contributions to engineering in Santa Catarina. Co-founder of the Department of Chemical Engineering at UFSC, of which he was Head, and of his Postgraduate Program in Chemical Engineering, of which he was Chairman. He is a master's, doctoral and post-doctoral supervisor, accredited by CAPES and CNPq. Luismar recently joined JBS S.A. to lead a Biotech Innovation Center in Brazil, focused on cultivated meat.