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MATRIX THERAPY RGTA BASED REGENERATIVE MEDICINE: CLINICAL STUDIES IN SEVERE CHRONIC WOUNDS AND DIABETIC FOOT ULCERS AND DEVELOPMENTS IN PLASTIC SURGERY

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Heparan sulfates (HS) are key elements of the Extra cellular matrix (ECM) scaffold and the storage/protection sites of peptide signals identified as local regulators of tissue homeostasis such as growth factors (GF), cytokines, chemokines etc...

We have engineered biodegradable nano-biopolymers named RGTA for ReGeneraTing Agent to replace HS in the wounded tissue; protect GF and regulate their bioavailability. By restoring a microenvironment mimicking the initial ECM architecture, the natural process of tissue homeostasis can resume. This matrix therapy based technology was validated in 70 published preclinical studies. A specific RGTA (polycarboxymethylglucosulfate or PCMGS), adapted to treat chronic skin ulcers, is on the market*. Several clinical trials and studies performed in France, US, Tunisia, middle East have now demonstrated unique efficacy of to induce wound closure and saved many patients from amputation when no other treatment showed efficacy. PCMGS revealed a very potent local pain killing activity. Over a thousand of patients have now been treated and PCMGS is well tolerated with only very few cases of local adverse delayed hypersensitivity, as described for heparinoids. A survey of these data and trials will be presented.

All together PCMGS is a new class of therapy offering a unique efficient solution to treat chronic diabetic foot ulcer and more generally to chronic wound healing and regenerative medicine.

* Commercial name is CACIPLIQ20, produced by OTR3