



Title Page

A PHASE 1, RANDOMIZED, DOUBLE-BLIND, SPONSOR-OPEN, PLACEBO-CONTROLLED, 4-PERIOD, CROSSOVER, FIRST-IN-HUMAN STUDY TO EVALUATE THE SAFETY, TOLERABILITY, AND PHARMACOKINETICS OF SINGLE ASCENDING ORAL DOSES OF PF-07293893 ADMINISTERED TO HEALTHY ADULT PARTICIPANTS

Study Intervention Number:	PF-07293893
Study Intervention Name:	NA
US IND Number:	NA
EU CT Number:	2023-504921-37-00
ClinicalTrials.gov ID:	NA
Pediatric Investigational Plan Number:	NA
Protocol Number:	C5171001
Phase:	1
Sponsor Legal Address:	Pfizer Inc. 66 Hudson Boulevard East New York, NY 10001 USA

Brief Title:

A Study to Learn About the Study Medicine Called PF-07293893 in Healthy Adults, and How Different Doses of Study Medicine are Tolerated and Act in the Body.

This document and accompanying materials contain confidential information belonging to Pfizer. Except as otherwise agreed to in writing, by accepting or reviewing these documents, you agree to hold this information in confidence and not copy or disclose it to others (except where required by applicable law) or use it for unauthorized purposes. In the event of any actual or suspected breach of this obligation, Pfizer must be promptly notified.

Document History

Document	Version Date
Amendment 1	07 June 2023
Original protocol	28 April 2023

This amendment incorporates all revisions to date, including amendments made at the request of country health authorities and IRBs/ECs and any global protocol administrative change letter(s)

Protocol Amendment Summary of Change Table

Amendment 1 (07 June 2023)

Overall Rationale for the Amendment: This amendment added a section for electronic consent, definitions for SAR and SUSAR, details regarding handling missing safety and PK data, and details regarding consideration of individual exposures in addition to mean exposures for dose escalation and PK stopping limits.

Description of Change	Brief Rationale	Section # and Name
Substantial Modification(s)		
Added Section 10.1.3.1 to describe the electronic consent process	Participants may be able to experience the informed consent process by electronic means (eConsent)	10.1.3.1 (Electronic Consent)
Added Sections 10.3.3 and 10.3.4 to define SAR and SUSAR, respectively.	SAR and SUSAR are defined to provide more clarity	10.3.3 (Definition of SAR) 10.3.4 (Definition of SUSAR)
Updated dose escalation and stopping rule to consider maximum individual exposure in addition to mean exposure for dose escalation.	To avoid exposing participants to exposures higher than PK stopping limits.	6.6.1 (Dose Escalation and Stopping Rules)
Non-substantial Modification(s)		
A description of how missing safety and PK observations will be handled is added.	To provide clarity on how the missing safety and PK observations will be handled.	Section 9.3 (Statistical Analyses)

TABLE OF CONTENTS

LIST OF TABLES	8
LIST OF FIGURES	8
1. PROTOCOL SUMMARY	9
1.1. Synopsis	9
1.2. Schema	14
1.3. Schedule of Activities	15
2. INTRODUCTION	20
2.1. Study Rationale	20
2.2. Background	20
2.2.1. AMPK γ 3 and HFpEF	20
2.2.2. Nonclinical Pharmacology	21
2.2.3. Nonclinical Pharmacokinetics and Metabolism	21
2.2.4. Biopharmaceutics	22
2.2.5. Nonclinical Safety	23
2.3. Benefit/Risk Assessment	23
2.3.1. Risk Assessment	24
2.3.2. Benefit Assessment	25
2.3.3. Overall Benefit/Risk Conclusion	25
3. OBJECTIVES AND ENDPOINTS	25
4. STUDY DESIGN	25
4.1. Overall Design	25
4.2. Scientific Rationale for Study Design	27
4.2.1. Choice of Contraception/Barrier Requirements	28
4.3. Justification for Dose	28
4.3.1. Prediction of Human PK	28
4.3.2. Prediction of Efficacious Dose/Concentration	28
4.3.3. Human Exposure Stopping Limits	29
4.3.4. Rationale for Dose Selection	29
4.4. End of Study Definition	30
5. STUDY POPULATION	30
5.1. Inclusion Criteria	31

5.2. Exclusion Criteria.....	31
5.3. Lifestyle Considerations.....	33
5.3.1. Contraception.....	33
5.3.2. Meals and Dietary Restrictions.....	34
5.3.3. Caffeine, Alcohol, and Tobacco	35
5.3.4. Activity	35
5.4. Screen Failures	36
6. STUDY INTERVENTION(S) AND CONCOMITANT THERAPY	36
6.1. Study Intervention(s) Administered	37
6.1.1. Administration	38
6.2. Preparation, Handling, Storage, and Accountability.....	39
6.2.1. Preparation and Dispensing	40
6.3. Assignment to Study Intervention.....	40
6.4. Blinding.....	40
6.4.1. Blinding of Participants	40
6.4.2. Blinding of Site Personnel	40
6.4.3. Blinding of the Sponsor.....	41
6.4.4. Sensitive Clinical Data	41
6.4.5. Breaking the Blind.....	41
6.5. Study Intervention Compliance.....	42
6.6. Dose Modification.....	42
6.6.1. Dose Escalation and Stopping Rules	43
6.7. Continued Access to Study Intervention After the End of the Study.....	44
6.8. Treatment of Overdose.....	44
6.9. Prior and Concomitant Therapy	44
6.9.1. Rescue Medicine.....	45
7. DISCONTINUATION OF STUDY INTERVENTION AND PARTICIPANT DISCONTINUATION/WITHDRAWAL.....	45
7.1. Discontinuation of Study Intervention	45
7.1.1. Potential Cases of Acute Kidney Injury	46
7.1.2. ECG Changes.....	47
7.1.3. COVID-19	47

7.2. Participant Discontinuation/Withdrawal From the Study	48
7.2.1. Withdrawal of Consent	48
7.3. Lost to Follow-Up	49
8. STUDY ASSESSMENTS AND PROCEDURES	49
8.1. Administrative Procedures	49
8.2. Efficacy Assessments	50
8.3. Safety Assessments	50
8.3.1. Physical Examinations	51
8.3.2. Neurological Examination	51
8.3.3. Vital Signs	51
8.3.3.1. Blood Pressure and Pulse Rate	51
8.3.3.2. Respiratory Rate	52
8.3.3.3. Temperature	52
8.3.4. Electrocardiograms	52
8.3.4.1. Continuous Cardiac Monitoring by Telemetry	53
8.3.5. Clinical Safety Laboratory Assessments	53
8.3.6. COVID-19 Specific Assessments	54
8.4. Adverse Events, Serious Adverse Events, and Other Safety Reporting	54
8.4.1. Time Period and Frequency for Collecting AE and SAE Information	55
8.4.1.1. Reporting SAEs to Pfizer Safety	55
8.4.1.2. Recording Nonserious AEs and SAEs on the CRF	55
8.4.2. Method of Detecting AEs and SAEs	56
8.4.3. Follow-Up of AEs and SAEs	56
8.4.4. Regulatory Reporting Requirements for SAEs	56
8.4.5. Environmental Exposure, Exposure During Pregnancy or Breastfeeding, and Occupational Exposure	57
8.4.5.1. Exposure During Pregnancy	57
8.4.5.2. Exposure During Breastfeeding	58
8.4.5.3. Occupational Exposure	59
8.4.6. Cardiovascular and Death Events	59
8.4.7. Disease-Related Events and/or Disease-Related Outcomes Not Qualifying as AEs or SAEs	59
8.4.8. Adverse Events of Special Interest	59

8.4.8.1. Lack of Efficacy	59
8.4.9. Medical Device Deficiencies	59
8.4.10. Medication Errors	59
8.5. Pharmacokinetics	60
8.5.1. Plasma for Analysis of PF-07293893 Concentration	60
8.6. Genetics	61
8.6.1. Specified Genetics	61
8.6.2. Retained Research Samples for Genetics	62
8.7. Biomarkers	62
8.7.1. Specified Gene Expression (RNA) Research	62
8.7.2. Specified Protein Research	62
8.7.3. Specified Metabolomic Research	62
8.7.4. Retained Research Samples for Biomarkers	62
8.7.5. Plasma for Analysis of Biomarker(s) of Transporter Activity	62
8.8. Immunogenicity Assessments	63
8.9. Health Economics	63
9. STATISTICAL CONSIDERATIONS	63
9.1. Statistical Hypothesis	63
9.2. Analysis Sets	63
9.3. Statistical Analyses	64
9.3.1. Safety Analyses	64
9.3.1.1. Electrocardiogram Analyses	64
9.3.2. PK Analyses	65
9.3.2.1. Derivation of PF-07293893 PK Parameters	65
9.3.2.2. Statistical Methods for PK Data	66
9.3.3. Tertiary/Exploratory Endpoint(s) Analysis	66
9.3.4. Other Analyses	67
9.4. Interim Analyses	67
9.5. Sample Size Determination	67
10. SUPPORTING DOCUMENTATION AND OPERATIONAL CONSIDERATIONS	68
10.1. Appendix 1: Regulatory, Ethical, and Study Oversight Considerations	68

10.1.1. Regulatory and Ethical Considerations	68
10.1.1.1. Reporting of Safety Issues and Serious Breaches of the Protocol or ICH GCP	68
10.1.2. Financial Disclosure	69
10.1.3. Informed Consent Process	69
10.1.3.1. Electronic Consent	70
10.1.4. Data Protection	70
10.1.5. Committees Structure	70
10.1.5.1. Data Monitoring Committee	70
10.1.6. Dissemination of Clinical Study Data	70
10.1.7. Data Quality Assurance	72
10.1.8. Source Documents	73
10.1.9. Use of Medical Records	73
10.1.10. Study and Site Start and Closure	74
10.1.11. Publication Policy	74
10.1.12. Sponsor's Medically Qualified Individual	75
10.2. Appendix 2: Clinical Laboratory Tests	76
10.3. Appendix 3: Adverse Events: Definitions and Procedures for Recording, Evaluating, Follow-Up, and Reporting	79
10.3.1. Definition of AE	79
10.3.2. Definition of an SAE	80
10.3.3. Definition of SAR	81
10.3.4. Definition of SUSAR	82
10.3.5. Recording/Reporting and Follow-Up of AEs and/or SAEs During the Active Collection Period	82
10.3.6. Reporting of SAEs	85
10.4. Appendix 4: Contraceptive and Barrier Guidance	87
10.4.1. Male Participant Reproductive Inclusion Criteria	87
10.4.2. Female Participant Reproductive Inclusion Criteria	87
10.4.3. Woman of Childbearing Potential	87
10.4.4. Contraception Methods	88
10.5. Appendix 5: Genetics	91
10.6. Appendix 6: Liver Safety: Suggested Actions and Follow-Up Assessments	92

10.7. Appendix 7: Kidney Safety: Monitoring Guidelines	94
10.7.1. Laboratory Assessment of Change in Kidney Function and Detection of Kidney Injury	94
10.7.2. Age-Specific Kidney Function Calculation Recommendations	94
10.7.2.1. Adults (18 Years and Above)—2021 CKD-EPI Equations	94
10.7.3. Kidney Function Calculation Tools	94
10.7.4. Adverse Event Grading for Kidney Safety Laboratory Abnormalities	95
10.8. Appendix 8: ECG Findings of Potential Clinical Concern	96
10.9. Appendix 9: Prohibited Concomitant Medications That May Result in DDI	98
10.10. Appendix 10: Abbreviations	100
11. REFERENCES	105

LIST OF TABLES

Table 1.	Study Schedule of Assessment	15
Table 2.	Study Schedule of Assessments for PK, Vitals, ECGs and Other on Day 1 of Each Period	19
Table 3.	Predicted Human Exposures and Safety Margins at Proposed Single Doses of PF-07293893	29
Table 4.	Plasma PF-07293893 PK Parameters	65
Table 5.	Protocol-Required Laboratory Assessments	77

LIST OF FIGURES

Figure 1 Study Design Schema ^{a,b,c}	14
---	----

1. PROTOCOL SUMMARY

1.1. Synopsis

Protocol Title:

A Phase 1, Randomized, Double-Blind, Sponsor-Open, Placebo-Controlled, 4-Period, Crossover, First-in-Human Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of Single Ascending Oral Doses of PF-07293893 Administered to Healthy Adult Participants.

Brief Title:

A Study to Learn About the Study Medicine Called PF-07293893 in Healthy Adults, and How Different Doses of Study Medicine are Tolerated and Act in the Body.

Regulatory Agency Identification Number(s):

US IND Number:	NA
EU CT Number:	2023-504921-37-00
ClinicalTrials.gov ID:	NA
Pediatric Investigational Plan Number:	NA
Protocol Number:	C5171001
Phase:	1

Rationale:

This study is the first clinical study with PF-07293893. The safety, tolerability, and plasma pharmacokinetics (PK) of PF-07293893 after administration of escalating, single, oral doses will be evaluated.

Objectives and Endpoints:

Objectives	Endpoints
Primary: <ul style="list-style-type: none">To evaluate the safety and tolerability of single ascending doses of PF-07293893 administered orally to healthy adult participants.	Primary: <ul style="list-style-type: none">Assessment of adverse events, clinical safety laboratory tests, vital signs, continuous cardiac monitoring, 12-lead electrocardiograms, physical examinations and neurological examinations.
Secondary: <ul style="list-style-type: none">To evaluate the PK of PF-07293893 following single doses of PF-07293893 administered orally to healthy adult participants.	Secondary: <ul style="list-style-type: none">PK parameters derived from plasma PF-07293893 concentrations: C_{max}, T_{max}, AUC_{last}, and if data permit, AUC_{inf}, and $t_{1/2}$.

Overall Design:

This is a randomized, investigator- and participant-blind, sponsor-open, placebo-controlled, first-in-human, single ascending oral dose, 4-period, crossover study of PF-07293893 administered to healthy adult participants. Approximately 24 healthy adult participants (up to 3 cohorts of approximately 8 participants each) will be enrolled in this study. The first 2 cohorts are planned, and the third cohort is optional. In each period, participants will be randomized to either PF-07293893 or placebo in a ratio of 3:1. Each participant is planned to undergo up to 4 treatment periods receiving up to 4 doses of PF-07293893 and up to 2 doses of placebo. Precautionary sentinel dosing will be used in any period evaluating escalating doses of PF-07293893 and may be omitted for periods when repeating a dose level or administering a lower dose level than previously evaluated. For periods with sentinel dosing, two participants (1 receiving PF-07293893 and 1 receiving placebo) will be dosed initially before the remaining participants of that period are dosed. Safety and tolerability data through at least 24 hours post-dose for the sentinel participants will be reviewed prior to dosing the remaining participants of that period.

Based on the review of emerging safety, tolerability, and PK data in Cohorts 1 and 2, the remaining periods of Cohort 2 and/or an optional third cohort enrolling approximately 8 participants (crossover, placebo-controlled design) may be used to explore additional doses, to repeat a dose, or to evaluate effect of crystalline form on PF-07293893 PK in fasted and/or fed state.

Dosing will occur in the fasted state for all periods, except if an optional exploratory assessment of the effect of food on crystalline PF-07293893 PK is conducted.

Number of Participants:

Approximately 16 (Cohorts 1 and 2) or 24 (with optional Cohort 3) healthy adult participants (approximately 8 participants per cohort) will be enrolled in the study.

Note: "Enrolled" means a participant's agreement to participate in a clinical study following completion of the informed consent process and randomization/assignment to study intervention.

Study Population:

Key inclusion and exclusion criteria are listed below:

Inclusion Criteria

Participants must meet the following key inclusion criteria to be eligible for enrollment into the study:

1. Females of non-childbearing potential and males 18 to 65 years of age, inclusive, at the time of signing the informed consent document (ICD) who are overtly healthy as

determined by medical evaluation including medical history, physical examination, laboratory tests, and cardiac monitoring.

2. Body mass index (BMI) of 16 to 30.5 kg/m²; and a total body weight >50 kg (110 lb).

Exclusion Criteria

Participants with any of the following characteristics/conditions will be excluded:

1. Evidence or history of clinically significant hematological, renal, endocrine, pulmonary, gastrointestinal, cardiovascular, hepatic, psychiatric, neurological, or allergic disease (including drug allergies, but excluding untreated, asymptomatic, seasonal allergies at the time of dosing).
 - Any condition possibly affecting drug absorption (eg, gastrectomy, cholecystectomy).
 - History of human immunodeficiency virus (HIV) infection, hepatitis B, or hepatitis C; positive testing for HIV, hepatitis B surface antigen (HBsAg), or hepatitis C antibody (HCVAb). Hepatitis B vaccination is allowed.
2. Any medical or psychiatric condition including recent (within the past year) or active suicidal ideation/behavior or laboratory abnormality or other conditions or situations related to coronavirus disease 2019 (COVID-19) pandemic that may increase the risk of study participation or, in the investigator's judgment, make the participant inappropriate for the study.
3. Use of prescription or nonprescription drugs and dietary and herbal supplements within 7 days or 5 half-lives (whichever is longer) prior to the first dose of study intervention, with the CCI [REDACTED] which are prohibited within 14 days plus 5 half-lives prior to the first dose of study intervention.
4. Previous administration with an investigational product (drug or vaccine) within 30 days (or as determined by the local requirement) or 5 half-lives preceding the first dose of study intervention used in this study (whichever is longer). Participation in studies of other investigational products (drug or vaccine) at any time during their participation in this study.
5. Screening supine blood pressure (BP) ≥ 140 mm Hg (systolic) or ≥ 90 mm Hg (diastolic) for participants <60 years; and $\geq 150/90$ mm/Hg for participants ≥ 60 years old, following at least 5 minutes of supine rest.
6. Renal impairment as defined by an estimated glomerular filtration rate (eGFR) <75 mL/min/1.73m². Since participants are 18 years to 65 years, 2021 chronic kidney disease epidemiology (CKD-EPI) eGFR (combined serum creatinine [Screat] and serum cystatin C [Scys]) is the recommended formula.

7. Standard 12-lead electrocardiogram (ECG) that demonstrates clinically relevant abnormalities that may affect participant safety or interpretation of study results (eg, QTcF >450 ms, complete left bundle branch block (LBBB), signs of an acute or indeterminate- age myocardial infarction, ST-T interval changes suggestive of myocardial ischemia, second- or third- degree atrioventricular (AV) block, or serious bradyarrhythmias or tachyarrhythmias).
8. Participants with ANY of the following abnormalities in clinical laboratory tests at screening, as assessed by the study specific laboratory and confirmed by a single repeat test, if deemed necessary:
 - Alanine aminotransferase (ALT), aspartate aminotransferase (AST), total bilirubin $\geq 1.05 \times$ upper limit of normal (ULN), participants with a history of Gilbert's syndrome may have direct bilirubin measured and would be eligible for this study provided the direct bilirubin level is \leq ULN.
9. History of alcohol abuse or binge drinking and/or any other illicit drug use or dependence within 6 months of Screening. Binge drinking is defined as a pattern of 5 (male) and 4 (female) or more alcoholic drinks in about 2 hours. As a general rule, alcohol intake should not exceed 14 units per week (1 unit = 8 ounces [240 mL] beer, 1 ounce [30 mL] of 40% spirit, or 3 ounces [90 mL] of wine).
10. Investigator site staff directly involved in the conduct of the study and their family members, site staff otherwise supervised by the investigator, and sponsor and sponsor delegate employees directly involved in the conduct of the study and their family members.

Study Arms and Duration: The total planned duration of participation from the screening visit to the telephone follow-up contact will be approximately 14 weeks for each participant.

Study Intervention(s)		
Intervention Name	PF-07293893	Placebo
Use	Experimental	Placebo
IMP or NIMP/AxMP	IMP	IMP
Dose Formulation	Bulk powder for extemporaneous preparation of oral suspensions	Bulk powder for extemporaneous preparation of oral suspensions
Unit Dose Strength(s)	Planned oral suspension doses ranging from 10-1500 mg	0 mg
Route of Administration	Oral	Oral

Study Arm(s)			
Arm Title	Cohort 1	Cohort 2	Cohort 3 (Optional)
Arm Description	Participants will receive up to 4 doses of PF-07293893 and up to 2 doses of matching placebo. Doses will be administered as oral suspensions as escalating single doses to be determined	Participants will receive up to 4 doses of PF-07293893 and up to 2 doses of matching placebo. Doses will be administered as oral suspensions as escalating single doses to be determined	Participants will receive up to 4 doses of PF-07293893 and up to 2 doses of matching placebo. Doses will be administered as oral suspensions as escalating single doses to be determined

Statistical Methods:

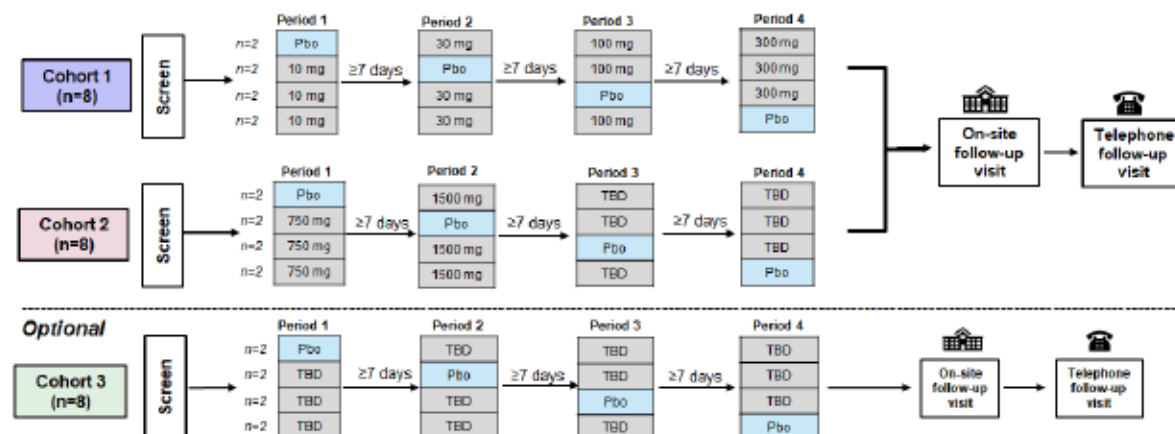
The sample size has been chosen based on the need to minimize first exposure to humans of a new chemical entity and the requirement to conduct adequate safety, toleration, and PK assessments at each dose level. All safety analyses will be performed on the safety analysis set, which is defined as all participants randomly assigned to study intervention and who take at least 1 dose of study intervention. Participants will be analyzed according to the study intervention they actually received. Safety data will be presented in tabular and/or graphical format and summarized descriptively, where appropriate. The plasma PK parameters for PF-07293893 following oral dose administration will be derived from the plasma concentration-time profiles. Plasma PK parameters and concentrations of PF-07293893 will be descriptively summarized by dose (formulation and fasting condition, if appropriate) and nominal time, as appropriate.

Ethical Considerations:

The participants in this study are not expected to obtain any specific benefit beyond contributing to the process of developing new therapies in an area of unmet need. They will receive close monitoring of their safety via study procedures undertaken (eg, physical examinations, neurological examinations, 12-lead ECGs, vital signs) which will occur as outlined in this protocol. Based on the totality of available nonclinical data, and taking into account the measures to minimize risk to study participants, the overall benefit/risk profile supports clinical testing of PF-07293893 in this study as part of the clinical development for an indication of heart failure with preserved ejection fraction (HFpEF).

1.2. Schema

Figure 1 Study Design Schema^{a,b,c}



- Doses shown for each cohort except the starting dose in Cohort 1 are planned doses and may be modified based on emerging data from previous cohorts. Similarly, assignment to study intervention may be modified. n represents number of participants.
- SDD extemporaneous prep will be used for dose escalation in this study. PK for crystalline formulation (fasted/fed) may be studied in remaining periods of Cohort 2 and/or optional Cohort 3 when it becomes available.
- Precautionary sentinel dosing will be used in any period evaluating escalating doses of PF-07293893. For such periods, 2 participants (1 receiving PF-07293893 and 1 receiving placebo) will be dosed initially before the remaining participants of that period are dosed. Safety and tolerability data through at least 24 hours post-dose for the sentinel participants will be reviewed prior to dosing the remaining participants of that period. Sentinel dosing may be omitted when repeating a dose level or administering a lower dose level than previously evaluated.

