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Multicomponent access to conjugate vaccines

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Though the discovery of antibiotics in the 20th century discouraged the application of carbohydrate based vaccines, the appearance of bacterial resistance and the cuasi prohibitive access to really new antibiotics have turned the interest toward new carbohydrate based vaccines. This work describes the development of a new synthetic strategy towards antibacterial glycoconjugate- and specially multivalent vaccines. The conjugation of functionalized capsular polysaccharides of *Streptococcus pneumoniae* and *Salmonella enterica* serovar Typhi to carrier proteins such as diphtheria and tetanus toxoids was caried out via the Ugi 4-component reaction, giving access to mono and multivalent unimolecular glycoconjugates by conjugating them to immunogenic proteins. This gives rise to opportunities toward multivalent and self-adjuvanting vaccines, which will be reported.

Biography

Yanira Méndez Gómez received her academic education from the University of Havana. Currently, she is a PhD student in the group of Prof B Westermann, IPB, Germany and the group of Prof D G Rivera, CEPN, Cuba. She is dealing with the synthesis and bioconjugation of capsular polysaccharides to carrier proteins and adjuvants to obtain conjugate vaccine candidates. Simultaneusly, she is working as Lecturer in Department of Organic Chemistry at University of Havana.

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