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(54) Title: SPRAY-DRIED COMPOSITIONS COMPRISING ADRENERGIC RECEPTOR MODULATORS

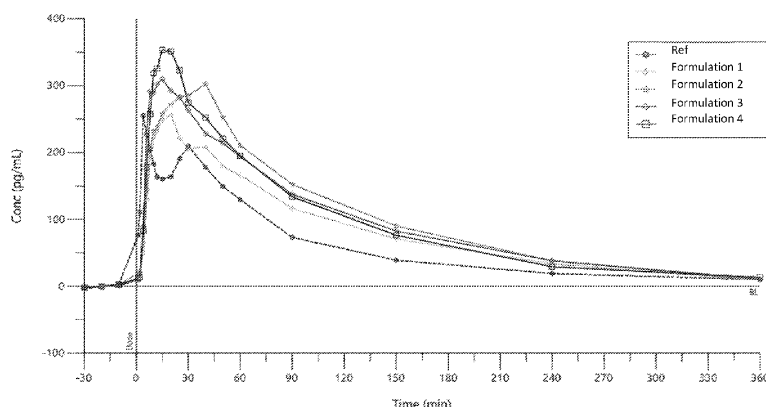


Figure 8

(57) Abstract: According to the invention, there is provided a pharmaceutically-acceptable composition in the form of a solid, amorphous, mono-particulate powder comprising a mixture of: (a) a pharmacologically-effective dosage amount of an adrenergic receptor modulator, or a pharmaceutically-acceptable salt thereof; and (b) a pharmaceutically-acceptable carrier material, which carrier material comprises a maltodextrin, which solid compositions, when dissolved in aqueous media, exhibit a pH of between about 4.5 and about 8.0. Said compositions are suitable for, for example, transmucosal drug delivery, including nasal delivery, by which said compositions may be loaded into a single-use nasal applicator. Compositions are preferably made by way of spray drying and may further include a disaccharide, such as lactose or trehalose which, along with the active ingredient and the maltodextrin, may be spray-dried together in combination. Compositions may further comprise one or more alkyl saccharides. Preferred alkyl saccharides include sucrose esters,

[Continued on next page]

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such as sucrose monolaurate. Preferred adrenergic receptor modulators include epinephrine (adrenaline). The compositions are thus particularly useful in the treatment of allergic reactions, including anaphylaxis.