1.3. Schedule of Activities

The SoA table provides an overview of the protocol visits and procedures. Refer to the [STUDY ASSESSMENTS AND PROCEDURES](#) section of the protocol for detailed information on each procedure and assessment required for compliance with the protocol.

The investigator may schedule visits (unplanned visits) in addition to those listed in the SoA table, in order to conduct evaluations or assessments required to protect the well-being of the participant.

Table 1. Study Schedule of Assessment

Visit Identifier Abbreviations used in this table may be found in Appendix 10 .	Screen	Period 1 to Period 4						F/U		ET	Notes
Days Relative to Day 1	Day -28 to Day -2	Day -1	Day 1	Day 2	Day 3	Day 4	Visit: Day 8±1	Contact: Day 29-36			<ul style="list-style-type: none"> All screening should be done ≤28 days before the first dose. Day relative to start of study intervention (Day 1). Day 1 activities at time=0 hours are prior to the dose, except for study intervention administration. On-site follow-up visit to occur on Day 8±1 after the final dose of study intervention. Follow-up may occur via telephone contact and must occur 28 to 35 days after administration of the final dose of study intervention.
Hours After Dose			0	24	36	48					
Outpatient visit	X						X				
Informed consent	X										<ul style="list-style-type: none"> Informed consent should be obtained prior to undergoing any study-specific procedures. See Section 10.1.3 for additional information.
CRU confinement		X	→	→	→	→	X				<ul style="list-style-type: none"> Admission on Day -1 in Period 1 of each cohort.
Inclusion/exclusion criteria	X	X									<ul style="list-style-type: none"> Period 1 only. Review any changes from Screening.
Medical/medication history	X	X									<ul style="list-style-type: none"> Period 1 only. Review any changes from Screening.
History of alcohol, tobacco, and illegal drug use	X	X									<ul style="list-style-type: none"> Period 1 only. Review any changes from Screening.
Review concomitant treatments	X	→	→	→	→	→	→	X	X	X	<ul style="list-style-type: none"> See Section 6.9 for additional information.

Table 1. Study Schedule of Assessment

Visit Identifier Abbreviations used in this table may be found in Appendix 10 . Days Relative to Day 1	Screen Day -28 to Day -2	Period 1 to Period 4						F/U		ET	Notes
		Day -1	Day 1	Day 2		Day 3	Day 4	Visit: Day 8±1	Contact: Day 29-36		
Hours After Dose			0	24	36	48	72				<ul style="list-style-type: none">All screening should be done ≤28 days before the first dose.Day relative to start of study intervention (Day 1).Day 1 activities at time=0 hours are prior to the dose, except for study intervention administration.On-site follow-up visit to occur on Day 8±1 after the final dose of study intervention.Follow-up may occur via telephone contact and must occur 28 to 35 days after administration of the final dose of study intervention.
Physical exam	X	X		X			X	X		X	<ul style="list-style-type: none">Complete PE at screening or upon admission for a participant's first period in the study; otherwise, brief PE, performed for findings during previous exam or new/open AEs, at investigator discretion. Including height and weight only at screening.See Section 8.3.1 for additional information.
Neurological exam		X	See Table 2	X							<ul style="list-style-type: none">During each period. See Section 8.3.2 for additional information.
Demography	X										
Contraception check	X	X					X	X	X	X	<ul style="list-style-type: none">Contraception only required for male study participants. Contraceptive guidance is outlined in Appendix 4.
COVID-19 related measures	X	X	X	X		X	X	X		X	<ul style="list-style-type: none">Per CRU procedures
CRU discharge							X				<ul style="list-style-type: none">Participants may be asked to remain at the CRU after completion of Day 4 activities at the discretion of the investigator or if safety, tolerability, or PK data dictate the need to prolong confinement in the CRU
Serious and nonserious AE monitoring	X	→	→	→	→	→	→	→	X	X	<ul style="list-style-type: none">See Section 8.4.3 for follow-up AE and SAE assessments.
12-Lead ECG	X		See Table 2	X	X	X	X	X		X	<ul style="list-style-type: none">Single 12-lead ECG at screening, follow-up visit and ET. Triplicate 12-lead ECGs at all other times. See Section 8.3.4 for additional details.

Table 1. Study Schedule of Assessment

Visit Identifier Abbreviations used in this table may be found in Appendix 10 . Days Relative to Day 1	Screen Day -28 to Day -2	Period 1 to Period 4					F/U		ET	Notes
		Day -1	Day 1	Day 2	Day 3	Day 4	Visit: Day 8±1	Contact: Day 29-36		
Hours After Dose			0	24	36	48	72			<ul style="list-style-type: none"> All screening should be done ≤28 days before the first dose. Day relative to start of study intervention (Day 1). Day 1 activities at time=0 hours are prior to the dose, except for study intervention administration. On-site follow-up visit to occur on Day 8±1 after the final dose of study intervention. Follow-up may occur via telephone contact and must occur 28 to 35 days after administration of the final dose of study intervention.
Continuous cardiac telemetry		X	See Table 2							<ul style="list-style-type: none"> Baseline telemetry to be recorded for at least 2 hours prior to the first dose in Period 1 only. This may be done immediately prior to dosing or at some 2-hour continuous interval in the 24 hours prior to dosing, as long as the participant is awake. Post-dose telemetry will continue for 8 hours after dosing. See Section 8.3.4.1 for additional information.
Supine BP	X			X	X	X	X		X	<ul style="list-style-type: none"> Single supine blood pressure at screening, follow-up visit and ET. Triplicate measures of supine blood pressure at all other times. See Section 8.3.3 for additional information.
Temperature, pulse rate and respiratory rate				X		X	X			<ul style="list-style-type: none"> See Section 8.3.3 for additional information.
Study intervention administration										<ul style="list-style-type: none"> Participants should fast for at least 10 hours prior to dosing, except for periods in which food effects are investigated. Dosing under fasted or fed conditions is to occur as outlined in Section 5.3.2.
Standardized meal/snack		X	X	X	X	X				<ul style="list-style-type: none"> See Section 5.3.2 for detailed instruction.
Blood samples for:										
Safety laboratory	X	X		X			X	X	X	<ul style="list-style-type: none"> Participant should fast for at least 4 hours prior to sample collection. Safety laboratory includes hematology, chemistry, and urinalysis, which are listed in Appendix 2.
FSH	X									<ul style="list-style-type: none"> For confirmation of postmenopausal status only in females <60 years old and not using hormonal or HRT only.
HIV, HBsAg, HBsAb, HBcAb, HCVAb	X									<ul style="list-style-type: none"> See Appendix 2: Clinical Laboratory Tests.

Table 1. Study Schedule of Assessment

Visit Identifier Abbreviations used in this table may be found in Appendix 10 . Days Relative to Day 1	Screen Day -28 to Day -2	Period 1 to Period 4						F/U		ET	Notes
		Day -1	Day 1	Day 2		Day 3	Day 4	Visit: Day 8±1	Contact: Day 29-36		
Hours After Dose			0	24	36	48	72				<ul style="list-style-type: none">All screening should be done ≤28 days before the first dose.Day relative to start of study intervention (Day 1).Day 1 activities at time=0 hours are prior to the dose, except for study intervention administration.On-site follow-up visit to occur on Day 8±1 after the final dose of study intervention.Follow-up may occur via telephone contact and must occur 28 to 35 days after administration of the final dose of study intervention.
Sample for specified genetics			X								<ul style="list-style-type: none">Samples for specified genetics: Collected in Period 1 only. If not collected on the designated collection day, collect at the next available time point when biospecimens are being collected in conjunction with a participant visit. See Section 8.6.1 for additional details.
Sample for specified protein research			See Table 2								<ul style="list-style-type: none">To be collected as outlined in Section 8.7.2.
PF-07293893 PK				X	X	X	X			X	<ul style="list-style-type: none">See Section 8.5 for additional details.
Sample for transporter biomarker(s)				X							<ul style="list-style-type: none">See Section 8.7.5 for additional details.
Urine samples for:											
Urine drug testing	X	X									<ul style="list-style-type: none">Results of any pre-dose testing will be reviewed and confirmed acceptable prior to dosing.
Urinalysis (with microscopy, if needed)	X	X		X			X	X		X	<ul style="list-style-type: none">Participant should fast for at least 4 hours prior to sample collection. Results of any pre-dose testing will be reviewed and confirmed acceptable prior to dosing. See Appendix 2: Clinical Laboratory Tests.

Table 2. Study Schedule of Assessments for PK, Vitals, ECGs and Other on Day 1 of Each Period

Visit Identifier														Notes
Study Day	1													
Hours After Dose	-1.0	-0.5	0	0.5	1	2	3	4	6	8	12	14	<ul style="list-style-type: none">Hour 0 = predose sample collection	
Neurological exam						X				X			<ul style="list-style-type: none">During each period. See Section 8.3.2 for additional information.	
Continuous cardiac telemetry			X	→	→	→	→	→	→	X			<ul style="list-style-type: none">Baseline telemetry to be recorded for at least 2 hours prior to the first dose in Period 1 only. This may be done immediately prior to dosing or at some 2-hour continuous interval in the 24 hours prior to dosing, as long as the participant is awake. Post-dose telemetry will continue for 8 hours after dosing. See Section 8.3.4.1 for additional information.	
Triplicate 12-Lead ECG	X	X	X	X	X	X	X	X	X	X	X		<ul style="list-style-type: none">Triplicate measures are collected approximately 2-4 minutes apart. See Section 8.3.4 for additional details.	
Triplicate Supine BP			X	X	X	X	X	X	X	X	X		<ul style="list-style-type: none">Triplicate measures are collected approximately 2-4 minutes apart. See Section 8.3.3 for additional information.	
Temperature, pulse rate and respiratory rate			X			X			X				<ul style="list-style-type: none">See Section 8.3.3 for additional information.	
Study intervention administration			X										<ul style="list-style-type: none">Participants should fast for at least 10 hours prior to dosing, except for periods in which food effects are investigated. Dosing under fasted or fed conditions is to occur as outlined in Section 5.3.2.	
Blood sampling for:														
PF-07293893 PK			X	X	X	X	X	X	X	X	X	X	<ul style="list-style-type: none">See Section 8.5 for additional details.	
Sample for specified protein research			X			X		X			X		<ul style="list-style-type: none">To be collected as outlined in Section 8.7.2.	
Sample for transporter biomarker(s)			X		X	X		X		X	X		<ul style="list-style-type: none">See Section 8.7.5 for additional details.	

2. INTRODUCTION

PF-07293893 is an oral small molecule activator of AMPK γ 3 that is currently being developed for the treatment of HFpEF.

2.1. Study Rationale

This study will be the first time PF-07293893 is administered to humans. The purpose of the study is to evaluate the safety, tolerability, and plasma PK of PF-07293893 following administration of escalating single oral doses to healthy adult participants.

2.2. Background

2.2.1. AMPK γ 3 and HFpEF

Heart failure represents a global health challenge with an estimated prevalence of 30 million individuals affected worldwide. More than half of patients with heart failure have heart failure with preserved ejection fraction (HFpEF).^{1,2,3,4} Exercise intolerance is a key feature of HFpEF and is a major source of morbidity for these patients. The gold standard measure of exercise intolerance is peak oxygen consumption (peak VO₂) measured during a cardiopulmonary exercise test. The peak VO₂ for HFpEF patients is often below established thresholds to support independent living. This decrease in peak VO₂ is secondary to cardiac and peripheral organ abnormalities that result in reduced oxygen delivery to and/or utilization by exercising skeletal muscle.^{5,6} Meta-analysis of randomized control exercise interval trials in subjects with HFpEF demonstrated that endurance training alone or when combined with resistance training is associated with changes in skeletal muscle biomarkers and an effective approach to increase peak VO₂.^{5,7} These findings suggest that therapeutic strategies to enhance skeletal muscle function may benefit HFpEF patients.

AMPK is the sensor of intracellular energy and the central regulator of energy homeostasis in eukaryotes.⁸ AMPK is a heterotrimeric complex consisting of a single α catalytic, β scaffolding, and γ regulatory subunit. There are two isoforms of the α and β subunits and three isoforms of the γ subunit, giving rise to twelve possible combinations of the AMPK heterotrimeric complex.⁹ AMPK rapidly responds to changes in cellular ATP concentrations where the ratio of ATP to AMP or ADP changes the activity of AMPK, further initiating multiple pathways to promote increased catabolism and decreased anabolism, including glycolysis, lipid metabolism, and mitochondrial homeostasis.^{10,11,12,13,14}

Human skeletal muscle (including the vastus lateralis) contains three AMPK heterotrimeric complexes: α 2 β 2 γ 1, α 1 β 2 γ 1 and α 2 β 2 γ 3, each contributing to ~65%, ~15% and ~20% of the total AMPK complex protein pool in this tissue, respectively.^{15,16} The γ 3 subunit is exclusively expressed in skeletal muscle, and the α 2 β 2 γ 3 complex represents the major complex in skeletal muscle that is activated during intense exercise.^{16,17,18} The tissue-specific expression of the γ isoforms theoretically could provide a means to selectively activate a distinct AMPK heterotrimeric species and potentially mitigate the cardiovascular safety concerns described for β -selective and pan-AMPK activator small molecules.^{19,20}

Human carriers of the rare $\gamma 3$ gain of function variant, R225W, are associated with an approximate doubling of both basal and AMP-activated AMPK activities in differentiated skeletal muscle cells, and the vastus lateralis muscle obtained from these individuals exhibits a ~90% increase in glycogen content and a ~30% decrease in intramuscular triglycerides, possibly as a consequence of increased fatty acid beta-oxidation due to the AMPK inhibitory phosphorylation of ACC.²¹ Further phenotyping of these individuals confirmed the initial findings and demonstrated that myotubes from the R225W carriers had threefold higher mitochondrial content and oxidative capacity, together with increased glycogen synthesis rates versus control myotubes.²² Additionally, R225W carriers displayed a remarkable resistance to muscular fatigue upon exercise.²² These results support the hypothesis that AMPK $\gamma 3$ activation improves skeletal muscle function.

Taken together, these data support the potential for a selective small molecule activator of AMPK $\gamma 3$ to benefit metabolic HFpEF patients through a mechanism that increases peak VO₂ and overall skeletal muscle function to improve exercise intolerance.

2.2.2. Nonclinical Pharmacology

PF-07293893 is a small molecule activator of AMPK which selectively binds to the AMPK $\alpha 2\beta 2\gamma 3$ isoform. By biochemical assessment, PF-07293893 is a potent and selective $\gamma 3$ AMPK activator which increases phosphorylation of an ACC-derived Cys5-SAMS peptide against human AMPK $\alpha 2\beta 2\gamma 3$ containing complexes. Similar potency was observed against mouse, dog, and monkey AMPK $\alpha 2\beta 2\gamma 3$. In AMPK $\alpha 2\beta 2\gamma 3$ transiently transfected HEK293 cells, PF-07293893 increases $\gamma 3$ associated pThr172.

In vivo, after a single PO dose, PF-07293893 demonstrated dose- and time-dependent changes in skeletal muscle biomarkers including an elevation of the ratio of CCI (direct and downstream targets of AMPK $\gamma 3$) in gastrocnemius muscle of humanized AMPK $\gamma 3$ KI DIO mice, a mouse model of HFpEF, compared with vehicle. The effect on CCI was maintained after repeated daily dosing with PF-07293893 for 2 weeks and these effects were dependent on AMPK $\gamma 3$, as PF-07293893 had no significant effect on either endpoint in AMPK $\gamma 3$ KO DIO mice.

Further details of nonclinical pharmacology are included in the IB.

2.2.3. Nonclinical Pharmacokinetics and Metabolism

The nonclinical PK of PF-07293893 was characterized by CCI in mouse, rat, dog, and monkey, CCI, and a t_{1/2} of approximately CCI or shorter across species. PF-07293893 exhibited CCI oral bioavailability across species with bioavailability increasing CCI with use of the SDD versus crystalline formulations in dog and monkey. In repeat dose toxicity studies in mice and dogs, systemic exposure increased with increasing dose with mean accumulation ratios CCI. Preliminary assessment of PF-07293893 demonstrated CCI passive permeability and suggested that PF-07293893 is a substrate for CCI transporters. Renal excretion of PF-07293893 was CCI in rats, dogs, and monkeys (CCI %) with the major elimination route appearing to be metabolic clearance.

PF-07293893 was highly bound to mouse, dog, and human plasma proteins and preferentially distributed into plasma versus red blood cells across the species. Following SC dosing in mice, PF-07293893 distributed into muscle tissue.

Following in vitro and in vivo evaluation, the primary clearance pathway for PF-07293893 in preclinical species and humans appears CCI

CCI There was one minor unique metabolite (a CCI metabolite) observed in human hepatocytes and another minor unique metabolite (CCI) that was observed only in micropatterned co-cultured human hepatocytes.

At the predicted clinical efficacious dose, a potential DDI (based on FDA and EMA DDI guidance documents using the mechanistic models) is predicted for PF-07293893-mediated CCI. PF-07293893 also has potential to inhibit CCI. In addition, PF-07293893 has the potential to elicit induction of intestinal CCI. There is a potential for DDIs which could occur with PF-07293893 as a victim if co-administered with moderate and/or potent clinical inhibitors or inducers of CCI.

Further details of nonclinical PK and metabolism are included in the IB.

2.2.4. Biopharmaceutics

PF-07293893 is a neutral compound. CCI and apparent permeability, as measured in cell lines, indicate that the molecule should readily CCI membrane. The solubility of the crystalline form will be CCI in gastric fluid and in the intestinal pH. Based on preclinical exposure data and *in silico* modelling, the PF-07293893 crystalline form is expected to be CCI absorbed under fasted condition CCI mg, and CCI absorbed at the dose range CCI mg in the FIH study using a suspension formulation. Based on physiochemical properties and *in silico* predictions, food is expected to CCI exposure of crystalline PF-07293893.

A SDD is predicted to have an CCI PK profile as compared to the crystalline form by CCI exposure over the entire dose range. The solubility of the SDD will be CCI in gastric fluid and in the intestinal pH. PF-07293893 SDD is expected to be CCI absorbed under fasted condition at the predicted dosing range CCI mg, and CCI absorbed at the dose range CCI mg in the FIH study using a suspension formulation.

Based on available physiochemical, preclinical PK and *in silico* oral absorption data it is anticipated that dose limiting absorption may occur in the dose range CCI mg for crystalline form and CCI mg for SDD due to solubility limitations. Consequently, C_{max} and/or AUC may decrease at higher doses.

Data on the human exposure from SDD versus crystalline PF-07293893 will be used to optimize the performance of the drug product.

2.2.5. Nonclinical Safety

PF-07293893 was evaluated in genetic toxicity, safety pharmacology, and repeat-dose toxicity studies in mice and dogs. PF-07293893 is not mutagenic or clastogenic. Adverse monitorable clinical signs (decreased activity, cool to touch, low body temperatures, emesis, tremors) and moribundity were noted in repeat-dose toxicity studies in mice and/or dogs at doses **CC1** mg/kg/day. The NOAEL was established at 100 mg/kg/day in mice (23 days of consecutive dosing) and dogs (21 days of consecutive dosing) (see [Section 4.3.3](#) for exposure data safety margins) and non-adverse minimal findings were noted in the liver (minimally higher liver weights and ALT in female mice). In the single-dose safety pharmacology studies, monitorable and transient cardiovascular (decreased BP, QTc, and compensatory increased HR in dogs), nervous (decreased locomotor activity in mice), and respiratory (decreased respiratory rate, minute volume and tidal volume in mice) systems effects were noted and the NOEL was established in these studies.

In summary, the nonclinical safety profile of PF-07293893 has been adequately characterized and supports progression into clinical trials of up to 21 days. Further details of nonclinical safety are included in the IB.

2.3. Benefit/Risk Assessment

Study C5171001 is the first time that PF-07293893 will be administered to humans and is designed primarily to generate safety, tolerability, and PK data for further clinical development. For healthy participants participating in this single-dose study, no clinical benefit is expected. The purpose of the study is to provide the basis for further clinical development of PF-07293893 as first-in-class therapy for treatment of patients with HFpEF. As of the date of final protocol, no specific human risks have been identified; postulated risks based on nonclinical studies are summarized in [Section 2.2.5](#). The clinical impact of these potential risks will be minimized with precautionary sentinel dosing and through the proposed cautious dose -escalation process wherein higher doses of PF-07293893 will be administered only after lower doses have been found to be well tolerated with an acceptable safety profile. In addition, this study will employ stopping rules for dose escalation ([Section 6.6.1](#)) and includes standard, intensive, inpatient monitoring of the participants following administration of single, oral doses of the study intervention.

More detailed information about the known and expected benefits and risks and reasonably expected AEs of PF-07293893 may be found in the IB, which is the SRSD for this study. Refer to the Study Intervention(s) table in [Section 6.1](#) for a complete description of SRSDs.

2.3.1. Risk Assessment

Potential Risk of Clinical Significance	Summary of Data/Rationale for Risk	Mitigation Strategy
Study Intervention(s) PF-07293893		
Cardiovascular, neurologic and pulmonary signs and symptoms	Transient clinical signs of cardiovascular (decreased BP, QTc, and compensatory increased HR), CNS (decreased locomotor activity) and pulmonary effects (decreased respiratory rate, minute volume and tidal volume) were noted in the non-clinical single-dose toxicity studies. Refer to Section 2.2.5 for additional details.	Cardiac, pulmonary and neurologic monitoring including telemetry, electrocardiograms, vital signs, respiratory rate and full neurologic exams will be incorporated as part of safety monitoring. Precautionary sentinel dosing will also be used in this study.
Drug-drug interactions resulting in exposure changes to background concomitant medications	Based on regulatory models, PF-07293893 has the potential to CCI [REDACTED]	Use of prescription or nonprescription drugs and dietary and herbal supplements are prohibited within 7 days or 5 half-lives (whichever is longer) prior to the first dose of study intervention through the last PK collection.

2.3.2. Benefit Assessment

The participants in this study are not expected to obtain any specific benefit beyond contributing to the process of developing a new therapy for patients with HFpEF an area with unmet need. They will receive close monitoring of their safety via study procedures undertaken (eg, physical examinations, neurological examinations, 12-lead ECGs, vital signs) which will occur as outlined in this protocol.

2.3.3. Overall Benefit/Risk Conclusion

Based on the totality of available nonclinical data, and taking into account the measures to minimize risk to study participants, the overall benefit/risk profile supports clinical testing of PF-07293893 in this study as part of the clinical development for an indication of HFpEF.

3. OBJECTIVES AND ENDPOINTS

Objectives	Endpoints
Primary:	Primary:
<ul style="list-style-type: none"> To evaluate the safety and tolerability of single ascending doses of PF-07293893 administered orally to healthy adult participants. 	<ul style="list-style-type: none"> Assessment of adverse events, clinical safety laboratory tests, vital signs, continuous cardiac monitoring, 12-lead electrocardiograms, physical examinations and neurological examinations.
Secondary:	Secondary:
<ul style="list-style-type: none"> To evaluate the PK of PF-07293893 following single doses of PF-07293893 administered orally to healthy adult participants. 	<ul style="list-style-type: none"> PK parameters derived from plasma PF-07293893 concentrations: C_{max}, T_{max}, AUC_{last}, and if data permit, AUC_{inf}, and $t_{1/2}$.
Tertiary/Exploratory:	Tertiary/Exploratory:
<ul style="list-style-type: none"> To evaluate additional PK parameters of PF-07293893 following single doses of PF-07293893 administered orally to healthy adult participants. 	<ul style="list-style-type: none"> Additional PK parameters derived from plasma PF-07293893 concentrations: $C_{max}(dn)$, $AUC_{last}(dn)$ and if data permit, $AUC_{inf}(dn)$, CL/F and V_z/F.
<ul style="list-style-type: none"> To evaluate the PK of PF-07293893 following single dose(s) of a crystalline form of PF-07293893 in fasted and/or fed state, <i>if conducted</i>. 	<ul style="list-style-type: none"> PK parameters derived from plasma PF-07293893 concentrations: C_{max}, T_{max}, AUC_{last}, and if data permit, AUC_{inf}, and $t_{1/2}$.
<ul style="list-style-type: none"> To evaluate the effects of single ascending doses of PF-07293893 on biomarker(s) of transporter activity, <i>if feasible & analyzed</i>. 	<ul style="list-style-type: none"> For each biomarker (as applicable): AUC_{24} and C_{max}

4. STUDY DESIGN

4.1. Overall Design

This is a randomized, investigator- and participant-blind, sponsor-open, placebo-controlled, first-in-human, single ascending oral dose, 4-period, crossover study of PF-07293893 administered to healthy adult participants. Approximately 24 healthy adult participants (up to 3 cohorts of approximately 8 participants each) will be enrolled in this study. The first 2 cohorts are planned, and the third cohort is optional. In each period, participants will be randomized to either PF-07293893 or placebo in a ratio of 3:1. Each participant is planned to undergo up to 4 treatment periods receiving up to 4 doses of PF-07293893 and up to 2 doses of placebo.

