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Structurally-modulated antigens as anti-malarial vaccine components

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Obtaining new generations of anti-malarial vaccines have to consider systematic selection of non-polymorphic antigenic peptides from Plasmodium spp. Bearing in mind that such targeted-molecules shown low immunogenic capacity when tested as vaccine components, these have to be rationally modified to overcome such an immunological profile. Peptido-mimetics represent important tools for designing new structurally modulated immunogens. Site-directed substitution of specific peptide-bonds with given isostere peptide-bond surrogates, is opening alternative pathways toward novel antimalarial vaccine components. Thus peptide chemistry strategies for peptide modulation is providing to vaccinology important new elements to be taken into account when designing vaccines. On the other hand the rodent experimental model for immunological testing such modulated structural probes, is also providing new clues for including different Plasmodium antigens in new vaccine formulations as well as developing platforms for multiple antigen presentation have also to be considered for new vaccine candidate testing. This work presents data regarding advances in antimalarial synthetic vaccine compositions.

Biography

Jose Manuel Lozano has completed his PhD at the age in 2002 in the Universidad Nacional de Colombia, Bogota, Colombia and Postdoctoral studies from Washington University School of Medicine and Le Laboratoire d'Immunologie et Chimie Therapeutiques, Universite Louis Pasteur, Strasbourg, France. He is the Head of the Biocatalysis Department at the Fundacion Instituto de Inmunologia de Colombia-FIDIC. He has published more than 50 papers in reputed journals and serving as an editorial board member of repute.

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