

Global Summit on SKIN CARE AND COSMETOLOGY

December 05, 2022 | Webinar

New directions in aesthetic medicine: A novel and hybrid filler based on hyaluronic acid and lactose modified chitosan**Giulio Bianchini***Jointherapeutics Srl, Italy*

According to Market Dynamics, rising disposable income and strong influence of social media are the key factors encouraging the dermal filler market growth. This global growth can be attributable to growing awareness and importance of quality of life and overall health among the population worldwide. Fillers based on crosslinked hyaluronic acid (HA) are becoming increasingly important in this field, for instance in the treatment of wrinkles or for volumizing purposes. Improvement of the benefit/risk ratio is the primary output for new products development therefore minimisation of side effects and improvement of performances are the main drivers. Through our research on an innovative lactose modified chitosan (CTL) we discovered unprecedented biological performances and physical-chemical synergism with HA. We therefore developed new fillers based on HA, crosslinked with reduced amounts of 1,4-butanediol diglycidyl ether (BDDE) and formulated with CTL. Due to its cationic nature, CTL interacts with the anionic HA and enhance the elastic properties of the filler. Fillers manufactured with this novel technology (HACL-CTL) were characterized and compared with several fillers available in the market. In particular, resistance against hyaluronidase, swelling, cohesivity and rheological properties were investigated. Cohesivity, resistance to hydrolysis and swelling of HACL-CTL were comparable to commercial products. Interestingly, HACL-CTL fillers showed excellent elastic performance that reached 94% of elasticity in response to shear stresses. Surprisingly, these fillers also showed a resistance to compression higher than that of currently marketed products, making them very promising for their lifting effect.

Biography

Giulio Bianchini has completed his PhD in chemical sciences from Ca' Foscari University in 2013 and postdoctoral studies from University of Bristol (UK) School of Chemistry in 2015. Later on, he joined Jointherapeutics, an innovative Italian SME focused in the development of new biopolymers for healthcare purposes, and since then he coordinated several research projects, including chemical-physical, in vitro and in vivo studies, in collaboration with International Research Centres.. He has published several papers in reputed journals and he is inventor of more than 10 patents.