[0009] The use of non-lamellar phase structures (such as liquid crystalline phases) in the delivery of bioactive agents is relatively well-known. Such structures form when an amphiphilic compound is exposed to a solvent because the amphiphile has both polar and non-polar groups which cluster to form polar and non-polar regions. These regions can effectively solubilise both polar and non-polar compounds. Such non-lamellar phase formulations are capable of forming liquid crystalline phase structures upon contact with aqueous fluid. However, considering the peculiarity of the rectal milieu, characterised by a low volume and with a composition highly affected by age, biological sex and pathology, aqueous fluid is not the most suitable trigger for an *in situ* gelation. Furthermore, such non-lamellar systems can exhibit a burst release of the encapsulated active upon exposure to aqueous fluid.

[0010] Thus, there remains a need for an improved or alternative delivery system, for use in the treatment of UC. In particular, topical formulations which are bioadherent (i.e. to mucosal surfaces), and which can be formulated as a low viscosity composition which would become adherent upon exposure to a suitable trigger *in situ*.

[0011] Upon hydration, monoacylglycerol lipids (such as monolinolein – MLO, generally recognised as safe for human and/or animal use – GRAS, by the FDA) can self-assemble in different arrangements. By increasing the water content, the less viscous lamellar (*L*) phase transforms first to an *Ia3d* and then to a *Pn3m* cubic phase (*Q)* which are similar in appearance and rheology to a high viscous cross-linked hydrogel.[37] To overcome the hurdle of administering a highly viscous gel, not only water but also temperature can be used as a trigger to tune the viscosity of the system. Thus, as described herein, the inventors have developed a gel platform that employs rectal temperature as a trigger for the formation of a highly viscous adhesive depot system. It has unexpectedly been found that the compositions of the invention can be used to effectively deliver a high concentration of drugs locally to the colonic mucosa, resulting in sustained drug release.

SUMMARY

[0011a] In one aspect, provided herein is a use of a composition in the manufacture of a medicament for treating a condition of the lower gastrointestinal tract, wherein the composition comprises:

a) a carrier comprising:

a1) water in an amount of more than 10% to 30% by weight of the carrier; and

a2) monoacylglycerol lipid in an amount of 70% to 90% by weight of the carrier, wherein the monoacylglycerol lipid comprises monolinolein or monoolein, or combinations thereof; and

b) a pharmaceutically active agent,

wherein the composition forms a lipid cubic phase at a temperature of 36 °C to 39 °C, and wherein the composition is to be administered rectally.

[0011b] In another aspect, provided herein is a composition comprising:

a) a carrier comprising:

a1) water in an amount of 16% by weight of the carrier; and

a2) monoacylglycerol lipid in an amount of 82% to 86% by weight of the carrier, wherein the monoacylglycerol lipid comprises at least 50% by weight monolinolein; and

b) a pharmaceutically active agent in an amount of 0.1% to 10% by weight of the composition,

wherein the composition forms a lipid cubic phase at a temperature of 36 °C to 39 °C, and wherein the composition is substantially free of other lipids.

[0012] In accordance with the present invention, there is provided a composition comprising:

a) a carrier comprising:

a1) water in an amount of more than 10% to 30% by weight of the carrier; and

a2) lipid in an amount of 70% to 90% by weight of the carrier; and

b) a pharmaceutically active agent,

wherein the lipid is selected from monolinolein or monoolein, and

wherein the composition forms a lipid cubic phase at a temperature of 36 °C to 39 °C.