Precautionary sentinel dosing will be used in any period evaluating escalating doses of PF-07293893 and may be omitted for periods when repeating a dose level or administering a lower dose level than previously evaluated. For periods with sentinel dosing, two participants (1 receiving PF-07293893 and 1 receiving placebo) will be dosed initially before the remaining participants of that period are dosed. Safety and tolerability data through at least 24 hours post-dose for the sentinel participants will be reviewed prior to dosing the remaining participants of that period. Dose levels will be escalated to bracket the expected clinical dose range, but the projected exposures will not exceed the predefined human exposure limits.

Screening activities will be completed over the 28 days prior to randomization in Period 1. Participants confirming eligibility according to [Section 5](#) will be admitted to the CRU on Day -1 in Period 1 for each cohort. For each period in this study, on Day 1, following ≥ 10 hour overnight fast, participants will receive a single oral dose of PF-07293893 or placebo. Participants will be discharged on Day 4, following completion of all scheduled assessments (approximately 72 hours post-dose). Participants may be asked to remain in the CRU after completion of Day 4 activities at the discretion of the investigator or if safety, tolerability, or PK data dictate the need to prolong confinement in the CRU. In each cohort, a washout interval of at least 7 days will be introduced between subsequent doses. During the washout interval, emerging 24-hour PK and 72-hour safety data will be reviewed and the next dose will be determined. An on-site follow-up visit will occur on Day 8 \pm 1 after the final dose. The follow-up contact may occur via telephone contact and must occur 28-35 days after administration of the final dose of study intervention. The total planned duration of participation from the screening visit to the telephone follow-up contact will be approximately 14 weeks.

Based on the review of emerging safety, tolerability, and PK data in Cohorts 1 and 2, the remaining periods of Cohort 2 and/or an optional third cohort enrolling approximately 8 participants (crossover, placebo controlled design) may be used to explore additional doses, to repeat a dose, or to evaluate effect of crystalline form on PF-07293893 PK in fasted and/or fed state.

Dosing will occur in the fasted state for all periods, except if an optional exploratory assessment of the effect of food on crystalline PF-07293893 PK is conducted. The actual dose level for the assessment of food effect will be selected based on emerging safety, tolerability, and PK data but will be expected to achieve projected therapeutic exposures ([Section 4.3.2](#)).

If a participant drops out before completing all study periods within a cohort, or withdraws for a reason unrelated to safety, the participant may be replaced at the discretion of the investigator and sponsor. The replacement participant(s) may or may not be required to complete all periods of the cohort in which they are participating at the discretion of the investigator and sponsor.

4.2. Scientific Rationale for Study Design

The population planned for this study will be healthy male and female participants. Female participants will be confirmed to be of non-childbearing potential, since at the present time embryo-fetal developmental toxicity studies with PF-07293893 have not been conducted. In male participants, appropriate measures are expected to be followed to minimize potential transfer of PF-07293893 via semen to partners (see [Appendix 4](#)).

Given this is the first time PF-07293893 will be administered to humans, an escalating single oral dose crossover design with careful assessment and ongoing review of safety, tolerability and PK data of PF-07293893 is planned. Due to the findings of transient clinical signs of cardiovascular and neuropsychological effects in the non-clinical chronic toxicology studies, neurological examination, RR and body temperature measurement will be performed in this study. In addition, a precautionary sentinel dosing will be used. The highest anticipated C_{max} and AUC_{24} of PF-07293893 will not exceed the pre-defined human exposure stopping limits. Furthermore, to permit an unbiased assessment of safety, the participants' treatment assignments (active treatment versus placebo) will be blinded to both site staff (except those involved in preparation of doses) as well as the study participants. However, to permit real-time review of the safety and PK data, a limited number of sponsor study team members will be unblinded (see [Section 6.4.3](#)).

In each period, approximately 6 participants are planned to receive PF-07293893, and 2 participants are planned to receive placebo. The 4-period crossover design will permit both within and between participant assessment of safety/tolerability and PK at multiple dose levels and placebo. An additional cohort may be included if, based on emerging data from the first 2 cohorts, it is deemed necessary to meet the objectives of this study. For a given participant, dosing will be separated by at least 7 days. This planned dosing interval is deemed sufficient based on the projected PF-07293893 terminal half-life (see [Section 4.3.1](#)).

Based on the predicted $t_{1/2}$ of PF-07293893, plasma concentrations of PF-07293893 are expected to be below the limit of detection in approximately [REDACTED], thus PK samples are planned to be collected over [REDACTED] hours post-dose. However, sampling times, duration of sampling, and/or the length of the interval between doses may be modified and/or extended based on emerging PK. The planned doses in the dose escalation sequence ([Table 3](#)) may be modified or repeated, as guided by emerging safety, tolerability, and PK data but will follow the dose-escalation rules defined in [Section 6.6.1](#).

Based on preclinical exposure data and *in silico* modelling, the PF-07293893 crystalline form is expected to be [REDACTED] absorbed under fasted condition [REDACTED] mg, and [REDACTED] absorbed at the dose range [REDACTED] mg. Therefore, SDD formulation with higher solubility and higher predicted exposures as compared to the crystalline form, will be used in this study.

Based on physiochemical properties and *in silico* predictions, food is expected to have a [REDACTED] impact on crystalline PF-07293893 exposure. An exploratory assessment of the PK of crystalline PF-07293893 with or without food relative to SDD formulation may be conducted.

In vitro data indicated that PF-07293893 has the potential to inhibit CCI in humans. In this study, blood samples for transporter biomarkers (eg, CCI) will be collected to evaluate potential effects of PF-07293893 on transporter activity in human. However, these samples will only be analyzed if feasible and deemed necessary.

The samples will be collected for exploratory analysis of circulatory biomarkers of AMPK γ 3 activation. The serial blood samples will be collected to understand the time-dependent profile of circulatory biomarker changes following PF-07293893 treatment, and possibly to identify the timepoint corresponding to peak. The results of these analyses will not be reported in the CSR.

Considering the nonclinical safety studies with PF-07293893 in mice and dogs (see [Section 2.2.3](#)), the standard safety assessments used by the sponsor in trials administering investigational product for the first time to humans are deemed suitable (see [Appendix 2](#)).

4.2.1. Choice of Contraception/Barrier Requirements

Human reproductive safety data are limited for PF-07293893. Therefore, the use of a highly effective method of contraception is required for male participants (see [Appendix 4](#)). Female participants of childbearing potential are excluded from participation in the trial.

There is no suspicion of human teratogenicity based on the intended pharmacology of the compound.

4.3. Justification for Dose

The proposed dose levels of PF-07293893 were derived based on cumulative nonclinical data, including in vitro, in vivo, PK and PD data, and the completed nonclinical toxicity studies. Dose levels have been selected to bracket the expected clinical dose and exposure range, while considering uncertainty in the projected clinically efficacious dose. Dose levels beyond the starting dose (in Period 1 of Cohort 1) may be modified based on emerging human safety, tolerability, and PK data in the current study.

4.3.1. Prediction of Human PK

The human PK profile was predicted using human hepatocytes and non-clinical data. PF-07293893 is predicted to CCI

4.3.2. Prediction of Efficacious Dose/Concentration

The PK/PD of PF-07293893 was examined using a PK/PD-hKI mouse model assessing the response of CCI in muscle tissue as a biomarker. Based on the predicted human PK, the projected human efficacious dose of PF-07293893 is CCI. This dose is expected to achieve CCI activation of AMPK γ 3 and result in a steady state total C_{max} of CCI, and a total AUC₂₄ of CCI

4.3.3. Human Exposure Stopping Limits

The NOAEL in the 1 month GLP toxicity study in mice (the most sensitive species) was 100 mg/kg/day (CCI). Therefore, the mouse NOAEL exposures are used to set human exposure limits for PF-07293893.

After correcting for species-dependent, plasma protein binding between mouse and human ($f_{u,p}$ of CCI respectively):

- The human PF-07293893 C_{max} limit is a total C_{max} of CCI ng/mL (CCI ng/mL unbound).
- The human PF-07293893 AUC_{24} limit is a total AUC_{24} of CCI ng•h/mL (CCI ng•h/mL unbound).

4.3.4. Rationale for Dose Selection

The safety, tolerability, and plasma PK of PF-07293893 after administration of single escalating oral doses across a wide dose/exposure range will be evaluated in this study. The doses presented in Table 3 are projected based on nonclinical data and may be modified based on emerging observed human safety, tolerability, and PK data generated during this study. The initial range of planned doses in this study were established using toxicokinetic data, predicted human PK parameter estimates, and projected efficacious concentrations.

Table 3. Predicted Human Exposures and Safety Margins at Proposed Single Doses of PF-07293893

Dose (mg)	Projected Exposures ^a		Safety Margins ^b	
	C_{max} (ng/mL)	AUC_{24} (ng•h/mL)	C_{max}	AUC_{24}
10	57.9	671	233	232
30	174	2012	77.6	77.3
100	579	6708	23.3	23.2
300	1737	20120	7.76	7.73
750	4342	50310	3.1	3.09
1500	8684	100600	1.55	1.55

- a. Human PK profiles were predicted using a 1-compartment model with the projected human PK parameters for PF-07293893. The model assumes linear PK at all doses CCI.
- b. Safety margins calculated using the total exposure limits in human which was based on unbound C_{max} (CCI ng/mL) and unbound AUC_{24} (CCI ng•h/mL) observed at NOAEL (100 mg/kg) in 1-m GLP toxicology study in mouse, the most sensitive species and corrected with human protein binding ($f_{u,p}$ = CCI).

The PF-07293893 starting dose level of 10 mg is planned. The predicted PF-07293893 C_{max} and AUC_{24} after single dose of 10 mg are approximately 233- and 232-fold, respectively, below the exposure limit defined for PF-07293893 dose escalation in [Section 4.3.3](#). The maximum target coverage following a single 10 mg dose is predicted to be CCI % with CCI maximum increase in CCI . The predicted PF-07293893 exposures (C_{max} and AUC_{24}) after single dose of 10 mg are approximately CCI lower than predicted exposures at projected human efficacious dose. A single dose of 1500 mg (the top dose in [Table 3](#)) is estimated to provide an exposure margin of CCI for both C_{max} and AUC_{24} relative to the exposure limits.

The dose range to be studied was selected to account for uncertainties in the projected C_{eff} and the projected therapeutic dose, while also bracketing the expected clinically effective dose range in humans for clinically relevant pharmacological activity and providing safety coverage for a wide range of PF-07293893 doses.

Assessment of the safety, tolerability, and PK after each single dose level will be conducted before escalating to the next dose level. The dose/exposure-escalation increments are planned to be up to approximately semi-logarithmic increases in exposure from the previous highest dose level that has been evaluated. If exposure exceeds the projected therapeutic range, or if changes in safety parameters are observed, smaller dose-escalation steps may be implemented.

The actual dose levels, target exposures, and/or dose level increments may be adjusted (higher or lower) during the study based on emerging human safety, tolerability, and PK data, but projected exposures will not exceed the predefined human exposure limits. Dose levels may also be repeated if warranted.

When the assessment of the food effect for the crystalline form on the PK of PF-07293893 is conducted, the dose level(s) will be selected based on the emerging safety, tolerability, and PK data from previous periods of the study. The actual dose level(s) will be expected to achieve exposures similar to or greater than projected therapeutic exposures (as outlined in [Section 4.3.2](#)), but the projected exposures will not exceed the predefined human exposure limits (as outlined in [Section 4.3.3](#)).

4.4. End of Study Definition

The end of the study is defined as the date of the last scheduled procedure shown in the [SoA](#) for the last participant in the trial.

A participant is considered to have completed the study if they have completed all periods of the study, including the last scheduled procedure shown in the [SoA](#).

5. STUDY POPULATION

This study can fulfill its objectives only if appropriate participants are enrolled, including participants across diverse and representative racial and ethnic backgrounds. If a prescreening tool is utilized for study recruitment purposes, it will include collection of information that reflects the enrollment of a diverse participant population including, where

permitted under local regulations, age, sex, race, and ethnicity. The following eligibility criteria are designed to select participants for whom participation in the study is considered appropriate. All relevant medical and nonmedical conditions should be taken into consideration when deciding whether a particular participant is suitable for this protocol.

Prospective approval of protocol deviations to recruitment and enrollment criteria, also known as protocol waivers or exemptions, is not permitted.

5.1. Inclusion Criteria

Participants are eligible to be included in the study only if all of the following criteria apply:

Age and Sex:

1. Females of non-childbearing potential and males 18 to 65 years of age, inclusive, at the time of signing the ICD who are overtly healthy as determined by medical evaluation including medical history, physical examination, laboratory tests, and cardiac monitoring.
 - Refer to [Appendix 4](#) for reproductive criteria for male ([Section 10.4.1](#)) and female ([Section 10.4.2](#)) participants.

Other Inclusion Criteria:

2. BMI of 16-30.5 kg/m²; and a total body weight >50 kg (110 lb).
3. Willing and able to comply with all scheduled visits, treatment plan, laboratory tests, lifestyle considerations, and other study procedures.
4. Capable of giving signed informed consent as described in [Appendix 1](#), which includes compliance with the requirements and restrictions listed in the ICD and in this protocol.

5.2. Exclusion Criteria

Participants are excluded from the study if any of the following criteria apply:

Medical Conditions:

1. Evidence or history of clinically significant hematological, renal, endocrine, pulmonary, gastrointestinal, cardiovascular, hepatic, psychiatric, neurological, or allergic disease (including drug allergies, but excluding untreated, asymptomatic, seasonal allergies at the time of dosing).
 - Any condition possibly affecting drug absorption (eg, gastrectomy, cholecystectomy).

- History of HIV infection, hepatitis B, or hepatitis C; positive testing for HIV, HBsAg, or HCVAb. Hepatitis B vaccination is allowed.
2. Any medical or psychiatric condition including recent (within the past year) or active suicidal ideation/behavior or laboratory abnormality or other conditions or situations related to COVID-19 pandemic that may increase the risk of study participation or, in the investigator's judgment, make the participant inappropriate for the study.

Prior/Concomitant Therapy:

3. Use of prescription or nonprescription drugs and dietary and herbal supplements within 7 days or 5 half-lives (whichever is longer) prior to the first dose of study intervention, with the CCI [REDACTED] which are prohibited within 14 days plus 5 half-lives prior to the first dose of study intervention. Refer to [Section 6.9](#) Prior and Concomitant Therapy for additional details.

Prior/Concurrent Clinical Study Experience:

4. Previous administration with an investigational product (drug or vaccine) within 30 days (or as determined by the local requirement) or 5 half-lives preceding the first dose of study intervention used in this study (whichever is longer). Participation in studies of other investigational products (drug or vaccine) at any time during their participation in this study.

Diagnostic Assessments:

5. A positive urine drug test.
6. Screening supine BP ≥ 140 mm Hg (systolic) or ≥ 90 mm Hg (diastolic) for participants < 60 years; and $\geq 150/90$ mm/Hg for participants ≥ 60 years old, following at least 5 minutes of supine rest. If systolic BP is ≥ 140 or 150 mm Hg (based on age) or diastolic ≥ 90 mm Hg, the BP should be repeated 2 more times and the average of the 3 BP values should be used to determine the participant's eligibility.
7. Renal impairment as defined by an eGFR < 75 mL/min/1.73m². Since participants are 18 years to 65 years, 2021 CKD-EPI eGFR (combined Screat and Scys) is the recommended formula (see [Section 10.7.2](#)) to determine eligibility and to provide a baseline to quantify any subsequent kidney safety events.
8. Standard 12-lead ECG that demonstrates clinically relevant abnormalities that may affect participant safety or interpretation of study results (eg, QTcF > 450 ms, complete LBBB, signs of an acute or indeterminate- age myocardial infarction, ST-T interval changes suggestive of myocardial ischemia, second- or third- degree AV block, or serious bradyarrhythmias or tachyarrhythmias). If QTcF exceeds 450 ms, or QRS exceeds 120 ms, the ECG should be repeated twice and the average of the 3 QTcF or QRS values used to determine the participant's eligibility.

Computer-interpreted ECGs should be overread by a physician experienced in reading ECGs before excluding a participant.

9. Participants with **ANY** of the following abnormalities in clinical laboratory tests at screening, as assessed by the study specific- laboratory and confirmed by a single repeat test, if deemed necessary:
 - ALT, AST, total bilirubin $\geq 1.05 \times \text{ULN}$; participants with a history of Gilbert's syndrome may have direct bilirubin measured and would be eligible for this study provided the direct bilirubin level is $\leq \text{ULN}$.

Other Exclusion Criteria:

10. History of alcohol abuse or binge drinking and/or any other illicit drug use or dependence within 6 months of Screening. Binge drinking is defined as a pattern of 5 (male) and 4 (female) or more alcoholic drinks in about 2 hours. As a general rule, alcohol intake should not exceed 14 units per week (1 unit = 8 ounces [240 mL] beer, 1 ounce [30 mL] of 40% spirit, or 3 ounces [90 mL] of wine).
11. Use of tobacco or nicotine-containing products in excess of the equivalent of 5 cigarettes/day or 2 chews of tobacco/day.
12. Investigator site staff directly involved in the conduct of the study and their family members, site staff otherwise supervised by the investigator, and sponsor and sponsor delegate employees directly involved in the conduct of the study and their family members.

5.3. Lifestyle Considerations

The following guidelines are provided:

5.3.1. Contraception

The investigator or their designee, in consultation with the participant, will confirm that the participant is utilizing an appropriate method of contraception for the individual participant and their partner(s) from the permitted list of contraception methods (see [Appendix 4, Section 10.4.4](#)) and will confirm that the participant has been instructed in its consistent and correct use. The investigator or designee will advise the participant to seek advice about the donation and cryopreservation of germ cells prior to the start of study intervention, if applicable.

At time points indicated in [SoA](#), the investigator or designee will inform the participant of the need to use highly effective contraception consistently and correctly and document the conversation and the participant's affirmation in the participant's chart. Participants need to affirm their consistent and correct use of at least 1 of the selected methods of contraception, considering that their risk for pregnancy may have changed since the last visit.

In addition, the investigator or designee will instruct the participant to call immediately if the selected contraception method is discontinued and document the requirement to use an alternate protocol-specified method, including if the participant will no longer use abstinence as the selected contraception method, or if pregnancy is known or suspected in the participant or partner.

5.3.2. Meals and Dietary Restrictions

- Participants must abstain from all food and drink (except water) at least 4 hours prior to any safety laboratory evaluations and approximately 10 hours prior to the collection of the predose PK sample.
- Noncaffeinated drinks (except grapefruit or grapefruit-related citrus fruit juices-see below) may be consumed with meals and the evening snack.
- Lunch will be provided approximately 4 hours after dosing.
- Dinner will be provided approximately 9 to 10 hours after dosing.
- An evening snack may be permitted.
- Participants will refrain from consuming red wine, grapefruit, or grapefruit-related citrus fruits (eg, Seville oranges, pomelos, fruit juices) from 7 days prior to the first dose of study intervention until collection of the final PK blood sample.
- While participants are confined, their total daily nutritional composition should be approximately 55% carbohydrate, 30% fat, and 15% protein, with the exception of dosing days in which a high-fat/high-calorie meal will be given prior to study intervention. The daily caloric intake per participant should not exceed approximately 3200 kcal.
- On *non-dosing days* while inpatient, as appropriate, standard morning meal, lunch, and evening meal (along with an evening snack) are to be provided at a similar clock time to the clock time when these meals are offered on the dosing day.
- Dosing under fasted conditions:
 - Following an overnight fast of at least 10 hours, participants will receive study intervention.
 - Water is permitted until 1 hour prior to study intervention administration. Water may be consumed without restriction beginning 1 hour after dosing.

- Dosing if food effects are investigated:
 - Following an overnight fast of at least 10 hours, participants should start breakfast approximately 30 minutes prior to administration of study intervention.
 - The high-fat, high-caloric breakfast will be consumed over approximately a 20-minute period with study intervention administered approximately 10 minutes after completion of the meal at 0H.
 - There are no water restrictions prior to dosing for participants dosed under fed conditions. Water may be consumed without restriction beginning 1 hour after dosing.
 - The breakfast will be a high-fat (approximately 50% of total caloric content of the meal), high-calorie (approximately 800 to 1000 calories) meal. The meal will consist of approximately 150 protein calories, 250 carbohydrate calories, and 500-600 fat calories. An example test meal would be: 2 eggs fried in butter, 2 strips of bacon (or 50 g of meat or sausage), 2 slices of toast with butter, 4 ounces (approximately 112 grams) of hash brown potatoes, and 8 fluid ounces (240 mL) of whole milk. Participants will be encouraged to consume the entire meal.

5.3.3. Caffeine, Alcohol, and Tobacco

- Participants will abstain from caffeine containing- products for 24 hours prior to the start of dosing until collection of the final PK sample of each study period.
- Participants will abstain from alcohol for 24 hours prior (or as specified above for red wine) to admission to the CRU and continue abstaining from alcohol until collection of the final PK sample of each study period. Participants may undergo an alcohol breath test or blood alcohol test at the discretion of the investigator.
- Participants will abstain from the use of tobacco- or nicotine-containing products for 24 hours prior to dosing and during confinement in the CRU.

5.3.4. Activity

- Participants will abstain from strenuous exercise (eg, heavy lifting, weight training, calisthenics, aerobics) for at least 48 hours prior to each blood collection for clinical laboratory tests. Walking at a normal pace will be permitted;
- In order to standardize the conditions on PK sampling days, participants will be required to refrain from lying down (except when required for BP, pulse rate, and ECG measurements), eating, and drinking beverages other than water during the first 4 hours after dosing;

- Participants will be confined to the procedure room for the first 4 hours after dosing on Day 1 during continuous cardiac monitoring, except to use the bathroom. After this, if the equipment setup allows, participants may be ambulatory during the ECG monitoring period, but should not engage in strenuous activities. If equipment does not allow ambulation, appropriate accommodations will be made by the investigator site to facilitate continuous monitoring (eg, bedside urinals should be provided to accommodate participants' excretory needs).

5.4. Screen Failures

Screen failures are defined as participants who consent to participate in the clinical study but are not subsequently enrolled in the study. Screen failure data are collected and remain as source and are not reported on the CRF.

Individuals who do not meet the criteria for participation in this study (screen failure) may be rescreened.

6. STUDY INTERVENTION(S) AND CONCOMITANT THERAPY

Study interventions are all prespecified investigational and noninvestigational medicinal products/auxiliary medicinal products, medical devices, and other interventions (eg, surgical and behavioral) intended to be administered to the study participants during the study conduct.

For the purposes of this protocol, study intervention refers to:

- PF-07293893
- Placebo for PF-07293893

6.1. Study Intervention(s) Administered

Study Intervention(s)		
Intervention Name	PF-07293893	Placebo
Type	Drug	Drug
Use	Experimental	Placebo
IMP or NIMP/AxMP	IMP	IMP
Dose Formulation	Bulk powder for extemporaneous preparation of oral suspensions	Bulk powder for extemporaneous preparation of oral suspensions
Unit Dose Strength(s)	Planned oral suspension doses ranging from 10-1500 mg	0 mg
Dosage Level(s)	Single ascending doses 10-1500 mg (see Section 1.2 and Section 4.3.4)	0 mg
Route of Administration	Oral	Oral
Sourcing	Provided centrally by the sponsor	Provided centrally by the sponsor
Packaging and Labeling	Study intervention will be provided as bulk powder for extemporaneous preparation of oral suspensions. Each individual bottle will be labeled as required per country requirement.	Study intervention will be provided as bulk powder for extemporaneous preparation of oral suspensions. Each individual bottle will be labeled as required per country requirement.
SRSD	IB	IB

Study Arm(s)			
Arm Title	Cohort 1	Cohort 2	Cohort 3 (Optional)
Arm Description	Participants will receive up to 4 doses of PF-07293893 and up to 2 doses of matching placebo doses. Doses will be administered as oral suspensions as escalating single doses to be determined	Participants will receive up to 4 doses of PF-07293893 and up to 2 doses of matching placebo doses. Doses will be administered as oral suspensions as escalating single doses to be determined	Participants will receive up to 4 doses of PF-07293893 and up to 2 doses of matching placebo doses. Doses will be administered as oral suspensions as escalating single doses to be determined

PF-07293893 and placebo will be provided by Pfizer as bulk powders for extemporaneous preparation of oral suspensions at the CRU.

