

Title – Development and validation of a high-throughput cell-based screen for a chemokine receptor using FLIPR and the Calcium Plus Kit

Authors – Sofia Ribeiro and Christopher Haskell, Berlex Biosciences, 15049 San Pablo Avenue, Richmond, CA 94804

Abstract - Chemokines have a key role in the regulation of movement and biological activity of leukocytes in many disease situations (i.e. inflammatory disorders, HIV, cancer) hence they represent an important class of targets for drug development. Binding of chemokines to their receptors triggers the activation of several signaling pathways such as a transient rise in cytosolic calcium concentration. Chemokine/chemokine receptor binding assays represent the traditional method of screening large compound libraries, however these approaches can not answer the question of the mechanism of action of identified hits. Furthermore, agonists can easily be missed by the traditional ligand-binding methods. We will describe the development and validation of a high-throughput cell-based functional assay using the new Calcium Plus Kit from MDC. Advantages and disadvantages of this method will be discussed.