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## An *in-vitro* functional assessment of a biosimilar rituximab and its originator

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This study described the functional characterization of a biosimilar rituximab and its originator. Functional characterization contained of a series of bioassays: Surface Plasmon Resonance (SPR) assays for Fc receptors binding analysis, Complement-Dependent Cytotoxicity (CDC) and Antibody-Dependent Cell-Mediated Cytotoxicity (ADCC) assays. With regard to binding of Fc to Fc gamma receptors mediates ADCC and CDC, complete affinity study of these receptors can increase the knowledge about the acceptable range of amount of these Critical Quality Attributes (CQAs). A widespread functional characterization package displayed that biosimilar rituximab has similar biological properties as originator rituximab; also the cell-based bioassays confirmed this.

### Biography

Fateme Torkashvand is an Academic Member in the Biotechnology Research Center at Pasteur Institute of Iran. She received her Bachelor's degree in General Biology from BuAli Sina University, and her Master's degree in Cellular and Molecular Biology from the Khatam University. She has completed her PhD in Pharmaceutical Biotechnology from Pasteur Institute of Iran, in 2016. She has started her activities as an Assistant Professor at Pasteur Institute of Iran from 2017. Her research interests include Protein Chemistry, Biopharmaceuticals Characterization and Quality by Design (QbD) in Biopharmaceutical Development.

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