- SDD PF-07293893 or placebo oral suspension will be extemporaneously prepared for single dose ranging from 10 mg to 1500 mg.
- Crystalline PF-07293893 or placebo oral suspension will be extemporaneously prepared for single dose ranging from 10 mg to 500 mg.

PF-07293893 and placebo will be presented to the participants in individual dosing containers.

6.1.1. Administration

For fasted period(s):

- Following an overnight fast of at least 10 hours, participants will receive study intervention at approximately 08:00 hours (plus or minus 2 hours) without breakfast on Day 1.

For fed period(s):

- Following an overnight fast of at least 10 hours, participants will receive breakfast approximately 30 minutes prior to dosing on Day 1 which is to be completed within approximately 20 minutes as outlined in [Section 5.3.2](#). The participants will then receive study intervention approximately 10 minutes after completion of the meal at approximately 08:00 hours (plus or minus 2 hours).

For all periods, investigator site personnel will administer a single oral dose of study intervention on Day 1 of each period with ambient temperature water to a total volume of approximately 240 mL. Administer study intervention according to the EDR.

Administration of study intervention(s) at the site will be performed by an appropriately qualified and trained member of the study staff as allowed by local, state, and institutional guidance.

Following administration of study intervention(s) at the site, participants will be observed by an appropriately qualified and trained member of the study staff. Appropriate medication and other supportive measures for management of a medical emergency will be available in accordance with local guidelines and institutional guidelines.

6.2. Preparation, Handling, Storage, and Accountability

1. The investigator or designee must confirm that appropriate conditions (eg, temperature) have been maintained during transit for all study interventions received and any discrepancies are reported and resolved before use of the study intervention.
2. Only participants enrolled in the study may receive study intervention and only authorized site staff may supply, prepare, and/or administer study intervention.
3. All study interventions must be stored in a secure, environmentally controlled, and monitored (manual or automated recording) area in accordance with the labeled storage conditions with access limited to the investigator and authorized site staff. At a minimum, daily minimum and maximum temperatures for all site storage locations must be documented and available upon request. Data for nonworking days must indicate the minimum and maximum temperatures since previously documented upon return to business.
4. Any excursions from the study intervention label storage conditions should be reported to Pfizer upon discovery along with actions taken. The site should actively pursue options for returning the study intervention to the labeled storage conditions, as soon as possible. Once an excursion is identified, the study intervention must be quarantined and not used until Pfizer provides permission to use the study intervention. Specific details regarding the excursion definition and information to report for each excursion will be provided to the site in the CRU procedures.
5. Any storage conditions stated in the SRSD will be superseded by the storage conditions stated on the label. See the EDR for storage conditions of the study intervention once prepared.
6. Study interventions should be stored in their original containers.
7. The investigator, institution, head of the medical institution (where applicable), or authorized site staff is responsible for study intervention accountability, reconciliation, and record maintenance (ie, receipt, reconciliation, and final disposition records), such as the IPAL or sponsor-approved equivalent. All study interventions will be accounted for using a study intervention accountability form/record.

8. Further guidance and information for the final disposition of unused study interventions are provided in the CRU's procedures. All destruction must be adequately documented. If destruction is authorized to take place at the investigator site, the investigator must ensure that the materials are destroyed in compliance with applicable environmental regulations, institutional policy, and any special instructions provided by Pfizer.

Upon identification of a product complaint, notify the sponsor within 1 business day of discovery.

6.2.1. Preparation and Dispensing

Within this protocol, preparation refers to the investigator site activities performed to make the study intervention ready for administration or dispensing to the participant by qualified staff. Dispensing is defined as the provision of study intervention, concomitant treatments, and accompanying information by qualified staff member(s) to a healthcare provider, participant, in accordance with this protocol. Local health authority regulations or investigator site guidelines may use alternative terms for these activities.

PF-07293893 and placebo oral dosing suspensions will be prepared in the CRU by 2 operators, 1 of whom is a pharmacist. Details of dose preparation will be given in a separate EDR. Prepared doses will be provided in unit dose containers and labeled in accordance with Pfizer regulations and the investigator site's labeling requirements.

PF-07293893 and placebo will be prepared by qualified unblinded site personnel according to the EDR. Blinded study intervention will be administered in a blinded fashion to the participant.

6.3. Assignment to Study Intervention

The investigator will assign participant numbers to the participants as they are screened for the study. Pfizer will provide a randomization schedule to the investigator and, in accordance with the randomization numbers, the participant will receive the study treatment regimen assigned to the corresponding randomization number.

6.4. Blinding

This is a site double-blind (sponsor unblinded) study.

6.4.1. Blinding of Participants

Participants will be blinded to their assigned study intervention.

6.4.2. Blinding of Site Personnel

Investigators and other site staff will be blinded to participants' assigned study intervention.

Participants will be assigned to receive study intervention according to the assigned treatment group from the randomization scheme. Investigators will remain blinded to each participant's assigned study intervention throughout the course of the study.

In order to maintain this blind, an otherwise uninvolved third party will be responsible for the preparation and dispensing of all study intervention and will endeavor to ensure that there are no differences in time taken to dispense or visual presentation, following randomization or dispensing. This third party will instruct the participant to avoid discussing the taste, dosing frequency, or packaging of the study intervention with the investigator.

In the event of a Quality Assurance audit, the auditor(s) will be allowed access to unblinded study intervention records at the site(s) to verify that randomization/dispensing has been done accurately.

CRU pharmacy staff responsible for preparing all study interventions will be unblinded. CRU site staff providing technical system support to pharmacy staff and supporting blinded laboratory data processes will be unblinded. These site staff providing system support will not be involved in any data collection or clinic floor activities.

6.4.3. Blinding of the Sponsor

As this is a sponsor-open study, the sponsor may conduct unblinded reviews of the data during the course of the study for the purpose of safety assessment, facilitating dose-escalation decisions, facilitating PK/PD modeling, and/or supporting clinical development. Unblinded results will be reviewed by a designated limited number of sponsor colleagues within the study team.

6.4.4. Sensitive Clinical Data

Sensitive clinical data are data collected in this study that have the potential to unblind a participant's treatment assignment. Access to sensitive clinical data will be restricted to authorized individuals until the study has been unblinded. The following data variables are considered sensitive clinical data:

- Study intervention assignment (PF-07293893 or Placebo)
- PF-07293893 plasma concentration (See [Section 8.5.1](#))
- Transporter biomarker(s) plasma concentration (See [Section 8.7.5](#))
- Any exploratory PD biomarkers (See [Section 8.7.2](#))

6.4.5. Breaking the Blind

The method for breaking the blind in this study will be manual. In case of an emergency, the investigator has the sole responsibility for determining if unblinding of a participant's treatment assignment is warranted. Participant safety must always be the first consideration in making such a determination. If the investigator decides that unblinding is warranted, the investigator should make every effort to contact the study medical monitor prior to unblinding a participant's treatment assignment unless this could delay further management

of the participant. If a participant's treatment assignment is unblinded, the sponsor must be notified within 24 hours after breaking the blind. When the blinding code is broken, the reason must be fully documented and entered on the CRF.

Blood specimens will be obtained from all participants for PK analysis to maintain the study blind at the investigator site. Only the investigator site staff and blinded study monitor, if assigned, will be blinded to study treatment. Other Pfizer personnel will be unblinded to participant treatments in order to permit real-time interpretation of the safety and PK data; and provide information necessary to potentially alter the dose -escalation sequence. The blinded study monitor, if assigned, will remain blinded to treatment until all monitoring for the study has been completed. Specimens from participants randomized to placebo will not be routinely analyzed. To minimize the potential for bias, treatment randomization information will be kept confidential by Pfizer unblinded personnel and will not be released to the blinded investigator or blinded investigator site personnel until the study database has been locked or the investigator requests unblinding for safety reasons.

6.5. Study Intervention Compliance

When the individual dose for a participant is prepared from a bulk supply, the preparation of the dose will be confirmed by a second qualified member of the study site staff.

When participants are dosed at the site, they will receive study intervention directly from the investigator or designee, under medical supervision. The date and time of each dose administered in the clinic will be recorded in the source documents and recorded in the CRF. The dose of study intervention and study participant identification will be confirmed at the time of dosing by a member of the study site staff other than the person administering the study intervention. Study site personnel will examine each participant's mouth to ensure that the study intervention was ingested.

6.6. Dose Modification

The decision to proceed to the next dose level of PF-07293893 (either an increase or a decrease) will be made by the study team and the investigator based on safety, tolerability, and preliminary PK data obtained in at least 6 participants (including at least 1 placebo participant) at the prior dose level. Safety data and PK data through at least 72 hours and 24 hours post-dose, respectively, will be reviewed. Cumulative safety and tolerability data from previous periods will also be reviewed.

The dosing schedule may also be adjusted to expand a dosing cohort to further evaluate safety and/or PK findings at a given dose level or to add cohorts to evaluate additional dose levels or repeat dose levels. The study procedures for these additional participant(s)/cohort(s) will be the same as that described for other study participants/cohorts.

Precautionary sentinel dosing will be used in periods where escalating doses of PF-07293893 will be evaluated and may be omitted when repeating a dose level or administering a lower dose level than previously evaluated. Two participants (1 receiving PF-07293893 and 1 receiving placebo) within a period will be dosed initially before the remaining participants of that period are dosed. Safety and tolerability data through at least 24 hours post-dose for the

PFIZER CONFIDENTIAL

CT02-GSOP Clinical Pharmacology Protocol Template (14 April 2023)

Page 42

sentinel participants will be reviewed prior to dosing the remaining participants of that period.

6.6.1. Dose Escalation and Stopping Rules

Dose escalation stopping rules will be used to determine whether the maximal tolerated dose has been attained. Dose escalation may be stopped if it is determined that the limits of safety and/or tolerability have been reached. This decision will be made after a discussion takes place between the sponsor study team and the investigator. The sponsor study team may not overrule the investigator's decision to stop dose escalation. If dose escalation is stopped because of any of these criteria, additional cohorts may receive the same or lower doses of the study intervention.

The dose escalation will be terminated based on the following criteria:

- If 50% or more of the participants receiving active drug at a given dose level (but not participants receiving placebo) develop similar clinically significant laboratory, ECG, or vital sign abnormalities, in the same organ class, indicating dose-limiting intolerance.
- Severe nonserious AEs, considered as, at least, possibly related to study intervention administration, in 2 participants at a given dose level (but not participants receiving placebo), independent of within or not within the same system organ class, indicating dose-limiting intolerance.
- Dosing will be paused for any SAE that occurs in a participant receiving active treatment until causality is fully assessed by the PI and sponsor. Dosing may resume if the SAE is determined to be not drug-related by the PI and sponsor. If the SAE is determined to be either drug-related or unknown, either dosing will cease or the SAE will be evaluated by the sponsor's protocol review committee (or similar review group), which is independent of the study team and investigators. If the protocol review committee determines that dosing may resume, a plan that mitigates risks to participants with the resumption of dosing will be implemented. Such a plan could include a revision of inclusion/exclusion criteria, repeating or reducing the dose, or adding appropriate safety monitoring.
- It is determined that the limit of safety and/or tolerability has been reached. This decision will be made following discussions between the study team and the investigator.
- Other findings that, at the discretion of the study team and investigator, indicate that dose escalation should be halted.
- If, at any dose level, the average exposure reaches or exceeds the PK stopping limits, total C_{max} of [REDACTED] ng/mL or total AUC_{24} of [REDACTED] ng·h/mL. In addition, individual PK data, including the maximum exposure observed in individual participants within a cohort will be considered alongside the mean exposures for the cohort. The dose

escalation will be stopped if individual maximum exposure in ≥ 2 participants reaches or exceeds the PK stopping limits, total C_{\max} of [REDACTED] ng/mL or total AUC_{24} of [REDACTED] ng•h/mL.

- If, based on the observed data, the group mean C_{\max} or AUC (based on total plasma concentration) of the next planned dose is projected to exceed the escalation limits, that dose will not be explored. Modified doses may be explored if they are not expected to exceed PK stopping criteria.

Progression to the next dose will occur if the last dose was well tolerated and after satisfactory review of the available safety and PK data.

6.7. Continued Access to Study Intervention After the End of the Study

No study intervention will be provided to participants at the end of their study participation.

6.8. Treatment of Overdose

For this study, any dose of PF-07293893 greater than 2000 mg within a 24-hour time period will be considered an overdose.

There is no specific treatment for an overdose.

In the event of an overdose, the investigator or treating physician should:

1. Contact the study medical monitor within 24 hours.
2. Closely monitor the participant for any AEs/SAEs and laboratory abnormalities as medically appropriate and follow up until resolution, stabilization, the event is otherwise explained, or the participant is lost to follow-up (as defined in [Section 7.3](#)).
3. Document the quantity of the excess dose as well as the duration of the overdose in the CRF.
4. Overdose is reportable to Pfizer Safety **only when associated with an SAE**.
5. Obtain a blood sample for PK analysis within 3 days from the date of the last dose of study intervention if requested by the study medical monitor (determined on a case by case basis).

Decisions regarding dose interruptions or modifications will be made by the investigator in consultation with the study medical monitor as needed based on the clinical evaluation of the participant.

6.9. Prior and Concomitant Therapy

Use of prescription or nonprescription drugs and dietary and herbal supplements are prohibited within 7 days or 5 half-lives (whichever is longer) prior to the first dose of study intervention through the last PK collection, with the [REDACTED]

CCI [REDACTED] which are prohibited within 14 days plus 5 half-lives prior to the first dose of study intervention.

A non-exhaustive list of **CCI** [REDACTED] is in [Appendix 9](#). Because this is not an all-inclusive list, site staff should consult with the sponsor or designee with any questions regarding potential DDI.

Limited use of nonprescription medications that are not believed to affect participant safety or the overall results of the study may be permitted on a case by case basis following approval by the sponsor. Acetaminophen/paracetamol may be used at doses of ≤ 1 g/day.

Females taking hormone replacement therapy may be eligible to participate in this study if they are willing to discontinue therapy at least 28 days prior to the first dose of study treatment and remain off hormonal therapy for the duration of the study.

All concomitant treatments taken during the study must be recorded with indication, daily dose, and start and stop dates of administration. All participants will be questioned about concomitant treatment at each clinic visit.

Treatments taken within 28 days before the first dose of study intervention will be documented as a prior treatment. Treatments taken after the first dose of study intervention will be documented as concomitant treatments.

6.9.1. Rescue Medicine

There is no rescue therapy to reverse the AEs observed with PF-07293893; standard medical supportive care must be provided to manage the AEs.

7. DISCONTINUATION OF STUDY INTERVENTION AND PARTICIPANT DISCONTINUATION/WITHDRAWAL

7.1. Discontinuation of Study Intervention

It may be necessary for a participant to permanently discontinue study intervention. Reasons for permanent discontinuation of study intervention include the following: AEs, or some other (administrative) reasons.

Discontinuation of study intervention does not represent withdrawal from the study. If study intervention is permanently discontinued, the participant should remain in the study to be evaluated for ongoing AEs. See the [SoA](#) for data to be collected at the time of discontinuation of study intervention and follow-up for any further evaluations that need to be completed.

In the event of discontinuation of study intervention, it must be documented on the appropriate CRF/in the medical records whether the participant is discontinuing further receipt of study intervention or also from study procedures, further study follow-up, and/or future collection of additional information.

7.1.1. Potential Cases of Acute Kidney Injury

Participants exposed to IMP demonstrating transient or sustained increase in Screat (with decrease in Screat-based eGFR or eCrCL) require expedited evaluation to differentiate AKI from DICI. DICI is defined as transporter-mediated effect related to altered renal tubular creatinine handling without histological injury.

AKI may be due to one or more types of injury, including DIKI. Differentiation of DIKI from other causes of AKI and from DICI may require clinical, radiographic, histopathologic, and laboratory assessments, as well as nephrology consultation.

Follow-up Assessments

The participant should return to the site for evaluation as soon as possible, preferably within 48 hours of awareness of the abnormal results.

Evaluation should include physical examination, laboratory tests, detailed medical and surgical history, review of all medications (including recreational drugs and supplements [herbal]), family history, sexual history, travel history, blood transfusion, and potential occupational exposure to chemicals.

Laboratory assessments should include simultaneous serum cystatin C (Scys) and serum creatinine (Screat) tests. Estimates of eGFR, eCrCL and Screat-based eGFR and combined Screat-Scys-based eGFR should also be derived using the appropriate equation described in [Appendix 7](#).

Assessments of urine albumin-to-creatinine ratio or urine volume may also be performed as appropriate.

Differentiating Acute Kidney Injury from DICI

A confirmed Screat increase is defined as:

- (i) ≥ 0.3 mg/dL (≥ 26.5 $\mu\text{mol/L}$) within 48 hours OR
- (ii) confirmed Screat increase ≥ 1.5 times baseline (known or suspected to have occurred within the prior 7 days).

Based on the assessments performed, suspected AKI (including DIKI) may be differentiated from DICI as follows.

Adult participants

	AKI (including DIKI) Any one of the below	DICI
Scys & Screat	Simultaneous, confirmed serum cystatin C (Scys) increase and confirmed Screat increase	Confirmed Screat increase without confirmed increase in reflex Scys AND

	AKI (including DIKI) Any one of the below	DICI
eGFR	Decrease in Screat-based eGFR and combined Screat-Scys-based eGFR (when available)	Confirmed Screat-based eGFR decrease without confirmed combined Screat-Scys-based eGFR decrease.
Albuminuria or proteinuria	Confirmed albuminuria increase (see Appendix 7 for Grades A1 to A3 quantitation)	
Urine volume	Urine volume <0.5 mL/kg/h for 6 consecutive hours	

Regardless of the presence or absence of increase in Screat, DIKI and other causes of AKI may be suspected if either there is new-onset or worsening albuminuria or proteinuria are detected.

All confirmed cases of clinically relevant decrease in kidney function should be considered potential cases of DIKI if no other reason for the kidney function abnormalities has been found.

7.1.2. ECG Changes

A participant who meets either bulleted criteria based on the average of triplicate ECG readings will be withdrawn from the study intervention.

- QTcF >500 ms.
- Change from baseline: QTcF >60 ms.

If a clinically significant finding is identified (including, but not limited to, changes from baseline in QTcF after enrollment), the investigator or qualified designee will determine if the participant can continue in the study and if any change in participant management is needed. This review of the ECG printed at the time of collection must be documented. Any new clinically relevant finding should be reported as an AE.

7.1.3. COVID-19

If a participant has COVID-19 during the study, this should be reported as an AE or SAE (as appropriate) and appropriate medical intervention provided. Study treatment should continue unless the investigator/treating physician is concerned about the safety of the participant, in which case temporary or permanent discontinuation may be required.

It is recommended that the investigator discuss temporary or permanent discontinuation of study intervention with the study medical monitor.

7.2. Participant Discontinuation/Withdrawal From the Study

A participant may withdraw from the study at any time at their own request. Reasons for discontinuation from the study include the following:

- Refused further study procedure;
- Lost to follow-up
- Death;
- Study terminated by sponsor;
- Discretion of the investigator or sponsor for safety or behavioral reasons, or the inability of the participant to comply with the protocol required schedule of study visits or procedures.

At the time of discontinuing from the study, if possible, an early discontinuation visit should be conducted. See the [SoA](#) for assessments to be collected at the time of study discontinuation and follow-up and for any further evaluations that need to be completed.

The early discontinuation visit applies only to participants who are enrolled/randomized and then are prematurely withdrawn from the study. Participants should be questioned regarding their reason for withdrawal.

The participant will be permanently discontinued from the study intervention and the study at that time.

If a participant withdraws from the study, they may request destruction of any remaining samples taken and not tested, and the investigator must document any such requests in the site study records and notify the sponsor accordingly.

If the participant withdraws from the study and also withdraws consent (see [Section 7.2.1](#) for disclosure of future information, no further evaluations will be performed and no additional data will be collected. The sponsor may retain and continue to use any data collected before such withdrawal of consent.

7.2.1. Withdrawal of Consent

Participants who request to discontinue receipt of study intervention will remain in the study and must continue to be followed for protocol specified- follow-up procedures. The only exception to this is when a participant specifically withdraws consent for any further contact with them or persons previously authorized by the participant to provide this information. Participants should notify the investigator in writing of the decision to withdraw consent from future follow-up, whenever possible. The withdrawal of consent should be explained in detail in the medical records by the investigator, as to whether the withdrawal is only from further receipt of study intervention or also from study procedures and/or posttreatment study follow-up-, and entered on the appropriate CRF page. In the event that vital status (whether

the participant is alive or dead) is being measured, publicly available information should be used to determine vital status only as appropriately directed in accordance with local law.

7.3. Lost to Follow-Up

A participant will be considered lost to follow-up if the participant repeatedly fails to return for scheduled visits and is unable to be contacted by the study site.

The following actions must be taken if a participant fails to return to the clinic for a required study visit:

- The site must attempt to contact the participant and reschedule the missed visit as soon as possible. Counsel the participant on the importance of maintaining the assigned visit schedule and ascertain whether the participant wishes to and/or should continue in the study;
- Before a participant is deemed lost to follow-up, the investigator or designee must make every effort to regain contact with the participant (where possible, 3 telephone calls and, if necessary, a certified letter to the participant's last known mailing address or local equivalent methods). These contact attempts should be documented in the participant's medical record;
- Should the participant continue to be unreachable, the participant will be considered to have withdrawn from the study.

8. STUDY ASSESSMENTS AND PROCEDURES

8.1. Administrative Procedures

The investigator (or an appropriate delegate at the investigator site) must obtain a signed and dated ICD before performing any study specific- procedures.

Study procedures and their timing are summarized in the [SoA](#). Protocol waivers or exemptions are not allowed.

Adherence to the study design requirements, including those specified in the [SoA](#), is essential and required for study conduct.

All screening evaluations must be completed and reviewed to confirm that potential participants meet all eligibility criteria. The investigator will maintain a screening log to record details of all participants screened and to confirm eligibility or record reasons for screening failure, as applicable.

Participants will be screened within 28 days prior to administration of the study intervention to confirm that they meet the study population criteria for the study. If the time between screening and dosing exceeds 28 days as a result of unexpected delays (eg, delayed drug shipment), then participants do not require rescreening if the laboratory results obtained prior to first dose administration meet eligibility criteria.

A participant who qualified for this protocol but did not enroll from an earlier cohort/group may be used in a subsequent cohort/group without rescreening, provided laboratory results obtained prior to the first dose administration meet eligibility criteria for this study. In addition, other clinical assessments or specimen collections, eg, retained research samples, may not need to be repeated, as appropriate.

Every effort should be made to ensure that protocol required- tests and procedures are completed as described. However, it is anticipated that from time to time there may be circumstances outside the control of the investigator that make it unfeasible to perform the test. In these cases, the investigator must take all steps necessary to ensure the safety and well-being of the participant. When a protocol required- test cannot be performed, the investigator will document the reason for the missed test and any corrective and preventive actions that they have taken to ensure that required processes are adhered to as soon as possible. The study team must be informed of these incidents in a timely manner.

Safety, laboratory, or analyte results that have been collected for the purposes of this study and could unblind the study will not be reported to investigative sites or other blinded personnel until the study has been unblinded.

If an IV catheter is utilized for blood sample collections, ECGs and vital sign assessments (pulse rate and BP) should be collected prior to the insertion of the catheter.

For samples being collected and shipped, detailed collection, processing, storage, and shipment instructions and contact information will be provided to the investigator site prior to initiation of the study.

