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Zongmin Zhao, Anvay Ukidve, Anshuman Dasgupta, Samir Mitragotri



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Transdermal immunomodulation: Principles, advances, and perspectives

Zongmin Zhao, Anvay Ukidve, Anshuman Dasgupta, Samir Mitragotri*

School of Engineering and Applied Sciences, Harvard University, Cambridge, MA 02138

*Correspondence to Samir Mitragotri, School of Engineering and Applied Sciences, Harvard University, Cambridge, MA 02138. Email: Mitragotri@seas.harvard.edu.

Abbreviations:

AD: atopic dermatitis
 AHR: airway hyper responsiveness
 APCs: antigen-presenting cells
 AS-ODN: antisense oligonucleotide
 BCG: Bacillus Calmette-Guérin
 CTLs: cytotoxic T cells
 dDCs: dermal dendritic cells
 DfE: Dermatophagoides farinae extract
 EAE: experimental autoimmune encephalomyelitis
 EPIT: epicutaneous immunotherapy
 GM-CSF: granulocyte-macrophage colony-stimulating factor
 HAAH: human aspartyl (asparaginy) b-hydroxylase
 hMTS: hollow microstructured transdermal system
 HPV: human papilloma virus
 LCs: Langerhans cells
 MBP: myelin basic protein
 MHC: major histocompatibility complex
 MIVM: multi-inlet vortex mixer-based method
 MOG: myelin oligodendrocyte glycoprotein
 mPEGhexPLA: methoxy-poly (ethylene glycol)-hexyl substituted poly (lactic acid)
 MRI: magnetic resonance imaging
 MS: multiple sclerosis
 NOD: nucleotide binding-domain oligomerization domain
 OVA: ovalbumin
 PAMPS: pathogen-associated molecular patterns
 PLGA: poly(lactic-co-glycolic) acid
 PLP: proteolipid protein
 PPE: peanut protein extract
 PVP: polyvinylpyrrolidone
 RA: rheumatoid arthritis
 SALT: skin-associated lymphoid tissue
 SC: stratum corneum
 SCIT: subcutaneous immunotherapy

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