A clinical phase I study on GIC-1001 in healthy volunteers

Submission date	Recruitment status	Prospectively registered
26/11/2012	No longer recruiting	☐ Protocol
Registration date	Overall study status	Statistical analysis plan
11/12/2012	Completed	[X] Results
Last Edited	Condition category	[] Individual participant data
26/04/2017	Digestive System	

Plain English summary of protocol

Background and study aims

GIC-1001 is a drug that is intended to provide analgesia (pain relief) for patients undergoing colonoscopy, where a thin flexible tube with a tiny camera on the end (colonoscope) is used to look inside the bowel. It may later be used for pain management in colonic diseases such as irritable bowel syndrome and ulcerative colitis. The aim of this study is to assess the safety, tolerability (side effects) and pharmacokinetic profile (movement of the drug into, through, and out of the body) of GIC-1001 in healthy volunteers.

Who can participate? Healthy volunteers aged 18 to 50

What does the study involve?

In Part 1 participants are randomly allocated to take GIC-1001 tablets at one of five doses or placebo (dummy) tablets once a day for 7 days. Up to 21 blood samples are taken over a 36-hour period. In Part 2 participants are randomly allocated to take GIC-1001 tablets at one of four doses or placebo (dummy) tablets three times a day for 7 days. Up to 18 blood samples are taken over a 7-day period. In Part 3 participants take a single dose of GIC-1001 in two periods with and without food to assess the effects of food intake on GIC-1001. A total of 16 blood samples are taken over a 36-hour period. Physical examinations, 24-hour cardiac (heart) monitoring and lab tests are carried out to assess the safety and tolerability of GIC-1001 in all groups.

What are the possible benefits and risks of participating? Not provided at time of registration

Where is the study run from? Algorithme Pharma (Canada)

When is the study starting and how long is it expected to run for? November 2012 to March 2013

Who is funding the study? glcare Pharma Inc (Canada)

Who is the main contact?

Dr Patrick Colin

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Contact information

Type(s)

Scientific

Contact name

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Contact details

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Additional identifiers

ClinicalTrials.gov (NCT)

NCT01738425

Protocol serial number

GIC-P2-458

Study information

Scientific Title

A double-blind, placebo controlled, phase I study to assess safety, tolerability and pharmacokinetics of single and multiple ascending oral doses of GIC-1001 in normal healthy volunteers

Acronym

GIC-1001

Study objectives

GIC-1001 is a non-centrally-acting, orally-administered, hydrogen sulfide releasing opioid agonist, which intends to provide adequate colonic analgesia to patients undergoing sedation-free colonoscopy.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Institutional Board Review Services, 09/11/2012, ref: IBRS-GIC-1001-09-NOV-2012

Study design

Randomized controlled phase I trial

Primary study design

Interventional

Study type(s)

Other

Health condition(s) or problem(s) studied

Gastroenterology/pain management/management of visceral pain during sedation-free colonoscopy

Interventions

Experimental: GIC-1001 oral tablets

GIC-1001; 125 mg oral tablets; Single ascending doses (SAD) from 125 mg to 1000 mg; multiple ascending dose (MAD) from 125 mg to 500 mg TID over 7 successive days

Part 1: Single Doses Cohort A: Single dose of 125 mg of GIC-1001 or placebo; Cohort B: Single dose of 250 mg of GIC-1001 or placebo; Cohort C: Single dose of 375 mg of GIC-1001 or placebo; Cohort D: Single dose of 500 mg of GIC-1001 or placebo; and Cohort E: Single dose of 1000 mg of GIC-1001 or placebo. Up to 21 blood samples will be obtained over a 36 hour period.

Part 2: Multiple Doses, three times a day (TID) during 7 consecutive days; Cohort F: Multiple doses of 125 mg of GIC-1001 or placebo; Cohort G: Multiple doses of 250 mg of GIC-1001 or placebo; Cohort H: Multiple doses of 375 mg of GIC-1001 or placebo; and Cohort I: Multiple doses of 500 mg of GIC-1001 or placebo. Up to 18 blood samples will be obtained over a 7 day period.

Part 3: one single dose of GIC-1001 to be selected for the Food Effect cross-over evaluation. A total of 16 blood samples will be obtained over a 36 hour period.

Placebo Comparator: GIC-1001 matching placebo Matching placebo, single or multiple dosing

Physical exams, 24 hour cardiac monitoring, and a complete battery of biochemical and hematological lab tests will be done to assess the safety and tolerability of GIC-1001 in all dosing cohorts.

Intervention Type

Drug

Phase

Phase I

Drug/device/biological/vaccine name(s)

GIC-1001

Primary outcome(s)

Safety and Tolerability: Single and multiple (7 consecutive days) doses In this Phase I study, 5 single ascending doses of GIC-1001 will be studied, as well as 4 multiple

doses administered during 7 consecutive days (TID regimen). As well, one single dose will be administered with and without food to assess the effect of food intake on the PK of the study drug. Safety issues monitored.

Key secondary outcome(s))

Pharmacokinetics: Up to 36 hours for single ascending doses; every day and up to 8 hour post last dose for multiple ascending doses

Blood samples will be obtained over a 36 hour period in the single dose portion of the study and over 7 days, every morning prior to GIC-1001, as well as 8 hours post-last dose in the multiple dosing phase. Main absorption and disposition parameters using a non-compartmental approach will be measured.