The total blood sampling volume for individual participants in this study is approximately 480 mL. The actual collection times of blood sampling may change. Additional blood samples may be taken for safety assessments at times specified by Pfizer, provided the total volume taken during the study does not exceed 550 mL during any period of 56 consecutive days.

To prepare for study participation, participants will be instructed on the information in the [Lifestyle Considerations](#) and [Concomitant Therapy](#) sections of the protocol.

8.2. Efficacy Assessments

Efficacy parameters are not evaluated in this study.

8.3. Safety Assessments

Planned time points for all safety assessments are provided in the [SoA](#). Unscheduled safety measurements may be obtained at any time during the study to assess any perceived safety issues.

8.3.1. Physical Examinations

Physical examinations are to be performed at the nominal timepoints specified in the [SoA](#). Additional physical examinations will be permitted, as necessary, to ensure appropriate collection of safety data.

A complete physical examination will include, at a minimum, head, ears, eyes, nose, mouth, skin, heart and lung examinations, lymph nodes, and gastrointestinal, musculoskeletal, and neurological systems.

A brief physical examination will include, at a minimum, assessments of general appearance, the respiratory and cardiovascular systems, and participant-reported symptoms.

Physical examinations may be conducted by a physician, trained physician's assistant, or nurse practitioner as acceptable according to local regulation.

Height and weight will also be measured and recorded as per the [SoA](#). For measuring weight, a scale with appropriate range and resolution is used and must be placed on a stable, flat surface. Participants must remove shoes, bulky layers of clothing, and jackets so that only light clothing remains. They must also remove the contents of their pockets and remain still during measurement of weight.

Physical examination findings collected during the study will be considered source record and will not be required to be reported, unless otherwise noted. Any untoward physical examination findings that are identified during the active collection period and meet the definition of an AE or SAE ([Appendix 3](#)) must be reported according to the processes in [Sections 8.4.1 to 8.4.3](#).

8.3.2. Neurological Examination

Neurological examinations may be conducted by a physician, trained physician's assistant, or nurse practitioner as acceptable according to local regulation at the nominal time points specified in the [SoA](#). The neurological exam will consist of assessment of higher cortical function, the cranial nerves, motor function, deep tendon reflexes, sensory exam, and coordination and gait. Additional neurological examinations that are outside of [SoA](#) (eg, to evaluate an AE) may be conducted at the discretion of investigator. All neurological exams should be done to the extent needed to assess the participant for any potential changes in neurological status, as determined by the investigator (or designee). Changes in the timing or addition of timepoints for the neurological examinations may occur based on emerging data.

8.3.3. Vital Signs

8.3.3.1. Blood Pressure and Pulse Rate

Supine BP will be measured with the participant's arm supported at the level of the heart, and recorded to the nearest mm Hg after approximately 5 minutes of rest. The same arm (preferably the dominant arm) will be used throughout the study. Participants should be instructed not to speak during measurements. When triplicate measurements of supine BP or pulse rate are required per [SoA](#), measurements should be collected 2-4 minutes apart.

The same properly sized and calibrated BP cuff will be used to measure BP each time. The use of an automated device for measuring BP and pulse rate is acceptable; however, when done manually, pulse rate will be measured in the brachial/radial artery for at least 30 seconds. When the timing of these measurements coincides with a blood collection, BP and pulse rate should be obtained prior to the nominal time of the blood collection.

Additional collection times, or changes to collection times, of BP and pulse rate will be permitted, as necessary, to ensure appropriate collection of safety data.

Any untoward vital sign findings that are identified during the active collection period and meet the definition of an AE or SAE ([Appendix 3](#)) must be reported according to the processes in [Sections 8.4.1 to 8.4.3](#).

8.3.3.2. Respiratory Rate

Respiratory rate will be measured after approximately 5 minutes of rest in a supine position by observing and counting the respirations of the participant for 30 seconds and multiplying by 2. When BP is to be taken at the same time, respiration measurement will be done during the 5 minutes of rest and before BP measurement.

8.3.3.3. Temperature

Temperature will be measured orally. No eating, drinking, or smoking is allowed for 15 minutes prior to the measurement.

8.3.4. Electrocardiograms

Standard 12-lead ECGs will be collected at times specified in the [SoA](#) section of this protocol using an ECG system that automatically calculates the HR and measures PR, QT, QTcF, and QRS intervals. All scheduled ECGs should be performed after the participant has rested quietly for at least 5 minutes in a supine position.

Triplicate 12-lead ECGs (as specified in the [SoA](#)) will be obtained approximately 2 to 4 minutes apart; the average of the triplicate ECG measurements collected at -1.0, -0.5, and 0 hours pre-dose on Day 1 of each period will serve as each participant's baseline QTcF value for that period.

To ensure safety of the participants, a qualified individual at the investigator site will make comparisons to baseline measurements. Additional ECG monitoring will occur if a) the mean value from the triplicate measurements for any post-dose QTcF interval is increased by ≥ 60 ms from the baseline **and** is >450 ms; or b) an absolute QT value is ≥ 500 ms for any scheduled ECG. If either of these conditions occurs, then a single ECG measurement must be repeated at least hourly until QTcF values from 2 successive ECGs fall below the threshold value that triggered the repeat measurement.

For single ECG collections, additional ECG monitoring will occur if a) a postdose QTcF interval is increased by ≥ 60 ms from the baseline **and** is >450 ms; or b) an absolute QT value is ≥ 500 ms for any scheduled ECG. If either of these conditions occurs, then 2 additional

ECGs will be collected approximately 2 –4 minutes apart to confirm the original measurement. If the QTcF values from these repeated ECGs remain above the threshold value, then a single ECG must be repeated at least hourly until QTc values from 2 successive ECGs fall below the threshold value that triggered the repeat measurement.

If a) a post-dose QTcF interval remains ≥ 60 ms from the baseline **and** is >450 ms; or b) an absolute QT value is ≥ 500 ms for any scheduled ECG for greater than 4 hours (or sooner, at the discretion of the investigator); or c) QTcF value get progressively longer, the participant should undergo continuous ECG monitoring. A cardiologist should be consulted if QTcF values do not return to less than the criteria listed above after 8 hours of monitoring (or sooner, at the discretion of the investigator).

In some cases, it may be appropriate to repeat abnormal ECGs to rule out improper lead placement as contributing to the ECG abnormality. It is important that leads be placed in the same positions each time in order to achieve precise ECG recordings. If a machine-read QTc value is prolonged, as defined above, repeat measurements may not be necessary if a qualified medical provider's interpretation determines that the QTcF values are in the acceptable range.

ECG values of potential clinical concern are listed in [Appendix 8](#).

8.3.4.1. Continuous Cardiac Monitoring by Telemetry

All abnormal rhythms will be recorded and reviewed by the study physician for the presence of rhythms of potential clinical concern. The time, duration, and description of the clinically significant event will be recorded in the CRF. In addition, a printed record of the tracing(s) of the clinically significant rhythm(s) will be made and retained with other source documents.

Telemetry should be collected using a centralized system that also allows for the storage and advanced analysis of all recorded data in order to preserve important events for future evaluations. Holter monitoring should not be used in parallel with continuous telemetry, unless it is the only means of data storage available at the investigator site, or verifiable arrhythmia quantification is required. To establish a baseline, telemetry should be recorded for at least 2 hours before dosing in Period 1. This may be done immediately prior to dosing or at some 2-hour continuous interval in the 24 hours prior to dosing, as long as the recording is performed when the participant is awake. Post-dose telemetry will continue for 8 hours after dosing. Telemetry may be stopped within a reasonably short period of time prior to dosing, in order to avoid interference with study operations conducted immediately before dosing. However, it is expected that the telemetry leads will be in place and the system connected prior to dosing.

8.3.5. Clinical Safety Laboratory Assessments

See [Appendix 2](#) for the list of clinical safety laboratory tests to be performed and the [SoA](#) for the timing and frequency. All protocol required laboratory assessments, as defined in [Appendix 2](#), must be conducted in accordance with the laboratory manual and the [SoA](#). Unscheduled clinical laboratory measurements may be obtained at any time during the study to assess any perceived safety issues.

The investigator must review the laboratory report, document this review, and record any clinically significant changes occurring during the study in the AE section of the CRF. Clinically significant abnormal laboratory test findings are those that are not associated with the underlying disease, unless judged by the investigator to be more severe than expected for the participant's condition.

All laboratory tests with values considered clinically significant and abnormal during participation in the study or within 28 days after the last dose of study intervention should be repeated until the values return to normal or baseline or are no longer considered clinically significant by the investigator or study medical monitor.

If such values do not return to normal/baseline within a period of time judged reasonable by the investigator, the etiology should be identified and the sponsor notified.

See [Appendix 6](#) for suggested actions and follow-up assessments in the event of potential DILI.

See [Appendix 7](#) for instructions for laboratory testing to monitor kidney function and reporting laboratory test abnormalities.

Participants may undergo random urine drug testing at the discretion of the investigator. Drug testing conducted prior to dosing must be negative for participants to receive study intervention.

8.3.6. COVID-19 Specific Assessments

Participants will be tested for COVID-19 infection per CRU procedures.

8.4. Adverse Events, Serious Adverse Events, and Other Safety Reporting

The definitions of an AE and an SAE can be found in [Appendix 3](#).

AEs may arise from symptoms or other complaints reported to the investigator by the participant (or, when appropriate, by a caregiver, surrogate, or the participant's legally authorized representative), or they may arise from clinical findings of the investigator or other healthcare providers (clinical signs, test results, etc).

The investigator and any qualified designees are responsible for detecting, documenting, and recording events that meet the definition of an AE or SAE and remain responsible to pursue and obtain adequate information both to determine the outcome and to assess whether the event meets the criteria for classification as an SAE or caused the participant to discontinue the study (see [Section 7.1](#)).

During the active collection period as described in [Section 8.4.1](#), each participant will be questioned about the occurrence of AEs in a nonleading manner.

In addition, the investigator may be requested by Pfizer Safety to obtain specific follow-up information in an expedited fashion.

8.4.1. Time Period and Frequency for Collecting AE and SAE Information

The time period for actively eliciting and collecting AEs and SAEs (“active collection period”) for each participant begins from the time the participant provides informed consent, which is obtained before undergoing any study-related procedure and/or receiving study intervention), through and including a minimum of 28 calendar days, except as indicated below, after the last administration of the study intervention.

Follow-up by the investigator continues throughout the active collection period and until the AE or SAE or its sequelae resolve or stabilize at a level acceptable to the investigator.

When a clinically important AE remains ongoing at the end of the active collection period, follow-up by the investigator continues until the AE or SAE or its sequelae resolve or stabilize at a level acceptable to the investigator and Pfizer concurs with that assessment.

For participants who are screen failures, the active collection period ends when screen failure status is determined.

If the participant withdraws from the study and also withdraws consent for the collection of future information, the active collection period ends when consent is withdrawn.

If a participant permanently discontinues or temporarily discontinues study intervention because of an AE or SAE, the AE or SAE must be recorded on the CRF and the SAE reported using the CT SAE Report Form.

Investigators are not obligated to actively seek information on AEs or SAEs after the participant has concluded study participation. However, if the investigator learns of any SAE, including a death, at any time after a participant has concluded study participation, and they consider the event to be reasonably related to the study intervention, the investigator must promptly report the SAE to Pfizer using the CT SAE Report Form/ PSSA.

8.4.1.1. Reporting SAEs to Pfizer Safety

All SAEs occurring in a participant during the active collection period as described in [Section 8.4.1](#) are reported to Pfizer Safety on the CT SAE Report Form/PSSA immediately upon awareness and under no circumstance should this exceed 24 hours, as indicated in [Appendix 3](#). The investigator will submit any updated SAE data to the sponsor within 24 hours of its being available.

8.4.1.2. Recording Nonserious AEs and SAEs on the CRF

All nonserious AEs and SAEs occurring in a participant during the active collection period, which begins after obtaining informed consent as described in [Section 8.4.1](#), will be recorded on the AE section of the CRF.

The investigator is to record on the CRF all directly observed and all spontaneously reported AEs and SAEs reported by the participant.

As part of ongoing safety reviews conducted by the sponsor, any nonserious AE that is determined by the sponsor to be serious will be reported by the sponsor as an SAE. To assist in the determination of case seriousness, further information may be requested from the investigator to provide clarity and understanding of the event in the context of the clinical study.

Reporting of AEs and SAEs for participants who fail screening are subject to the CRF requirements as described in [Section 5.4](#).

8.4.2. Method of Detecting AEs and SAEs

The method of recording, evaluating, and assessing causality of AEs and SAEs and the procedures for completing and transmitting SAE reports are provided in [Appendix 3](#).

Care will be taken not to introduce bias when detecting AEs and/or SAEs. Open-ended and nonleading verbal questioning of the participant is the preferred method to inquire about AE occurrences.

8.4.3. Follow-Up of AEs and SAEs

After the initial AE or SAE report, the investigator is required to proactively follow each participant at subsequent visits/contacts. For each event, the investigator must pursue and obtain adequate information until resolution, stabilization, the event is otherwise explained, or the participant is lost to follow-up (as defined in [Section 7.3](#)).

In general, follow-up information will include a description of the event in sufficient detail to allow for a complete medical assessment of the case and independent determination of possible causality. Any information relevant to the event, such as concomitant medications and illnesses, must be provided. In the case of a participant death, a summary of available autopsy findings must be submitted as soon as possible to Pfizer Safety.

Further information on follow-up procedures is provided in [Appendix 3](#).

8.4.4. Regulatory Reporting Requirements for SAEs

Prompt notification by the investigator to the sponsor of an SAE is essential so that legal obligations and ethical responsibilities toward the safety of participants and the safety of a study intervention under clinical investigation are met.

The sponsor has a legal responsibility to notify both the local regulatory authority and other regulatory agencies about the safety of a study intervention under clinical investigation. The sponsor will comply with country -specific regulatory requirements relating to safety reporting to the regulatory authority, IRBs/ECs, and investigators.

Investigator safety reports must be prepared for SUSARs according to local regulatory requirements and sponsor policy and forwarded to investigators as necessary.

An investigator who receives SUSARs or other specific safety information (eg, summary or listing of SAEs) from the sponsor will review and then file it along with the SRSD(s) for the study and will notify the IRB/EC, if appropriate according to local requirements.

8.4.5. Environmental Exposure, Exposure During Pregnancy or Breastfeeding, and Occupational Exposure

Environmental exposure, occurs when a person not enrolled in the study as a participant receives unplanned direct contact with or exposure to the study intervention. Such exposure may or may not lead to the occurrence of an AE or SAE. Persons at risk for environmental exposure include healthcare providers, family members, and others who may be exposed. An environmental exposure may include EDP, EDB, and occupational exposure.

Any such exposures to the study intervention under study are reportable to Pfizer Safety within 24 hours of investigator awareness.

8.4.5.1. Exposure During Pregnancy

An EDP occurs if:

- A female participant is found to be pregnant while receiving or after discontinuing study intervention.
- A male participant who is receiving or has discontinued study intervention inseminates a female partner.
- A female nonparticipant is found to be pregnant while being exposed or having been exposed to study intervention because of environmental exposure. Below are examples of environmental EDP:
 - A female family member or healthcare provider reports that she is pregnant after having been exposed to the study intervention by ingestion, inhalation, or skin contact.
 - A male family member or healthcare provider who has been exposed to the study intervention by ingestion, inhalation, or skin contact then inseminates his female partner prior to or around the time of conception.

The investigator must report EDP to Pfizer Safety within 24 hours of the investigator's awareness, irrespective of whether an SAE has occurred. The initial information submitted should include the anticipated date of delivery (see below for information related to termination of pregnancy).

- If EDP occurs in a participant or participant's partner, the investigator must report this information to Pfizer Safety using the CT SAE Report Form and EDP Supplemental Form *or* via PSSA regardless of whether an SAE has occurred. Details of the pregnancy will be collected after the start of study intervention and until 28 days after the last dose.

- If EDP occurs in the setting of environmental exposure, the investigator must report information to Pfizer Safety using the CT SAE Report Form and EDP Supplemental Form *or* via PSSA. Since the exposure information does not pertain to the participant enrolled in the study, the information is not recorded on a CRF; however, a copy of the completed report is maintained in the investigator site file.

Follow-up is conducted to obtain general information on the pregnancy and its outcome for all EDP reports with an unknown outcome. The investigator will follow the pregnancy until completion (or until pregnancy termination) and notify Pfizer Safety of the outcome as a follow-up to the initial report. In the case of a live birth, the structural integrity of the neonate can be assessed at the time of birth. In the event of a termination, the reason(s) for termination should be specified and, if clinically possible, the structural integrity of the terminated fetus should be assessed by gross visual inspection (unless pre-procedure test findings are conclusive for a congenital anomaly and the findings are reported).

Abnormal pregnancy outcomes are considered SAEs. If the outcome of the pregnancy meets the criteria for an SAE (ie, ectopic pregnancy, spontaneous abortion, intrauterine fetal demise, neonatal death, or congenital anomaly in a live-born baby, a terminated fetus, an intrauterine fetal demise, or a neonatal death), the investigator should follow the procedures for reporting SAEs. Additional information about pregnancy outcomes that are reported to Pfizer Safety as SAEs follows:

- Spontaneous abortion including miscarriage and missed abortion should be reported as an SAE;
- Neonatal deaths that occur within 1 month of birth should be reported, without regard to causality, as SAEs. In addition, infant deaths after 1 month should be reported as SAEs when the investigator assesses the infant death as related or possibly related to exposure to the study intervention.

Additional information regarding the EDP may be requested by the sponsor. Further follow-up of birth outcomes will be handled on a case-by-case basis (eg, follow-up on preterm infants to identify developmental delays). In the case of paternal exposure, the investigator will provide the participant with the Pregnant Partner Release of Information Form to deliver to his partner. The investigator must document in the source documents that the participant was given the Pregnant Partner Release of Information Form to provide to his partner.

8.4.5.2. Exposure During Breastfeeding

An EDB occurs if:

- A female participant is found to be breastfeeding while receiving or after discontinuing study intervention.
- A female nonparticipant is found to be breastfeeding while being exposed or having been exposed to study intervention (ie, environmental exposure). An example of

environmental EDB is a female family member or healthcare provider who reports that she is breastfeeding after having been exposed to the study intervention by ingestion, inhalation, or skin contact.

The investigator must report EDB to Pfizer Safety within 24 hours of the investigator's awareness, irrespective of whether an SAE has occurred. The information must be reported using the CT SAE Report Form *or* via PSSA. When EDB occurs in the setting of environmental exposure, the exposure information does not pertain to the participant enrolled in the study, so the information is not recorded on a CRF. However, a copy of the completed report is maintained in the investigator site file.

An EDB report is not created when a Pfizer drug specifically approved for use in breastfeeding women (eg, vitamins) is administered in accordance with authorized use. However, if the infant experiences an SAE associated with such a drug, the SAE is reported together with the EDB.

8.4.5.3. Occupational Exposure

The investigator must report any instance of occupational exposure to Pfizer Safety within 24 hours of the investigator's awareness using the CT SAE Report Form *or* via PSSA regardless of whether there is an associated SAE. Since the information about the occupational exposure does not pertain to a participant enrolled in the study, the information is not recorded on a CRF; however, a copy of the completed report is maintained in the investigator site file.

8.4.6. Cardiovascular and Death Events

Not applicable.

8.4.7. Disease-Related Events and/or Disease-Related Outcomes Not Qualifying as AEs or SAEs

Not applicable.

8.4.8. Adverse Events of Special Interest

Not applicable.

8.4.8.1. Lack of Efficacy

This section is not applicable because efficacy is not expected in the study population.

8.4.9. Medical Device Deficiencies

Not applicable.

8.4.10. Medication Errors

Medication errors may result from the administration or consumption of the study intervention by the wrong participant, or at the wrong time, or at the wrong dosage strength.

Medication errors are recorded and reported as follows:

Recorded on the Medication Error Page of the CRF	Recorded on the Adverse Event Page of the CRF	Reported on the CT SAE Report Form/PSSA to Pfizer Safety Within 24 Hours of Awareness
All (regardless of whether associated with an AE)	Any AE or SAE associated with the medication error	Only if associated with an SAE

Medication errors include:

- Medication errors involving participant exposure to the study intervention;
- Potential medication errors or uses outside of what is foreseen in the protocol that do or do not involve the study participant.
- The administration of expired study intervention;
- The administration of an incorrect study intervention;
- The administration of an incorrect dosage;
- The administration of study intervention that has undergone temperature excursion from the specified storage range, unless it is determined by the sponsor that the study intervention under question is acceptable for use.

Whether or not the medication error is accompanied by an AE, as determined by the investigator, such medication errors occurring to a study participant are recorded on the medication error page of the CRF, which is a specific version of the AE page and, if applicable, any associated serious and nonserious AE(s), are recorded on the AE page of the CRF.

In the event of a medication dosing error, the sponsor should be notified within 24 hours.

Medication errors should be reported to Pfizer Safety within 24 hours on a CT SAE Report Form/ PSSA **only when associated with an SAE**.

8.5. Pharmacokinetics

8.5.1. Plasma for Analysis of PF-07293893 Concentration

Blood samples of approximately 3 mL, to provide approximately 1.2 mL plasma, will be collected for measurement of plasma concentrations of PF-07293893 into appropriately labeled tubes containing K₂EDTA as specified in the [SoA](#). Instructions for the collection including any potential additive information, processing, aliquoting, handling, storage, and shipment of biological samples will be provided in the laboratory manual or by the sponsor. The actual date and time (24-hour clock time) of each sample will be recorded.

All efforts will be made to obtain the samples at the exact nominal time relative to dosing. Collection of samples up to and including 10 hours after dose administration that are obtained within 10% of the nominal time relative to dosing (eg, within 6 minutes of a 60-minute sample) will not be captured as a protocol deviation, as long as the exact time of the collection is noted on the source document and the CRF. Collection of samples more than 10 hours after dose administration that are obtained ≤ 1 hour away from the nominal time relative to dosing will not be captured as a protocol deviation, as long as the exact time of the collection is noted on the source document and the CRF. This protocol deviation window does not apply to samples to be collected more than 10 hours after dose administration at outpatient/follow-up visits with visit windows.

Samples will be used to evaluate the PK of PF-07293893. Samples collected for analyses of PF-07293893 plasma concentration may also be used to evaluate safety or efficacy aspects related to concerns arising during or after the study, for metabolite identification and/or evaluation of the bioanalytical method, or for other internal exploratory purposes. The exploratory results may not be reported in the CSR.

Genetic analyses will not be performed on these PK plasma samples unless consent for this was included in the informed consent. Participant confidentiality will be maintained.

Samples collected for measurement of plasma concentrations of PF-07293893 will be analyzed using a validated analytical method in compliance with applicable SOPs. Potential metabolites may be analyzed with either validated or exploratory methods.

The PK samples must be processed and shipped as indicated in the instructions provided to the investigator site to maintain sample integrity. Any deviations from the PK sample handling procedure (eg, sample collection and processing steps, interim storage or shipping conditions), including any actions taken, must be documented and reported to the sponsor. On a case-by-case basis, the sponsor may make a determination as to whether sample integrity has been compromised.

Drug concentration information that may unblind the study will not be reported to investigator sites or blinded personnel until the study has been unblinded.

Any changes in the timing or addition of time points for any planned study assessments must be documented and approved by the relevant study team member and then archived in the sponsor and site study files, but will not constitute a protocol amendment. The IRB/EC will be informed of any safety issues that require alteration of the safety monitoring scheme or amendment of the ICD.

8.6. Genetics

8.6.1. Specified Genetics

A 4 mL blood PGx sample for DNA isolation will be collected as specified in the [SoA](#). DNA samples may be analyzed for evaluation of genetic variants associated with variation in PK, biomarker response, or to explore AEs should these be observed.

See [Appendix 5](#) for information regarding genetic research. Details on processes for collection and shipment of these samples can be found in the lab manual and other supporting documentation.

8.6.2. Retained Research Samples for Genetics

Retained research samples for genetics will not be collected in this study.

8.7. Biomarkers

8.7.1. Specified Gene Expression (RNA) Research

Specified gene expression (RNA) research is not included in this study.

8.7.2. Specified Protein Research

A 4 mL blood sample will be collected in a red-top serum venous blood collection tube (no serum separators) at the timepoints outlined in the [SoA](#).

Serum samples may be used for exploratory analysis of circulatory biomarkers of AMPK γ 3 activation and/or to understand the time-dependent profile of circulatory biomarker changes following PF-07293893 treatment. Residual samples may also be used to analyze non-drug metabolites in response to study intervention.

8.7.3. Specified Metabolomic Research

Specified metabolomic research is not included in this study.

8.7.4. Retained Research Samples for Biomarkers

Retained research samples for biomarkers will not be collected in this study.

8.7.5. Plasma for Analysis of Biomarker(s) of Transporter Activity

A 3 mL blood sample to provide approximately 1.2 mL of plasma, will be collected into appropriately labeled amber colored tubes containing K₂EDTA for measurement of plasma biomarker(s), as specified in the [SoA](#).

Further instructions for the collection, handling, processing, storage, and shipment of biological samples will be provided in the laboratory manual or by the sponsor. The actual date and time (24-hour clock time) of each sample will be recorded.

Plasma samples collected for biomarker(s) may also be used to evaluate safety or efficacy or PK aspects related to concerns arising during or after the study, for metabolite identification and/or evaluation of the bioanalytical method, or for the measurement of PK biomarkers or for other internal exploratory purposes.

All efforts will be made to obtain the samples at the exact nominal time relative to dosing. Collection of samples up to and including 10 hours after dose administration that are obtained within 10% of the nominal time relative to dosing (eg, within 6 minutes of a 60-minute sample) will not be captured as a protocol deviation, as long as the exact time of

the collection is noted on the source document and the CRF. Collection of samples more than 10 hours after dose administration that are obtained ≤ 1 hour away from the nominal time relative to dosing will not be captured as a protocol deviation, as long as the exact time of the collection is noted on the source document and the CRF. This protocol deviation window does not apply to samples to be collected more than 10 hours after dose administration at outpatient/follow-up visits with visit windows.

8.8. Immunogenicity Assessments

Immunogenicity assessments are not included in this study.

8.9. Health Economics

Health economics/medical resource utilization and health economics parameters are not evaluated in this study.

9. STATISTICAL CONSIDERATIONS

Detailed methodology for summary and statistical analyses of the data collected in this study is outlined here and further detailed in the SAP, which will be maintained by the sponsor. The SAP may modify what is outlined in the protocol where appropriate; however, any major modifications of the primary endpoint definitions or their analyses will also be reflected in a protocol amendment.

9.1. Statistical Hypothesis

No formal statistical hypothesis testing will be performed in this study.

9.2. Analysis Sets

For purposes of analysis, the following analysis sets are defined:

Participant Analysis Set	Description
Enrolled	“Enrolled” means a participant’s agreement to participate in a clinical study following completion of the informed consent process and randomization to study intervention.
Safety analysis set	All participants randomly assigned to study intervention and who take at least 1 dose of study intervention. Participants will be analyzed according to the study intervention they actually received.
PK Concentration Set	All participants randomly assigned to study intervention and who receive at least 1 dose of study intervention and in whom at least 1 plasma concentration value is reported.
PK Parameter Set	All participants randomly assigned to study intervention and who receive at least 1 dose of study intervention and have at least 1 of the PK parameters of interest calculated.

9.3. Statistical Analyses

The SAP will be developed and finalized before any analyses are performed and will describe the analyses and procedures for accounting for missing, unused, and spurious data. Briefly, for the analysis of the primary endpoint of safety, the sponsor data standard rules for imputation will be applied to handle missing safety data. In all PK data presentations (except listings), concentrations below the limit of quantification will be set to zero. For PK summary tables and plots of mean/median profiles, statistics will be calculated having set concentrations to missing if one of the following cases is true:

1. A concentration has been collected as ND (ie, not done) or NS (ie, no sample);
2. A deviation in sampling time is of sufficient concern or a concentration has been flagged anomalous by the pharmacokineticist/statistician.

If a PK parameter cannot be derived from a participant's concentration data, the parameter will be coded as NC (ie not calculated) and set to missing for summary tables and analyses.

This section is a summary of the planned statistical analyses of the primary and secondary endpoints.

9.3.1. Safety Analyses

All safety analyses will be performed on the safety population.

AEs, ECGs, BP, pulse rate, continuous cardiac monitoring, and safety laboratory data will be reviewed and summarized on an ongoing basis during the study to evaluate the safety of participants. Any clinical laboratory, ECG, BP, pulse rate, respiratory rate, and/or temperature abnormalities of potential clinical concern will be described. Safety data will be presented in tabular and/or graphical format and summarized descriptively, where appropriate.

Medical history and physical examination, neurological examination, and continuous cardiac monitoring data, collected during the course of the study, will be considered source data and will not be required to be reported, unless otherwise noted. However, any untoward findings identified on physical and/or neurological examinations, and continuous cardiac monitoring data, conducted during the active collection period will be captured as AEs, if those findings meet the definition of an AE.

Data collected at screening that are used for inclusion/exclusion criteria, such as laboratory data, ECGs, and vital signs, will be considered source data, and will not be required to be reported, unless otherwise noted. Demographic data collected at screening will be reported.

9.3.1.1. Electrocardiogram Analyses

Changes from baseline for the ECG parameters HR, QT interval, QTcF interval, PR interval, and QRS complex will be summarized by treatment and time. The frequency of uncorrected QT values above 500 ms will be tabulated.

The number (%) of participants with maximum postdose QTcF values and maximum increases from baseline in the following categories will be tabulated by treatment:

Safety QTcF Assessment

Degree of Prolongation	Mild (ms)	Moderate (ms)	Severe (ms)
Absolute value	>450-480	>480-500	>500
Increase from baseline		30-60	>60

If more than 1 ECG is collected at a nominal time after dose administration (for example, triplicate ECGs), the mean of the replicate measurements will be used to represent a single observation at that time point. If any of the 3 individual ECG tracings has a QTcF value >500 ms, but the mean of the triplicates is not >500 ms, the data from the participant's individual tracing will be described in a safety section of the CSR in order to place the >500-ms value in appropriate clinical context. However, values from individual tracings within triplicate measurements that are >500 ms will not be included in the categorical analysis unless the average from the triplicate measurements is also >500 ms. Changes from baseline will be defined as the change between the postdose QTcF value and the average of the pre-dose triplicate values at -1, -0.5, and 0 hours predose on Day 1.

In addition, an attempt will be made to explore and characterize the relationship between plasma concentration and QT interval length using a PK/PD modeling approach. If a PK/PD relationship is found, the impact of participant factors (covariates) on the relationship will be examined. The results of such analyses may not be included in the CSR.

9.3.2. PK Analyses

The PK concentration and parameter populations are defined in [Section 9.2](#).

9.3.2.1. Derivation of PF-07293893 PK Parameters

The plasma PK parameters for PF-07293893, following oral dose administration, will be derived from the plasma concentration-time profiles using standard noncompartmental methods as detailed in Table 4, as data permit. Actual PK sampling times will be used in the derivation of PK parameters. If actual PK sampling times are not available, nominal PK sampling times will be used in the derivation of PK parameters.

Table 4. Plasma PF-07293893 PK Parameters

Parameter	Definition	Method of Determination
AUC _{last}	Area under the plasma concentration-time profile from time 0 to the time of the last quantifiable concentration (C _{last})	Linear/Log trapezoidal method
AUC _{inf} *	Area under the plasma concentration-time profile from time 0 extrapolated to infinite time	AUC _{last} + (C _{last} */k _{el}), where C _{last} * is the predicted plasma concentration at the last quantifiable timepoint estimated from the log-linear regression analysis
C _{max}	Maximum plasma concentration	Observed directly from data

Table 4. Plasma PF-07293893 PK Parameters

Parameter	Definition	Method of Determination
T_{max}	Time for C_{max}	Observed directly from data as time of first occurrence
$t_{1/2}^*$	Terminal elimination half-life	$\text{Loge}(2)/k_{el}$, where k_{el} is the terminal phase rate constant calculated by a linear regression of the log-linear concentration-time curve. Only those data points judged to describe the terminal log-linear decline will be used in the regression.
CL/F^*	Apparent clearance	Dose/AUC_{inf}
V_z/F^*	Apparent volume of distribution	$\text{Dose}/(AUC_{inf} \cdot k_{el})$
$AUC_{last}(dn)$	Dose-normalized AUC_{last}	AUC_{last}/Dose
$AUC_{inf}(dn)^*$	Dose-normalized AUC_{inf}	AUC_{inf}/Dose
$C_{max}(dn)$	Dose-normalized C_{max}	C_{max}/Dose

*As data permits

9.3.2.2. Statistical Methods for PK Data

Plasma concentrations of PF-07293893 will be listed and summarized descriptively by dose (formulation and fasting condition, if appropriate) and nominal PK sampling time. Individual participant and median profiles of the plasma concentration-time data will be plotted by dose (formulation and fasting condition, if appropriate) using actual (for individual) and nominal (for median) times respectively. Median profiles will be presented on both linear and log scales.

The plasma PK parameters will be summarized descriptively by dose (formulation and fasting condition, if appropriate) as applicable. Dose-normalized AUC_{inf} , AUC_{last} , and C_{max} will be plotted against dose (formulation and fasting condition, if appropriate) using a logarithmic scale, and will include individual participant values and the geometric means for each dose. These plots will be used to understand the relationship between the PK parameters and dose (formulation and fasting condition, if appropriate).

If the formulation and/or food effect is assessed, a mixed effects ANOVA will be performed separately on the natural log transformed AUC_{inf} , AUC_{last} , and C_{max} (dose-normalized prior to analysis, if appropriate) with formulation and/or fasting condition included as a fixed effect and participant as a random effect. Further details of this analysis will be provided in the SAP, where modifications to the model may be outlined depending on dosing schema implemented.

Additional PK analyses may be performed if deemed appropriate and may not be included in the CSR.

9.3.3. Tertiary/Exploratory Endpoint(s) Analysis

The analysis of tertiary/exploratory endpoints will be detailed in the SAP.

9.3.4. Other Analyses

Pharmacogenomic or biomarker data from specified genetics and specified protein biomarker samples may be collected during or after the trial and retained for future analyses; the results of such analyses are not planned to be included in the CSR.

9.4. Interim Analyses

No formal interim analysis will be conducted for this study.

9.5. Sample Size Determination

A sample size of approximately 24 healthy adult participants (up to 3 cohorts of approximately 8 participants each) has been chosen based on the need to minimize first exposure to humans of a new chemical entity and the requirement to provide adequate safety, tolerability, and PK assessment at each dose level. At each dose level, 6 participants are planned to receive PF-07293893 and 2 participants are planned to receive placebo with all participants at the end of the study having received up to 4 doses of PF-07293893 and up to 2 doses of placebo.

10. SUPPORTING DOCUMENTATION AND OPERATIONAL CONSIDERATIONS

10.1. Appendix 1: Regulatory, Ethical, and Study Oversight Considerations

10.1.1. Regulatory and Ethical Considerations

This study will be conducted in accordance with the protocol and with the following:

- Consensus ethical principles derived from international guidelines, including the Declaration of Helsinki and CIOMS International Ethical Guidelines;
- Applicable ICH GCP guidelines;
- Applicable laws and regulations, including applicable privacy laws.

The protocol, protocol amendments, ICD, SRSD(s), and other relevant documents (eg, advertisements) must be reviewed and approved by the sponsor, submitted to an IRB/EC by the investigator, and reviewed and approved by the IRB/EC before the study is initiated.

Any amendments to the protocol will require IRB/EC approval before implementation of changes made to the study design, except for changes necessary to eliminate an immediate hazard to study participants.

Protocols and any substantial amendments to the protocol will require health authority approval prior to initiation except for changes necessary to eliminate an immediate hazard to study participants.

The investigator will be responsible for the following:

- Providing written summaries of the status of the study to the IRB/EC annually or more frequently in accordance with the requirements, policies, and procedures established by the IRB/EC;
- Notifying the IRB/EC of SAEs or other significant safety findings as required by IRB/EC procedures;
- Providing oversight of the conduct of the study at the site and adherence to requirements of 21 CFR, ICH GCP guidelines, the IRB/EC, European regulation 536/2014 for clinical studies, European Medical Device Regulation 2017/745 for clinical device research, and all other applicable local regulations.

10.1.1.1. Reporting of Safety Issues and Serious Breaches of the Protocol or ICH GCP

In the event of any prohibition or restriction imposed (ie, clinical hold) by an applicable regulatory authority in any area of the world, or if the investigator is aware of any new information that might influence the evaluation of the benefits and risks of the study intervention, Pfizer should be informed immediately.

In addition, the investigator will inform Pfizer immediately of any urgent safety measures taken by the investigator to protect the study participants against any immediate hazard, and of any serious breaches of this protocol or of the ICH GCP guidelines that the investigator becomes aware of.

10.1.2. Financial Disclosure

Not applicable.

10.1.3. Informed Consent Process

The investigator or the investigator's representative will explain the nature of the study, including the risks and benefits, to the participant and answer all questions regarding the study. The participant should be given sufficient time and opportunity to ask questions and to decide whether or not to participate in the trial.

Participants must be informed that their participation is voluntary. Participants will be required to sign a statement of informed consent that meets the requirements of 21 CFR 50, local regulations, ICH guidelines, privacy and data protection requirements, where applicable, and the IRB/EC or study center.

The investigator must ensure that each participant is fully informed about the nature and objectives of the study, the sharing of data related to the study, and possible risks associated with participation, including the risks associated with the processing of the participant's personal data.

The participant must be informed that their personal study-related data will be used by the sponsor in accordance with local data protection law. The level of disclosure must also be explained to the participant.

The participant must be informed that their medical records may be examined by Clinical Quality Assurance auditors or other authorized personnel appointed by the sponsor, by appropriate IRB/EC members, and by inspectors from regulatory authorities.

The investigator further must ensure that each study participant is fully informed about their right to access and correct their personal data and to withdraw consent for the processing of their personal data.

The medical record must include a statement that written informed consent was obtained before the participant was enrolled in the study and the date on which the written consent was obtained. The authorized person obtaining the informed consent must also sign the ICD.

Participants must be reconsented to the most current version of the IRB/EC-approved ICD(s) during their participation in the study as required per local regulations.

A copy of the ICD(s) must be provided to the participant.

Participants who are rescreened are required to sign a new ICD.

10.1.3.1. Electronic Consent

Participants may be able to experience the informed consent process by electronic means (eConsent). The eConsent process includes an electronic presentation of the informed consent document (eICD), clinical trial educational components (as applicable), and electronic signatures (if allowed by local regulations). The use of eConsent does not replace or alter the ICD content or informed consent process as described above. The eConsent process complies with applicable regulations and sponsor policies to ensure reliability and data privacy.

10.1.4. Data Protection

All parties will comply with all applicable laws, including laws regarding the implementation of organizational and technical measures to ensure protection of participant data.

Participants' personal data will be stored at the study site in encrypted electronic and/or paper form and will be password protected or secured in a locked room to ensure that only authorized study staff have access. The study site will implement appropriate technical and organizational measures to ensure that the personal data can be recovered in the event of disaster. In the event of a potential personal data breach, the study site will be responsible for determining whether a personal data breach has in fact occurred and, if so, providing breach notifications as required by law.

To protect the rights and freedoms of participants with regard to the processing of personal data, participants will be assigned a single, participant-specific numerical code. Any participant records or data sets that are transferred to the sponsor will contain the numerical code; participant names will not be transferred. All other identifiable data transferred to the sponsor will be identified by this single, participant-specific code. The study site will maintain a confidential list of participants who participated in the study, linking each participant's numerical code to their actual identity and medical record ID. In case of data transfer, the sponsor will protect the confidentiality of participants' personal data consistent with the clinical study agreement and applicable privacy laws.

Information technology systems used to collect, process, and store study-related data are secured by technical and organizational security measures designed to protect such data against accidental or unlawful loss, alteration, or unauthorized disclosure or access.

The sponsor maintains SOPs on how to respond in the event of unauthorized access, use, or disclosure of sponsor information or systems.

10.1.5. Committees Structure

10.1.5.1. Data Monitoring Committee

This study will not use an E-DMC.

10.1.6. Dissemination of Clinical Study Data

Pfizer fulfills its commitment to publicly disclose clinical study results through posting the results of studies on www.clinicaltrials.gov (ClinicalTrials.gov), the EudraCT/CTIS, and/or

www.pfizer.com, and other public registries and websites in accordance with applicable local laws/regulations. In addition, Pfizer reports study results outside of the requirements of local laws/regulations pursuant to its SOPs.

In all cases, study results are reported by Pfizer in an objective, accurate, balanced, and complete manner and are reported regardless of the outcome of the study or the country in which the study was conducted.

www.clinicaltrials.gov

Pfizer posts clinical trial results on www.clinicaltrials.gov for Pfizer-sponsored interventional studies (conducted in patients) that evaluate the safety and/or efficacy of a product, regardless of the geographical location in which the study is conducted. These results are submitted for posting in accordance with the format and timelines set forth by US law.

EudraCT/CTIS

Pfizer posts clinical trial results on EudraCT/CTIS for Pfizer-sponsored interventional studies in accordance with the format and timelines set forth by EU requirements.

www.pfizer.com

Pfizer posts CSR synopses and plain-language study results summaries on www.pfizer.com for Pfizer-sponsored interventional studies at the same time the corresponding study results are posted to www.clinicaltrials.gov. CSR synopses will have personally identifiable information anonymized.

Documents within marketing applications

Pfizer complies with applicable local laws/regulations to publish clinical documents included in marketing applications. Clinical documents include summary documents and CSRs including the protocol and protocol amendments, sample CRFs, and SAPs. Clinical documents will have personally identifiable information anonymized.

Data sharing

Pfizer provides researchers secure access to participant-level data or full CSRs for the purposes of “bona-fide scientific research” that contributes to the scientific understanding of the disease, target, or compound class. Pfizer will make data from these trials available 18 months after study completion. Participant-level data will be anonymized in accordance with applicable privacy laws and regulations. CSRs will have personally identifiable information anonymized.

Data requests are considered from qualified researchers with the appropriate competencies to perform the proposed analyses. Research teams must include a biostatistician. Data will not be provided to applicants with significant conflicts of interest, including individuals requesting access for commercial/competitive or legal purposes.

10.1.7. Data Quality Assurance

All participant data relating to the study will be recorded on printed or electronic CRF unless transmitted to the sponsor or designee electronically (eg, laboratory data). The investigator is responsible for verifying that data entries are accurate and correct by physically or electronically signing the CRF.

Guidance on completion of CRFs will be provided in the CRF Completion Requirements document.

The investigator must ensure that the CRFs are securely stored at the study site in encrypted electronic and/or paper form and are password-protected or secured in a locked room to prevent access by unauthorized third parties.

The investigator must permit study-related monitoring, audits, IRB/EC review, and regulatory agency inspections and provide direct access to source records and documents. This verification may also occur after study completion. It is important that the investigator(s) and their relevant personnel are available during the monitoring visits and possible audits or inspections and that sufficient time is devoted to the process.

Monitoring details describing strategy, including definition of study-critical data items and processes (eg, risk-based initiatives in operations and quality, such as risk management and mitigation strategies and analytical risk-based monitoring), methods, responsibilities, and requirements, including handling of noncompliance issues and monitoring techniques (central, virtual, or on-site monitoring), are provided in the data management plan maintained and utilized by the sponsor or designee.

The sponsor or designee is responsible for the data management of this study, including quality checking of the data.

Records and documents, including signed ICDs, pertaining to the conduct of this study must be retained by the investigator for 15 years after study completion unless local regulations or institutional policies require a longer retention period. No records may be destroyed during the retention period without the written approval of the sponsor. No records may be transferred to another location or party without written notification to the sponsor. The investigator must ensure that the records continue to be stored securely for as long as they are maintained.

When participant data are to be deleted, the investigator will ensure that all copies of such data are promptly and irrevocably deleted from all systems.

The investigator(s) will notify the sponsor or its agents immediately of any regulatory inspection notification in relation to the study. Furthermore, the investigator will cooperate with the sponsor or its agents to prepare the investigator site for the inspection and will allow the sponsor or its agent, whenever feasible, to be present during the inspection. The investigator site and investigator will promptly resolve any discrepancies that are identified between the study data and the participant's medical records. The investigator will promptly

provide copies of the inspection findings to the sponsor or its agent. Before response submission to the regulatory authorities, the investigator will provide the sponsor or its agents with an opportunity to review and comment on responses to any such findings.

10.1.8. Source Documents

Source documents provide evidence for the existence of the participant and substantiate the integrity of the data collected. Source documents are filed at the investigator site.

Data reported on the CRF or entered in the eCRF that are from source documents must be consistent with the source documents or the discrepancies must be explained. The investigator may need to request previous medical records or transfer records, depending on the study. Also, current medical records must be available.

Definition of what constitutes a source document and its origin can be found in the Source Document Locator, which is maintained by the sponsor's designee (Pfizer CRU).

Description of the use of the computerized system is documented in the Data Management Plan, which is maintained by the sponsor's designee (Pfizer CRU).

The investigator must maintain accurate documentation (source record) that supports the information entered in the CRF.

The sponsor or designee will perform monitoring to confirm that data entered into the CRF by authorized site personnel are accurate, complete, and verifiable from source documents; that the safety and rights of participants are being protected; and that the study is being conducted in accordance with the currently approved protocol and any other study agreements, ICH GCP guidelines, and all applicable regulatory requirements.

10.1.9. Use of Medical Records

In certain situations, sponsor review of redacted copies of participant medical records for treatment of an AE may be performed, where ethically and scientifically justified and permitted by local regulations, to ensure participant safety.

Due to the potential for a participant to be re-identified from their medical records, the following actions must be taken when medical records are sent to the sponsor or sponsor designee:

- The investigator or site staff must redact personal information from the medical record. The personal information includes, but is not limited to, the following: participant names or initials, participant dates (eg, birth date, date of hospital admission/discharge, date of death), participant identification numbers (eg, Social Security number, health insurance number, medical record number, hospital/institution identifier), participant location information (eg, street address, city, country, postal code, IP address), participant contact information (eg, telephone/fax number, email address).

- Each medical record must be transmitted to the sponsor or sponsor designee using systems with technical and organizational security measures to ensure the protection of personal data (eg, Florence is the preferred system if available).

There may be unplanned situations where the sponsor may request medical records (eg, sharing medical records so that the sponsor can provide study-related advice to the investigator). The medical records should be submitted according to the procedure described above.

10.1.10. Study and Site Start and Closure

The study start date is the date of the first participant's first visit.

The sponsor designee reserves the right to close the study site or terminate the study at any time for any reason at the sole discretion of the sponsor, including (but not limited to) regulatory authority decision, change in opinion of the IRB/EC, or change in benefit-risk assessment. Study sites will be closed upon study completion. A study site is considered closed when all required documents and study supplies have been collected and a study site closure visit has been performed.

The investigator may initiate study site closure at any time upon notification to the sponsor if requested to do so by the responsible IRB/EC or if such termination is required to protect the health of study participants.

Reasons for the early closure of a study site by the sponsor may include but are not limited to:

- Failure of the investigator to comply with the protocol, the requirements of the IRB/EC or local health authorities, the sponsor's procedures, or the ICH GCP guidelines;
- Inadequate recruitment of participants by the investigator;
- Discontinuation of further study intervention development.

If the study is prematurely terminated or suspended, the sponsor shall promptly inform the investigators, the ECs/IRBs, the regulatory authorities, and any CRO(s) used in the study of the reason for termination or suspension, as specified by the applicable regulatory requirements. The investigator shall promptly inform the participant and should assure appropriate participant therapy and/or follow-up.

Study termination is also provided for in the clinical study agreement. If there is any conflict between the contract and this protocol, the contract will control as to termination rights.

10.1.11. Publication Policy

The investigator agrees to refer to the primary publication in any subsequent publications. Pfizer will not provide any financial compensation for the investigator's participation in the

preparation of the primary congress abstract, poster, presentation, or primary manuscript for the study.

Investigators are free to publish individual center results that they deem to be clinically meaningful after publication of the overall results of the study or 12 months after primary completion date or study completion at all sites, whichever occurs first, subject to the other requirements described in this section.