For GIC-1001 and its metabolites, the pharmacokinetic parameters of interest for the single dose regimens will be Cmax, AUC0-8, AUCT, AUC∞, Tmax, AUCT/∞, Kel, T½el, Cl/F and Vd/F. The parameters Cmax, AUC0-8, AUCT and AUC∞ will be dose-normalized, and their natural logarithm will be calculated. The pharmacokinetic parameters of interest for the multiple dose regimens will be Cmax, Tmax, AUCτ, Cmin, Cpds, Fluctuation and Swing. The parameters Cmax, AUCτ and Cmin will be dose-normalized, and the natural logarithm of Cmax, AUCτ, Cmin and Cpds of will be calculated. For hydrogen sulfide and thiosulfate, the pharmacokinetic parameters of interest will be Cmax, Tmax and AUC0-4.

Completion date

08/03/2013

Eligibility

Key inclusion criteria

- 1. Male or female volunteer
- 2. A female volunteer must meet one of the following criteria:
- 2.1. Participant is of childbearing potential and agrees to use one of the accepted contraceptive regimens from the screening visit until 2 months after the last drug administration. Additionally, if the participant is using systemic contraceptives, she must use an additional form of acceptable contraception from first drug administration until 2 months after the last drug administration. OR
- 2.2. Participant is of non-childbearing potential, defined as a female who had had a hysterectomy or tubal ligation, is clinically considered infertile or is in a menopausal state (at least 1 year without menses)
- 3. A male volunteer with sexual partners who are pregnant, possibly pregnant, or who could become pregnant must meet the following criterion: Participant agrees to use one of the accepted contraceptive regimens from first drug administration until 3 months after the last drug administration. An acceptable method of contraception includes one of the following: Abstinence from heterosexual intercourse or condom with spermicide
- 4. Volunteer aged of at least 18 years but not older than 50 years
- 5. Volunteer with a body mass index (BMI) greater than or equal to 18.50 and below 30 kg/m2
- 6. Non- or ex-smokers. An ex-smoker is defined as someone who completely stopped smoking for at least 6 months before day 1 of this study
- 7. Clinical laboratory values within the laboratory's stated normal range; if not within this range, they must be without any clinical significance
- 8. Have no clinically significant diseases captured in the medical history or evidence of clinically significant findings on physical examination and/or clinical laboratory evaluations (hematology, biochemistry, ECG and urinalysis)

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

- 1. History of significant hypersensitivity to trimebutine, to sulfur containing drugs (e.g. Captopril) or any related products (including excipients of the formulation) as well as severe hypersensitivity reactions (like angioedema) to any drugs
- 2. Presence of significant gastrointestinal, liver/kidney disease, or any other conditions known to interfere with the absorption, distribution, metabolism or excretion of drugs or known to potentiate or predispose to undesired effects
- 3. History of significant gastrointestinal, liver or kidney disease that may affect drug bioavailability
- 4. Presence of significant cardiovascular, pulmonary, hematologic, neurological, psychiatric, endocrine, immunologic or dermatologic disease
- 5. Suicidal tendency, history of or disposition to seizures, state of confusion, clinically relevant psychiatric diseases
- 6. Presence of out-of-range cardiac interval (PR < 110 msec, PR > 200 msec, QRS <60 msec, QRS >110 msec and QTc > 440 msec) on the screening ECG or other clinically significant ECG abnormalities
- 7. Known presence of rare hereditary problems of galactose and /or lactose intolerance
- 8. Use of cysteine, methionine, and other sulfur containing amino acid supplements in the previous 7 days before day 1 of this study
- 9. Maintenance therapy with any drug, or significant history of drug dependency or alcohol abuse (> 3 units of alcohol per day, intake of excessive alcohol, acute or chronic)
- 10. Any clinically significant illness in the previous 28 days before day 1 of this study
- 11. Use of any enzyme-modifying drugs, including strong inhibitors of cytochrome P450 (CYP) enzymes (such as cimetidine, fluoxetine, quinidine, erythromycin, ciprofloxacin, fluconazole, ketoconazole, diltiazem and HIV antivirals) and strong inducers of CYP enzymes (such as barbiturates, carbamazepine, glucocorticoids, phenytoin, rifampin and St John's Wort), in the previous 28 days before day 1 of this study
- 12. Any history of tuberculosis and/or prophylaxis for tuberculosis
- 13. Positive urine screening of ethanol and/or drugs of abuse
- 14. Positive results to HIV, HBsAg or anti-HCV tests
- 15. Females who are pregnant according to a positive serum pregnancy test
- 16. Volunteers who took an Investigational Product (in another clinical trial) or donated 50 mL or more of blood in the previous 28 days before day 1 of this study

Date of first enrolment

Date of final enrolment 08/03/2013

Locations

Countries of recruitmentCanada

Study participating centre Algorithme Pharma Inc. Montreal Canada H7V 4B3

Sponsor information

Organisation glcare Pharma Inc (Canada)

Funder(s)

Funder type Industry

Funder Name glcare Pharma Inc (Canada)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summaryNot provided at time of registration

Study outputs

Output type

Details results

Date created Date added Peer reviewed? Patient-facing?

Results article 01/11/2014 Yes No

Participant information sheet Participant information sheet 11/11/2025 No Yes