The investigator will provide Pfizer an opportunity to review any proposed publication or any other type of disclosure of the study results (collectively, “publication”) before it is submitted or otherwise disclosed and will submit all publications to Pfizer 30 days before submission. If any patent action is required to protect intellectual property rights, the investigator agrees to delay the disclosure for a period not to exceed an additional 60 days upon request from Pfizer. This allows Pfizer to protect proprietary information and to provide comments, and the investigator will, on request, remove any previously undisclosed confidential information before disclosure, except for any study-intervention or Pfizer-related information necessary for the appropriate scientific presentation or understanding of the study results. For joint publications, should there be disagreement regarding interpretation and/or presentation of specific analysis results, resolution of, and responsibility for, such disagreements will be the collective responsibility of all authors of the publication.

For all publications relating to the study, the investigator and Pfizer will comply with recognized ethical standards concerning publications and authorship, including those established by the International Committee of Medical Journal Editors. The investigator will disclose any relationship with Pfizer and any relevant potential conflicts of interest, including any financial or personal relationship with Pfizer, in any publications. All authors will have access to the relevant statistical tables, figures, and reports (in their original format) required to develop the publication.

10.1.12. Sponsor’s Medically Qualified Individual

The contact information for the sponsor’s MQI for the study is documented in the study contact list, located in the clinical trial management system.

To facilitate access to their investigator and the sponsor’s MQI for study-related medical questions or problems from non-study healthcare professionals, participants are provided with an ECC at the time of informed consent. The ECC contains, at a minimum, (a) protocol and study intervention identifiers, (b) participant’s study identification number, (c) site emergency phone number active 24 hours/day, 7 days per week.

The ECC is intended to augment, not replace, the established communication pathways between the participant and their investigator and site staff, and between the investigator and sponsor study team. The ECC is only to be used by healthcare professionals not involved in the research study, as a means of reaching the investigator or site staff related to the care of a participant.

10.2. Appendix 2: Clinical Laboratory Tests

The following safety laboratory tests will be performed at times defined in the [SoA](#) section of this protocol. Additional laboratory results may be reported on these samples as a result of the method of analysis or the type of analyzer used by the clinical laboratory, or as derived from calculated values. These additional tests would not require additional collection of blood. Unscheduled clinical laboratory measurements may be obtained at any time during the study to assess any perceived safety issues.

Table 5. Protocol-Required Laboratory Assessments

Hematology	Chemistry	Urinalysis	Other
Hemoglobin Hematocrit RBC count Platelet count WBC count Total neutrophils (Abs) Eosinophils (Abs) Monocytes (Abs) Basophils (Abs) Lymphocytes (Abs)	Urea Creatinine Cystatin C ^a eGFR ^b Glucose (fasting) Calcium Sodium Potassium Chloride Total CO ₂ (bicarbonate) AST, ALT Total bilirubin Alkaline phosphatase Uric acid Albumin Total protein	<u>Local dipstick:</u> pH Glucose (qual) Protein (qual) Blood (qual) Ketones Nitrites Leukocyte esterase <u>Laboratory:</u> Microscopy and culture ^c	<u>At screening and admission:</u> <ul style="list-style-type: none"> Urine drug screening^e <u>At screening:</u> <ul style="list-style-type: none"> FSH^d Hepatitis B surface antigen Hepatitis B surface antibody^f Hepatitis B core antibody Hepatitis C antibody Human immunodeficiency virus COVID-19 testing (per CRU procedures)
<u>If Hb/RBC abnormal:</u> MCV, MCH, MCHC Neutrophils (%) Eosinophils (%) Basophils (%) Lymphocytes (%) Monocytes (%) RBC morphology RBC distribution width	<u>Required:</u> <u>For suspected DILI:</u> AST/ALT T bili, albumin, CK, direct and indirect bili GGT, PT/INR, eosinophils (%), alkaline phosphatase The following additional testing may be warranted: Acetaminophen/paracetamol or protein adduct levels Hepatitis serology (even if screening negative) Total bile acids Liver imaging <u>For suspected DICI/DIKI:</u> Creatinine (Screat) Cystatin C ^a (Scys) eGFR (Screat only and combined Screat+Scys) Urine albumin-to-creatinine-ratio		

090177e19dabb673\Approved\Approved On: 07-Jun-2023 17:00 (GMT)

Table 5. Protocol-Required Laboratory Assessments

Hematology	Chemistry	Urinalysis	Other
a. Cystatin C (Scys): Screening or Baseline Scys is recommended to help differentiate post-baseline DIKI from DICI. Post-baseline, Scys is measured if and only if serum creatinine increase post-baseline is observed (see Section 7.1.1). b. Screening, Baseline and Post-baseline (only in case of reflex measurement of Scys) eGFR is calculated using 2021 CKD-EPI eGFR (combined Creat and Scys- based) equation (see Section 10.7.2) is recommended to assess presence or absence of post-baseline change in kidney function. c. Only if UTI is suspected and urine dipstick is positive for nitrites or leukocyte esterase or both. d. For confirmation of postmenopausal status only in females <60 years old and not using hormonal or HRT only. e. The minimum requirement for drug screening includes cocaine, THC, opiates/opioids, benzodiazepines, and amphetamines (others are site- and study-specific). f. Test as reflex if HBsAg and/or HBcAb are positive.			

The investigator must review the laboratory report, document this review, and record any clinically relevant changes occurring during the study in the AE section of the CRF.

Laboratory/analyte results that could unblind the study and have been collected for the purpose of the study will not be reported to investigator sites or other blinded personnel until the study has been unblinded.

Any remaining serum/plasma from samples collected for clinical safety laboratory measurements at baseline and at all times after dose administration may be retained and stored for the duration of the study. Upon completion of the study, these retained safety samples may be used for the assessment of exploratory safety biomarkers or unexpected safety findings. These data will not be included in the CSR. Samples to be used for this purpose will be shipped to either a Pfizer-approved BBS facility or other designated laboratory and retained for up to 1 year following the completion of the study.

10.3. Appendix 3: Adverse Events: Definitions and Procedures for Recording, Evaluating, Follow-Up, and Reporting

10.3.1. Definition of AE

AE Definition
<ul style="list-style-type: none">An AE is any untoward medical occurrence in a patient or clinical study participant, temporally associated with the use of study intervention, whether or not considered related to the study intervention.Note: An AE can therefore be any unfavorable and unintended sign (including an abnormal laboratory finding), symptom, or disease (new or exacerbated) temporally associated with the use of study intervention.

Events <u>Meeting</u> the AE Definition
<ul style="list-style-type: none">Any abnormal laboratory test results (hematology, clinical chemistry, or urinalysis) or other safety assessments (eg, ECG, radiological scans, vital sign measurements), including those that worsen from baseline, considered clinically significant in the medical and scientific judgment of the investigator. Any abnormal test results that meet any of the conditions below must be recorded as an AE:<ul style="list-style-type: none">Is associated with accompanying symptoms;Requires additional diagnostic testing or medical/surgical intervention;Leads to a change in study dosing (outside of any protocol-specified dose adjustments) or discontinuation from the study, significant additional concomitant drug treatment, or other therapy.Exacerbation of a chronic or intermittent preexisting condition, including an increase in either frequency and/or intensity of the condition.New condition detected or diagnosed after study intervention administration, even though it may have been present before the start of the study.Signs, symptoms, or the clinical sequelae of a suspected drug-drug interaction.Signs, symptoms, or the clinical sequelae of a suspected overdose of either study intervention or a concomitant medication. Overdose per se will not be reported as an AE or SAE unless it is an intentional overdose taken with possible suicidal/self-harming intent. Such overdoses should be reported regardless of sequelae.

Events <u>NOT</u> Meeting the AE Definition
<ul style="list-style-type: none"> Any clinically significant abnormal laboratory findings or other abnormal safety assessments that are associated with the underlying disease, unless judged by the investigator to be more severe than expected for the participant's condition. The disease/disorder being studied or expected progression, signs, or symptoms of the disease/disorder being studied, unless more severe than expected for the participant's condition. Medical or surgical procedure (eg, endoscopy, appendectomy): the condition that leads to the procedure is the AE. Situations in which an untoward medical occurrence did not occur (social and/or convenience admission to a hospital). Anticipated day-to-day fluctuations of preexisting disease(s) or condition(s) present or detected at the start of the study that do not worsen.

10.3.2. Definition of an SAE

An SAE is defined as any untoward medical occurrence that, at any dose, meets one or more of the criteria listed below:
a. Results in death
b. Is life-threatening The term "life-threatening" in the definition of "serious" refers to an event in which the participant was at risk of death at the time of the event. It does not refer to an event that hypothetically might have caused death if it were more severe.
c. Requires inpatient hospitalization or prolongation of existing hospitalization In general, hospitalization signifies that the participant has been admitted (usually involving at least an overnight stay) at the hospital or emergency ward for observation and/or treatment that would not have been appropriate in the physician's office or outpatient setting. Complications that occur during hospitalization are AEs. If a complication prolongs hospitalization or fulfills any other serious criteria, the event is serious. When in doubt as to whether "hospitalization" occurred or was necessary, the AE should be considered serious. Hospitalization for elective treatment of a preexisting condition that did not worsen from baseline is not considered an AE.

An SAE is defined as any untoward medical occurrence that, at any dose, meets one or more of the criteria listed below:

d. Results in persistent or significant disability/incapacity

- The term disability means a substantial disruption of a person's ability to conduct normal life functions.
- This definition is not intended to include experiences of relatively minor medical significance, such as uncomplicated headache, nausea, vomiting, diarrhea, influenza, and accidental trauma (eg, sprained ankle), that may interfere with or prevent everyday life functions but do not constitute a substantial disruption.

e. Is a congenital anomaly/birth defect

f. Is a suspected transmission via a Pfizer product of an infectious agent, pathogenic or non-pathogenic

The event may be suspected from clinical symptoms or laboratory findings indicating an infection in a participant exposed to a Pfizer product. The terms "suspected transmission" and "transmission" are considered synonymous. These cases are considered unexpected and handled as serious expedited cases by pharmacovigilance personnel. Such cases are also considered for reporting as product defects, if appropriate.

g. Other situations:

- Medical or scientific judgment should be exercised by the investigator in deciding whether SAE reporting is appropriate in other situations, such as significant medical events that may jeopardize the participant or may require medical or surgical intervention to prevent one of the other outcomes listed in the above definition. These events should usually be considered serious.
- Examples of such events include invasive or malignant cancers, intensive treatment in an emergency room or at home for allergic bronchospasm, blood dyscrasias or convulsions that do not result in hospitalization, or development of drug dependency or drug abuse.

10.3.3. Definition of SAR

SAR Definition

- SARs are all noxious and unintended responses to an IMP related to any dose administered that result in death, are life-threatening, require inpatient hospitalization or prolongation of existing hospitalization, result in persistent or significant disability or incapacity, or are a congenital anomaly or birth defect.

090177e19dabb673\Approved\Approved On: 07-Jun-2023 17:00 (GMT)

10.3.4. Definition of SUSAR

SUSAR Definition
<ul style="list-style-type: none"> SUSAR is a SAR whose nature, severity or outcome is not consistent with the reference safety information.

10.3.5. Recording/Reporting and Follow-Up of AEs and/or SAEs During the Active Collection Period

AE and SAE Recording/Reporting		
<p>The table below summarizes the requirements for recording AEs on the CRF and for reporting SAEs using the CT SAE Report Form <i>or</i> via PSSA to Pfizer Safety throughout the active collection period. These requirements are delineated for 3 types of events: (1) SAEs; (2) nonserious AEs; and (3) exposure to the study intervention under study during pregnancy or breastfeeding, and occupational exposure.</p> <p>It should be noted that the CT SAE Report Form/PSSA for reporting of SAE information is not the same as the AE page of the CRF. When the same data are collected, the forms must be completed in a consistent manner. AEs should be recorded using concise medical terminology and the same AE term should be used on both the CRF and the CT SAE Report Form/PSSA for reporting of SAE information.</p>		
Safety Event	Recorded on the CRF	Reported on the CT SAE Report Form /PSSA to Pfizer Safety Within 24 Hours of Awareness
SAE	All	All
Nonserious AE	All	None
Exposure to the study intervention under study during pregnancy or breastfeeding	<p>All AEs/SAEs associated with EDP or EDB</p> <p>Note: Instances of EDP or EDB not associated with an AE or SAE are not captured in the CRF</p>	<p>All instances of EDP are reported (whether or not there is an associated SAE)*</p> <p>All instances of EDB are reported (whether or not there is an associated SAE)**</p>

090177e19dabb673\Approved\Approved On: 07-Jun-2023 17:00 (GMT)

AE and SAE Recording/Reporting		
Environmental or occupational exposure to the product under study to a nonparticipant (not involving EDP or EDB)	None. Exposure to a study non-participant is not collected on the CRF	The exposure (whether or not there is an associated AE or SAE) must be reported***
<p>* EDP (with or without an associated SAE): is reported to Pfizer Safety using the CT SAE Report Form and EDP Supplemental Form <i>or</i> via PSSA.</p> <p>** EDB is reported to Pfizer Safety using the CT SAE Report Form <i>or</i> PSSA, which would also include details of any SAE that might be associated with the EDB.</p> <p>*** Environmental or occupational exposure: AEs or SAEs associated with occupational exposure are reported to Pfizer Safety using the CT SAE Report Form <i>or</i> via PSSA.</p> <ul style="list-style-type: none"> When an AE or SAE occurs, it is the responsibility of the investigator to review all documentation (eg, hospital progress notes, laboratory reports, and diagnostic reports) related to the event. The investigator will then record all relevant AE or SAE information in the CRF. It is not acceptable for the investigator to send photocopies of the participant's medical records to Pfizer Safety in lieu of completion of the CT SAE Report Form/AE or SAE CRF page. There may be instances when copies of medical records for certain cases are requested by Pfizer Safety. In this case, all participant identifiers, with the exception of the participant number, will be redacted on the copies of the medical records before submission to Pfizer Safety. Refer to Section 10.1.9 for actions that must be taken when medical records are sent to the sponsor or sponsor designee. The investigator will attempt to establish a diagnosis of the event based on signs, symptoms, and/or other clinical information. Whenever possible, the diagnosis (not the individual signs/symptoms) will be documented as the AE or SAE. 		
Assessment of Intensity		
<p>The investigator will make an assessment of intensity for each AE and SAE reported during the study and assign it to 1 of the following categories:</p> <ul style="list-style-type: none"> Mild: A type of AE that is usually transient and may require only minimal treatment or therapeutic intervention. The event does not generally interfere with usual ADL. Moderate: A type of AE that is usually alleviated with additional specific therapeutic intervention. The event interferes with usual ADL, causing 		

AE and SAE Recording/Reporting

discomfort, but poses no significant or permanent risk of harm to the research participant.

- Severe: A type of AE that interrupts usual ADL, or significantly affects clinical status, or may require intensive therapeutic intervention.

An event is defined as “serious” when it meets at least 1 of the predefined outcomes as described in the definition of an SAE, NOT when it is rated as severe.

Assessment of Causality

- The investigator is obligated to assess the relationship between study intervention and each occurrence of each AE or SAE. The investigator will use clinical judgment to determine the relationship.
- A “reasonable possibility” of a relationship conveys that there are facts, evidence, and/or arguments to suggest a causal relationship, rather than a relationship cannot be ruled out.
- Alternative causes, such as underlying disease(s), concomitant therapy, and other risk factors, as well as the temporal relationship of the event to study intervention administration, will be considered and investigated.
- The investigator will also consult the IB and/or product information, for marketed products, in their assessment.
- For each AE or SAE, the investigator **must** document in the medical notes that they have reviewed the AE or SAE and have provided an assessment of causality.
- There may be situations in which an SAE has occurred and the investigator has minimal information to include in the initial report to the sponsor. However, it is very important that the investigator always make an assessment of causality for every event before the initial transmission of the SAE data to the sponsor.
- The investigator may change their opinion of causality in light of follow-up information and send an SAE follow-up report with the updated causality assessment.
- The causality assessment is one of the criteria used when determining regulatory reporting requirements.

Assessment of Causality

- If the investigator does not know whether or not the study intervention caused the event, then the event will be handled as “related to study intervention” for reporting purposes, as defined by the sponsor. In addition, if the investigator determines that an SAE is associated with study procedures, the investigator must record this causal relationship in the source documents and CRF, and report such an assessment in the dedicated section of the CT SAE Report Form/PSSA and in accordance with the SAE reporting requirements.

Follow-Up of AEs and SAEs

- The investigator is obligated to perform or arrange for the conduct of supplemental measurements and/or evaluations, as medically indicated or as requested by the sponsor, to elucidate the nature and/or causality of the AE or SAE as fully as possible. This may include additional laboratory tests or investigations, histopathological examinations, or consultation with other healthcare providers.
- If a participant dies during participation in the study or during a recognized follow-up period, the investigator will provide Pfizer Safety with a copy of any postmortem findings, including histopathology.
- New or updated information will be recorded in the originally submitted documents.
- The investigator will submit any updated SAE data to the sponsor within 24 hours of receipt of the information.

10.3.6. Reporting of SAEs

SAE Reporting to Pfizer Safety via an Electronic DCT

- The primary mechanism for reporting an SAE to Pfizer Safety will be the electronic DCT (eg, eSAE or PSSA).
- If the electronic system is unavailable, then the site will use the paper SAE report form (see next section) to report the event within 24 hours.
- The site will enter the SAE data into the electronic DCT (eg, eSAE or PSSA) or paper form (as applicable) as soon as the data become available.
- After the study is completed at a given site, the electronic DCT will be taken off-line to prevent the entry of new data or changes to existing data.

- If a site receives a report of a new SAE from a study participant or receives updated data on a previously reported SAE after the electronic DCT has been taken off-line, then the site can report this information on a paper SAE form (see next section) or to Pfizer Safety by telephone.

SAE Reporting to Pfizer Safety via the CT SAE Report Form

- Facsimile transmission of the CT SAE Report Form is one of the methods to transmit this information to Pfizer Safety.
- In circumstances when the facsimile is not working, an alternative method should be used, eg, secured (Transport Layer Security) or password-protected email. If none of these methods can be used, notification by telephone is acceptable with a copy of the CT SAE Report Form sent by overnight mail or courier service.
- Initial notification via telephone does not replace the need for the investigator to complete and sign the CT SAE Report Form pages within the designated reporting time frames.

10.4. Appendix 4: Contraceptive and Barrier Guidance

10.4.1. Male Participant Reproductive Inclusion Criteria

Male participants are eligible to participate if they agree to the following requirements during the intervention period and for at least 28 days after the last dose of study intervention, which corresponds to the time needed to eliminate reproductive safety risk of the study intervention(s):

- Refrain from donating sperm.

PLUS either:

- Be abstinent from heterosexual intercourse as their preferred and usual lifestyle (abstinent on a long-term and persistent basis) and agree to remain abstinent.

OR

- Must agree to use contraception/barrier as detailed below:
 - Agree to use a male condom, and should also be advised of the benefit for a female partner to use a highly effective method of contraception, as a condom may break or leak when having sexual intercourse with a WOCBP who is not currently pregnant.
 - In addition to male condom use, a highly effective method of contraception may be considered in WOCBP partners of male participants (refer to the list of highly effective methods below in [Section 10.4.4](#)).

10.4.2. Female Participant Reproductive Inclusion Criteria

The criteria below are part of Inclusion Criterion 1 (Age and Sex; [Section 5.1](#)) and specify the reproductive requirements for including female participants. Refer to [Section 10.4.4](#) for a complete list of contraceptive methods permitted in the study.

A female participant is eligible to participate if she is not pregnant or breastfeeding and is not a WOCBP (see definition in [Section 10.4.3](#)).

The investigator is responsible for review of medical history, menstrual history, and recent sexual activity to decrease the risk for inclusion of a woman with an early undetected pregnancy.

10.4.3. Woman of Childbearing Potential

A woman is considered fertile following menarche and until becoming postmenopausal unless permanently sterile (see below).

If fertility is unclear (eg, amenorrhea or oligomenorrhea) and a menstrual cycle cannot be confirmed before the first dose of study intervention, additional evaluation should be considered.

Women in the following categories are not considered WOCBP:

1. Premenopausal female with 1 of the following:

- Documented hysterectomy;
- Documented bilateral salpingectomy;
- Documented bilateral oophorectomy.

For individuals with permanent infertility due to a medical cause other than the above (eg, mullerian agenesis, androgen insensitivity), investigator discretion should be applied to determining study entry.

Note: Documentation for any of the above categories can come from the site personnel's review of the participant's medical records, medical examination, or medical history interview. The method of documentation should be recorded in the participant's medical record for the study.

2. Postmenopausal female.

- A postmenopausal state is defined as no menses for 12 months without an alternative medical cause. In addition:
 - A high FSH level in the postmenopausal range must be used to confirm a postmenopausal state in women under 60 years old and not using hormonal contraception or HRT.
 - A female on HRT and whose menopausal status is in doubt will be required to discontinue HRT to allow confirmation of postmenopausal status before study enrollment.

10.4.4. Contraception Methods

Contraceptive use by men or women should be consistent with local availability/regulations regarding the use of contraceptive methods for those participating in clinical trials.

The following contraceptive methods are appropriate for this study:

Highly Effective Methods That Have Low User Dependency (for WOCBP partners of male participants)

1. Implantable progestogen-only hormone contraception associated with inhibition of ovulation.
2. Intrauterine device.
3. Intrauterine hormone releasing system.
4. Bilateral tubal occlusion.
5. Vasectomized partner:
 - Vasectomized partner is a highly effective contraceptive method provided that the partner is the sole sexual partner of the WOCBP and the absence of sperm has been confirmed. If not, an additional highly effective method of contraception should be used. The spermatogenesis cycle is approximately 90 days.

Highly Effective Methods That Are User Dependent (for WOCBP partners of male participants)

6. Combined (estrogen- and progestogen-containing) hormonal contraception associated with inhibition of ovulation:
 - Oral + barrier*
 - Intravaginal + barrier*
 - Transdermal + barrier*
7. Progestogen-only hormone contraception associated with inhibition of ovulation:
 - Oral + barrier*
 - Injectable + barrier*

Sexual Abstinence

8. Sexual abstinence is considered a highly effective method only if defined as refraining from heterosexual intercourse during the entire period of risk associated with the study intervention. The reliability of sexual abstinence needs to be evaluated in relation to the duration of the study and the preferred and usual lifestyle of the participant

* Acceptable barrier methods to be used concomitantly with options 6 or 7 for the study include any of the following:

- Male or female condom, with or without spermicide;
- Cervical cap, diaphragm or sponge with spermicide;
- A combination of male condom with either cervical cap, diaphragm or sponge with spermicide (double-barrier methods).

10.5. Appendix 5: Genetics

Use/Analysis of DNA

- Genetic variation may impact a participant's response to study intervention, susceptibility to, and severity and progression of disease. Therefore, where local regulations and IRBs/ECs allow, a blood sample will be collected for DNA analysis.
- The scope of the genetic research may be narrow (eg, 1 or more candidate genes) or broad (eg, the entire genome), as appropriate to the scientific question under investigation.
- The samples may be analyzed as part of a multistudy assessment of genetic factors involved in the response to study intervention or study interventions of this class to understand treatments for the disease(s) under study or the disease(s) themselves.
- The results of genetic analyses may be reported in the CSR or in a separate study summary, or may be used for internal decision making without being included in a study report.
- The sponsor will store the DNA samples in a secure storage space with adequate measures to protect confidentiality.
- The samples will be retained as indicated:
- Sample for specified genetic analysis (see [Section 8.6.1](#)) will be stored for up to 15 years or other period as per local requirements.
- Samples for genetic research will be labeled with a code. The key between the code and the participant's personally identifying information (eg, name, address) will be held securely at the study site.

10.6. Appendix 6: Liver Safety: Suggested Actions and Follow-Up Assessments

Potential Cases of Drug-Induced Liver Injury

Humans exposed to a drug who show no sign of liver injury (as determined by elevations in transaminases) are termed “tolerators,” while those who show transient liver injury but adapt are termed “adaptors.” In some participants, transaminase elevations are a harbinger of a more serious potential outcome. These participants fail to adapt and therefore are “susceptible” to progressive and serious liver injury, commonly referred to as DILI. Participants who experience a transaminase elevation above $3 \times \text{ULN}$ should be monitored more frequently to determine if they are “adaptors” or are “susceptible”.

In the majority of DILI cases, elevations in AST and/or ALT precede T bili elevations ($>2 \times \text{ULN}$) by several days or weeks. The increase in T bili typically occurs while AST/ALT is/are still elevated above $3 \times \text{ULN}$ (ie, AST/ALT and T bili values will be elevated within the same laboratory sample). In rare instances, by the time T bili elevations are detected, AST/ALT values might have decreased. This occurrence is still regarded as a potential DILI. Therefore, abnormal elevations in either AST OR ALT in addition to T bili that meet the criteria outlined below are considered potential DILI (assessed per Hy’s law criteria) cases and should always be considered important medical events, even before all other possible causes of liver injury have been excluded.

The threshold of laboratory abnormalities for a potential DILI case depends on the participant’s individual baseline values and underlying conditions. Participants who present with the following laboratory abnormalities should be evaluated further as potential DILI (Hy’s law) cases to definitively determine the etiology of the abnormal laboratory values:

- Participants with AST/ALT and T bili baseline values within the normal range who subsequently present with AST OR ALT values $\geq 3 \times \text{ULN}$ AND a T bili value $\geq 2 \times \text{ULN}$ with no evidence of hemolysis and an alkaline phosphatase value $<2 \times \text{ULN}$ or not available.
- For participants with baseline AST OR ALT OR T bili values above the ULN, the following threshold values are used in the definition mentioned above, as needed, depending on which values are above the ULN at baseline:
 - Preexisting AST or ALT baseline values above the normal range: AST or ALT values ≥ 2 times the baseline values AND $\geq 3 \times \text{ULN}$; or $\geq 8 \times \text{ULN}$ (whichever is smaller).
 - Preexisting values of T bili above the normal range: T bili level increased from baseline value by an amount of $\geq 1 \times \text{ULN}$ or if the value reaches $\geq 3 \times \text{ULN}$ (whichever is smaller).

Rises in AST/ALT and T bili separated by more than a few weeks should be assessed individually based on clinical judgment; any case where uncertainty remains as to whether it represents a potential Hy’s law case should be reviewed with the sponsor.

The participant should return to the investigator site and be evaluated as soon as possible, preferably within 48 hours from awareness of the abnormal results. This evaluation should include laboratory tests, detailed history, and physical assessment.

In addition to repeating measurements of AST and ALT and T bili for suspected Hy's law cases, additional laboratory tests should include albumin, CK, direct and indirect bilirubin, GGT, PT/INR, eosinophils (%), and alkaline phosphatase. Consideration should also be given to drawing a separate tube of clotted blood and an anticoagulated tube of blood for further testing, as needed, for further contemporaneous analyses at the time of the recognized initial abnormalities to determine etiology. A detailed history, including relevant information, such as review of ethanol, acetaminophen/paracetamol (either by itself or as a coformulated product in prescription or over-the-counter medications), recreational drug, or supplement (herbal) use and consumption, family history, sexual history, travel history, history of contact with a jaundiced person, surgery, blood transfusion, history of liver or allergic disease, and potential occupational exposure to chemicals, should be collected. Further testing for acute hepatitis A, B, C, D, and E infection, total bile acids, liver imaging (eg, biliary tract), and collection of serum samples for acetaminophen/paracetamol drug and/or protein adduct levels may be warranted.

All cases demonstrated on repeat testing as meeting the laboratory criteria of AST/ALT and T bili elevation defined above should be considered potential DILI (Hy's law) cases if no other reason for the LFT abnormalities has yet been found. **Such potential DILI (Hy's law) cases are to be reported as SAEs, irrespective of availability of all the results of the investigations performed to determine etiology of the LFT abnormalities.**

A potential DILI (Hy's law) case becomes a confirmed case only after all results of reasonable investigations have been received and have excluded an alternative etiology.

10.7. Appendix 7: Kidney Safety: Monitoring Guidelines

10.7.1. Laboratory Assessment of Change in Kidney Function and Detection of Kidney Injury

Standard kidney safety monitoring requires assessment of baseline and postbaseline Screat measurement to estimate kidney function [Screat-based eGFR] or creatinine clearance [eCrCl]. Obtaining Screening or Baseline Scys and postbaseline reflex Scys (if confirmed Screat increase ≥ 0.3 mg/dL) makes it feasible to distinguish AKI from DICI. If Screat increase is confirmed after baseline, then reflex measurement of Scys is indicated

ADULTS: Currently, 2021 CKD-EPI eGFR equations (Screat only-based and combined Screat plus Scys-based) are valid for use in adults only. At baseline Screat and Scys values are needed to calculate 2021 CKD-EPI eGFR by Screat only-based equation (see Table 10.7.2.1) and by combined Screat plus Scys-based equation. When post-baseline Screat increase ≥ 0.3 mg/dL is confirmed, then reflex Scys measurement is needed to enable post-baseline comparison of eGFR changes (Screat only-based eGFR and combined Screat plus Scys eGFR).

10.7.2. Age-Specific Kidney Function Calculation Recommendations

10.7.2.1. Adults (18 Years and Above)—2021 CKD-EPI Equations

eGFR (mL/min/1.73m²)²³

2021 CKD-EPI Screat Only	Screat (mg/dL)	Scys (mg/L)	Recommended eGFR Equation
Female	if ≤ 0.7	NA	$eGFR = 143 \times (Screat/0.7)^{-0.241} \times (0.9938)^{Age}$
Female	if > 0.7	NA	$eGFR = 143 \times (Screat/0.7)^{-1.200} \times (0.9938)^{Age}$
Male	if ≤ 0.9	NA	$eGFR = 142 \times (Screat/0.9)^{-0.302} \times (0.9938)^{Age}$
Male	if > 0.9	NA	$eGFR = 142 \times (Screat/0.9)^{-1.200} \times (0.9938)^{Age}$
2021 CKD-EPI Screat-Scys Combined	Screat (mg/dL)	Scys (mg/L)	Recommended eGFR Equation
Female	if ≤ 0.7	if ≤ 0.8	$eGFR = 130 \times (Screat/0.7)^{-0.219} \times (Scys/0.8)^{-0.323} \times (0.9961)^{Age}$
Female	if ≤ 0.7	if > 0.8	$eGFR = 130 \times (Screat/0.7)^{-0.219} \times (Scys/0.8)^{-0.778} \times (0.9961)^{Age}$
Female	if > 0.7	if ≤ 0.8	$eGFR = 130 \times (Screat/0.7)^{-0.544} \times (Scys/0.8)^{-0.323} \times (0.9961)^{Age}$
Female	if > 0.7	if > 0.8	$eGFR = 130 \times (Screat/0.7)^{-0.544} \times (Scys/0.8)^{-0.778} \times (0.9961)^{Age}$
Male	if ≤ 0.9	if ≤ 0.8	$eGFR = 135 \times (Screat/0.9)^{-0.144} \times (Scys/0.8)^{-0.323} \times (0.9961)^{Age}$
Male	if ≤ 0.9	if > 0.8	$eGFR = 135 \times (Screat/0.9)^{-0.144} \times (Scys/0.8)^{-0.778} \times (0.9961)^{Age}$
Male	if > 0.9	if ≤ 0.8	$eGFR = 135 \times (Screat/0.9)^{-0.544} \times (Scys/0.8)^{-0.323} \times (0.9961)^{Age}$
Male	if > 0.9	if > 0.8	$eGFR = 135 \times (Screat/0.9)^{-0.544} \times (Scys/0.8)^{-0.778} \times (0.9961)^{Age}$

10.7.3. Kidney Function Calculation Tools

The sponsor has provided the following resources to investigational sites when required to calculate age-specific kidney function at Screening, Baseline, and post-Baseline visits. Site calculations of kidney function can be performed manually, using the age appropriate formulae (see Section 10.7.2) and can use recommended online kidney function calculators to reduce the likelihood of a calculation error.

The United States National Kidney Foundation Online Calculators.

- Adults (18 years and above) - 2021 CKD-EPI Creatinine Online Calculator (eGFR):
https://www.kidney.org/professionals/KDOQI/gfr_calculator

Investigational sites are responsible to ensure that the accurate age-specific equation is selected and that the correct units for serum creatinine (mg/dL only), serum cystatin C (mg/L only), total body weight (kg only), and age (years). Investigators are expected to (i) review and confirm correctness of the kidney function calculation results and (ii) evaluate the calculated value within the context of historical information available to them in the participant's medical record. Investigators are responsible for the clinical oversight of the participant eligibility process, kidney function calculation, and dose selection and adjustments per study protocol. Investigators are encouraged to direct questions or uncertainties regarding kidney function and dosing to the Pfizer Clinical Team and Medical Monitor, if needed.

10.7.4. Adverse Event Grading for Kidney Safety Laboratory Abnormalities

AE grading for decline in kidney function (ie, eGFR or eCrCl) will be according to Kidney Disease: Improving Global Outcomes (KDIGO) criteria for both pediatric and adult participants.

<https://kdigo.org/guidelines/>

KDIGO criteria grade (G)	Study Population	G1	G2	G3	G4	G5
Decreased Kidney Function due to either Acute or Chronic Kidney Injury	Adult participants eGFR (mL/min/1.73m ²)	≥90	≥60 to 89	30 to 59	15 to 29	<15

KDIGO albuminuria (A) criteria	A1	A2	A3
Albumin-to-creatinine ratio (ACR)	<30 mg/g OR <3 mg/mmol	30 to 300 mg/g OR 3 to 30 mg/mmol	>300 mg/g OR >30 mg/mmol

10.8. Appendix 8: ECG Findings of Potential Clinical Concern

ECG Findings That <u>May</u> Qualify as AEs
<ul style="list-style-type: none"> Marked sinus bradycardia (rate <40 bpm) lasting minutes. New PR interval prolongation >280 ms. New prolongation of QTcF to >480 ms (absolute). New prolongation of QTcF by >60 ms from baseline. New-onset atrial flutter or fibrillation, with controlled ventricular response rate: ie, rate <120 bpm. New-onset type I second-degree (Wenckebach) AV block of >30-second duration. Frequent PVCs, triplets, or short intervals (<30 seconds) of consecutive ventricular complexes.
ECG Findings That <u>May</u> Qualify as SAEs
<ul style="list-style-type: none"> QTcF prolongation >500 ms. Absolute value of QTcF > 450 ms AND QTcF change from baseline >60 ms. New ST-T changes suggestive of myocardial ischemia. New-onset LBBB (QRS complex >120 ms). New-onset right bundle branch block (QRS complex >120 ms). Symptomatic bradycardia. Asystole <ul style="list-style-type: none"> In awake, symptom-free participants in sinus rhythm, with documented asystolic pauses ≥ 3 seconds or any escape rate <40 bpm, or with an escape rhythm that is below the AV node; In awake, symptom-free participants with atrial fibrillation and bradycardia with 1 or more asystolic pauses of at least 5 seconds or longer. Atrial flutter or fibrillation, with rapid ventricular response rate: rapid = rate >120 bpm.

- Sustained supraventricular tachycardia (rate >120 bpm) (“sustained” = short duration with relevant symptoms or lasting >1 minute).
- Ventricular rhythms >30 seconds’ duration, including idioventricular rhythm (HR <40 bpm), accelerated idioventricular rhythm (HR >40 bpm to <100 bpm), and monomorphic/polymorphic ventricular tachycardia (HR >100 bpm [such as torsades de pointes]).
- Type II second-degree (Mobitz II) AV block.
- Complete (third-degree) heart block.

ECG Findings That Qualify as SAEs

- Change in pattern suggestive of new myocardial infarction.
- Sustained ventricular tachyarrhythmias (>30-seconds duration).
- Second- or third-degree AV block requiring pacemaker placement.
- Asystolic pauses requiring pacemaker placement.
- Atrial flutter or fibrillation with rapid ventricular response requiring cardioversion.
- Ventricular fibrillation/flutter.
- At the discretion of the investigator, any arrhythmia classified as an adverse experience.

The major events of potential clinical concern listed above are recommended as “alerts” or notifications from the core ECG laboratory to the investigator and Pfizer study team, and not to be considered as all-inclusive of what is to be reported as AEs/SAEs.

10.9. Appendix 9: Prohibited Concomitant Medications That May Result in DDI

CCI [REDACTED]. Therefore, as outlined in [Section 5.2](#) and [Section 6.9](#), use of prescription or nonprescription drugs and dietary and herbal supplements that are CCI [REDACTED] are prohibited within 14 days plus 5 half-lives prior to the first dose of study intervention.

A non-exhaustive list of CCI [REDACTED] is below. Because this is not an all-inclusive list, site staff should consult with the sponsor or designee with any questions regarding potential DDI. The Pfizer study team is to be notified of any prohibited medications taken during the study.

CCI [REDACTED]

090177e19dabb673\Approved\Approved On: 07-Jun-2023 17:00 (GMT)

CCI

In a situation where appropriate medical care of a participant requires the use of a prohibited CCI [REDACTED]
CCI [REDACTED]: These medications are not permitted in the study except in emergency situations requiring no more than one day of administration. Topical application of antimicrobial and antifungal medications is permitted.

This list of drugs prohibited for potential DDI concerns may be revised during the course of the study with written notification from sponsor, to include or exclude specific drugs or drug categories for various reasons (eg, emerging DDI results for the IMP, availability of new information in literature on the DDI potential of other drugs), if the overall benefit:risk assessment is not impacted or if the changes do not significantly impact the safety of participants or the scientific value of the trial.

10.10. Appendix 10: Abbreviations

The following is a list of abbreviations that may be used in the protocol.

Abbreviation	Term
A1 to A3	albuminuria (KDIGO albuminuria severity standardization)
Abs	absolute
ACC	acetyl-CoA carboxylase
ADL	activity/activities of daily living
ADP	adenosine diphosphate
AE	adverse event
AKI	acute kidney injury
ALT	alanine aminotransferase
AMP	adenosine monophosphate
AMPK	AMP-activated protein kinase
AMPK γ 3	5'-AMP-activated protein kinase subunit gamma-3
ANOVA	analysis of variance
AST	aspartate aminotransferase
ATP	Adenosine triphosphate
AUC	area under the concentration-time curve
AUC ₂₄	area under the concentration-time curve from time 0 to 24 hours
AUC _{inf}	area under the concentration-time curve from time 0 to infinity
AUC _{inf} (dn)	dose normalized AUC _{inf}
AUC _{last}	area under the concentration-time curve from 0 to time of last measurable concentration
AUC _{last} (dn)	dose normalized AUC _{last}
AV	atrioventricular
AxMP	auxiliary medicinal product
BBS	Biospecimen Banking System
CCI	
BMI	body mass index
BP	blood pressure
bpm	beats per minute
C _{eff}	Efficacious concentration
CFR	Code of Federal Regulations
CIOMS	Council for International Organizations of Medical Sciences
CK	creatinine kinase
CKD-EPI	chronic kidney disease epidemiology
CL/F	apparent clearance
C _{last}	the predicted plasma concentration at the last quantifiable timepoint estimated from the log-linear regression analysis
CCI	
C _{max}	maximum observed concentration
C _{max} (dn)	dose-normalized C _{max}

Abbreviation	Term
CNS	central nervous system
CO ₂	carbon dioxide (bicarbonate)
COVID-19	coronavirus disease 2019
CCI	
CRF	case report form
CRO	contract research organization
CRU	clinical research unit
CSR	Clinical Study Report
CT	clinical trial
CTIS	Clinical Trial Information System
CCI	
DCT	data collection tool
DDI	drug-drug interaction
DICI	drug-induced creatinine increase
DIKI	drug-induced kidney injury
DILI	drug-induced liver injury
DIO	diet induced obese
DNA	deoxyribonucleic acid
EC	ethics committee
ECC	emergency contact card
ECG	electrocardiogram or electrocardiography
eCrCl	estimated creatinine clearance
eCRF	electronic case report form
EDB	exposure during breastfeeding
E-DMC	External Data Monitoring Committee
EDP	exposure during pregnancy
EDR	extemporaneous dispensing record
eGFR	estimated glomerular filtration rate
eICD	electronic informed consent document
EMA	European Medicines Agency
eSAE	electronic serious adverse event
ET	early termination
EU	European Union
EudraCT	European Union Drug Regulating Authorities Clinical Trials (European Clinical Trials Database)
FDA	Food and Drug Administration
FIH	first in human
CCI	
FSH	follicle-stimulating hormone
$f_{u,p}$	fraction unbound in plasma
GCP	Good Clinical Practice
GGT	gamma-glutamyl transferase
GLP	Good Laboratory Practice

Abbreviation	Term
Hb	hemoglobin
HBcAb	hepatitis B core antibody
HBsAb	hepatitis B surface antibody
HBsAg	hepatitis B surface antigen
HCVAb	hepatitis C antibody
HEK	human embryonic kidney
HFpEF	heart failure with preserved ejection fraction
HIV	human immunodeficiency virus
hKI	humanized knock-in
HR	heart rate
HRT	hormone replacement therapy
IB	Investigator's Brochure
CCI	
ICD	informed consent document
ICH	International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use
ID	identification
IMP	investigational medicinal product
IND	Investigational New Drug
INR	international normalized ratio
IPAL	Investigational Product Accountability Log
IRB	Institutional Review Board
IV	Intravenous(ly)
K ₂ EDTA	dipotassium ethylenediaminetetraacetic acid
KDIGO	Kidney Disease Improving Global Outcomes
KDOQI	Kidney Disease Outcomes Quality Initiative
kel	first-order elimination rate constant
KI	knockin
KO	knockout
LBBB	left bundle branch block
LFT	liver function test
CCI	
MCH	mean corpuscular hemoglobin
MCHC	mean corpuscular hemoglobin concentration
MCV	mean corpuscular volume
CCI	
MQI	medically qualified individual
NA	not applicable
NC	not calculated
ND	not done
NIMP	noninvestigational medicinal product
NOAEL	no observed adverse effect level
NOEL	no observed effect level

Abbreviation	Term
NS	no sample
CCI	
OCT	organic cation transporter
CCI	
Pbo	placebo
PD	pharmacodynamic(s)
PE	Physical Examination
CCI	
PGx	pharmacogenomic(s)
PI	principal investigator
PK	pharmacokinetic(s)
PO	by mouth
PR	pulse rate
PSSA	Pfizer's Serious Adverse Event Submission Assistant
PT	prothrombin time
PVC	premature ventricular contraction/complex
CCI	
QTc	corrected QT interval
QTcF	QTc corrected using Fridericia's formula
qual	qualitative
RBC	red blood cell
RNA	ribonucleic acid
RR	respiratory rate
SAE	serious adverse event
SAP	Statistical Analysis Plan
SAR	Serious Adverse Reaction
SC	subcutaneous
Screat	serum creatinine
Scys	serum cystatin C
SDD	spray dried dispersion
CCI	
SoA	schedule of activities
SOP	standard operating procedure
SRSD	Single Reference Safety Document
SUSAR	Suspected Unexpected Serious Adverse Reaction
t _½	terminal phase half-life
T bili	total bilirubin
THC	tetrahydrocannabinol
T _{max}	time to reach C _{max}
UACR	urine albumin/creatinine ratio
UGT	uridine 5'-diphospho-glucuronosyltransferase
ULN	upper limit of normal
US	United States

Abbreviation	Term
UTI	urinary tract infection
VO ₂	oxygen consumption
CCI	
V _z /F	apparent volume of distribution for extravascular dosing
WBC	white blood cell
WOCBP	woman/women of childbearing potential

11. REFERENCES

- ¹ Timmis A, Townsend N, Gale C, et al. European Society of Cardiology: Cardiovascular Disease Statistics 2017. *European Heart Journal* 2018; 39: 508-79.
- ² Bragazzi NL, Zhong W, Shu J, et al. Burden of heart failure and underlying causes in 195 countries and territories from 1990 to 2017. *European Journal of Preventive Cardiology*, 2021; 28: 1682-90.
- ³ Benjamin EJ, Muntner P, Alonso A, et al. Heart Disease and Stroke Statistics-2019 Update A Report From the American Heart Association. *Circulation*, 2019;139: E56-E528.
- ⁴ Dunlay SM, Roger VL, and M. M. Redfield. Epidemiology of heart failure with preserved ejection fraction. *Nat Rev Cardiol*, 2017;14: 591-602.
- ⁵ Tucker WJ, Nelson MD, Beaudry RI, et al. Impact of Exercise Training on Peak Oxygen Uptake and its Determinants in Heart Failure with Preserved Ejection Fraction. *Card Fail Rev* 2016; 2: 95-101.
- ⁶ Naylor M, Houstis NE, Namasivayam M, et al. Impaired Exercise Tolerance in Heart Failure With Preserved Ejection Fraction: Quantification of Multiorgan System Reserve Capacity. *JACC Heart Fail* 2020; 8: 605-17.
- ⁷ Winzer, E. B., A. Augstein, A. Schauer, et al. Impact of Different Training Modalities on Molecular Alterations in Skeletal Muscle of Patients With Heart Failure With Preserved Ejection Fraction: A Substudy of the OptimEx Trial. *Circ Heart Fail* 2022;15: e009124.
- ⁸ Herzig, S and Shaw RJ. AMPK: guardian of metabolism and mitochondrial homeostasis. *Nat Rev Mol Cell Biol*, 2018;19: 121-35.
- ⁹ Xiao BR, Heath R, Saiu P, et al. Structural basis for AMP binding to mammalian AMP-activated protein kinase. *Nature* 2007; 449: 496-500.
- ¹⁰ Carling D, Zammit VA, Hardie DG. A Common Bicyclic Protein-Kinase Cascade Inactivates the Regulatory Enzymes of Fatty-Acid and Cholesterol-Biosynthesis, *Febs Letters*, 1987; 223: 217-22.
- ¹¹ Watt MJ, Holmes AG, Pinnamaneni SK, et al. Regulation of HSL serine phosphorylation in skeletal muscle and adipose tissue. *Am J Physiol Endocrinol Metab* 2006; 290: E500-8.

- 12 Sakamoto K and Holman GD. Emerging role for AS160/TBC1D4 and TBC1D1 in the regulation of GLUT4 traffic. *American Journal of Physiology-Endocrinology and Metabolism* 2008; 295: E29-E37.
- 13 Zong H, Ren JM, Young LH, et al. 2002. AMP kinase is required for mitochondrial biogenesis in skeletal muscle in response to chronic energy deprivation. *Proc Natl Acad Sci USA* 2002; 99: 15983-87.
- 14 Jager S, Handschin C, St-Pierre J, et al. AMP-activated protein kinase (AMPK) action in skeletal muscle via direct phosphorylation of PGC-1alpha. *Proc Natl Acad Sci USA*, 2007;104: 12017-22.
- 15 Wojtaszewski JF, Birk JB, Frosig C, et al. 5'AMP activated protein kinase expression in human skeletal muscle: effects of strength training and type 2 diabetes. *J Physiol*, 2005; 564: 563-73.
- 16 Kjobsted R, Hingst JR, Fentz J, et al. AMPK in skeletal muscle function and metabolism. *FASEB J*, 2018; 32: 1741-77.
- 17 Mahlapuu M, Johansson C, Lindgren K, et al. Expression profiling of the gamma-subunit isoforms of AMP-activated protein kinase suggests a major role for gamma3 in white skeletal muscle. *Am J Physiol Endocrinol Metab*, 2004;286: E194-200.
- 18 Birk JB and Wojtaszewski JFP. Predominant alpha2/beta2/gamma3 AMPK activation during exercise in human skeletal muscle. *J Physiol*, 2006; 577: 1021-32.
- 19 Steinberg GR and Carling D. AMP-activated protein kinase: the current landscape for drug development. *Nat Rev Drug Discov*, 2019; 18: 527-51.
- 20 Myers RW, Guan HP, Ehrhart J, et al. Systemic pan-AMPK activator MK-8722 improves glucose homeostasis but induces cardiac hypertrophy. *Science*, 2017; 357: 507-11.
- 21 Costford SR, Kavaslar N, Ahituv N, et al. Gain-of-function R225W mutation in human AMPKgamma(3) causing increased glycogen and decreased triglyceride in skeletal muscle. *PLoS One*, 2007; 2: e903.
- 22 Crawford S, Costford S, Aguer C, et al. Naturally occurring R225W mutation of the gene encoding AMP-activated protein kinase (AMPK)gamma(3) results in increased oxidative capacity and glucose uptake in human primary myotubes. *Diabetologia*, 2010; 53: 1986-97.
- 23 Inker LA, Eneanya ND, Coresh J, et al. New Creatinine- and Cystatin C-Based Equations to Estimate GFR without Race. *N Engl J Med*. 2021;385(19):1737-49.