

# Phase I dose-escalation study of oral administration of S55746 in patients with B-Cell Non-Hodgkin Lymphoma

<b>Submission date</b> 31/01/2014	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 21/03/2014	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 22/11/2019	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Not provided at time of registration and not expected to be available in the future

## Contact information

### Type(s)

Scientific

### Contact name

Prof Steven Le Guill

### Contact details

Université de Nantes, Hotel-Dieu  
Service dhématologie clinique  
Place Alexis Ricordeau  
Nantes  
France  
44093

## Additional identifiers

### Clinical Trials Information System (CTIS)

2013-003779-36

### ClinicalTrials.gov (NCT)

NCT02920697

### Protocol serial number

CL1-55746-001

# Study information

## Scientific Title

Phase I dose-escalation study of oral administration of the selective Bcl2 inhibitor S55746 in patients with refractory or relapsed Chronic Lymphocytic Leukaemia and B-Cell Non-Hodgkin Lymphoma

## Study objectives

To determine the safety profile and tolerability and establish the recommended Phase II dose of S55746.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Ethics approval was obtained before recruitment of the first participants

## Study design

Phase I dose-escalation study non-randomized trial

## Primary study design

Interventional

## Study type(s)

Treatment

## Health condition(s) or problem(s) studied

Chronic Lymphocytic Leukaemia (CLL) and B-Cell Non-Hodgkin Lymphoma (NHL) including Follicular Lymphoma (FL), Mantle Cell Lymphoma (MCL), Diffuse Large B-Cell Lymphoma, Small Lymphocytic Lymphoma, Marginal Zone Lymphoma and Multiple myeloma (MM)

## Interventions

Current interventions as of 13/01/2017:

Film-coated tablets containing 50 mg or 100mg of S55746.

This trial is a dose escalation trial. A panel of doses from 50 to 1500 mg could be tested.

Patients, who clearly benefiting from the study treatment, and in the opinion of the investigator it is in the patient's best interest to continue S 55746 may remain on study treatment until evidence of progressive disease, the occurrence of unacceptable toxicity, death or investigator's /patient's decision. Total number of cycles is at the discretion of the investigator.

Interventions from 07/09/2016 to 13/01/2017:

Film-coated tablets containing 50 mg or 100 mg of S55746.

This trial is a dose escalation trial. A modified version of the Continual Reassessment Method (mCRM) will be used for dose allocation process and performed in each arm independently. A panel of doses from 50 to 1500 mg could be tested according to the dose allocation process of the mCRM. Intermediate doses could be tested if needed. Patients will receive at least 2 cycles of treatment. Patients will receive the treatment(s) as long as, in the investigators opinion, they receive benefit according to tumour evaluation. Maximum number of cycles is at the discretion of the investigator.

Original interventions:

Film-coated tablets containing 50 mg or 100 mg of S55746.

This trial is a dose escalation trial. A modified version of the Continual Reassessment Method (mCRM) will be used for dose allocation process and performed in each arm independently. A panel of doses from 50 to 1000 mg could be tested according to the dose allocation process of the mCRM. Doses over 1000 mg and intermediate doses could be tested if needed. Patients will receive at least 2 cycles of treatment. Patients will receive the treatment(s) as long as, in the investigators opinion, they receive benefit according to tumour evaluation. Maximum number of cycles is at the discretion of the investigator.

## **Intervention Type**

Drug

## **Phase**

Phase I

## **Drug/device/biological/vaccine name(s)**

S55746

## **Primary outcome(s)**

Current primary outcome measures as of 13/01/2017:

1. Dose Limiting Toxicities (DLTs) in cycle 1
2. Maximum Tolerated Dose, defined as the highest drug dosage that is unlikely (<25% posterior probability) to cause DLTs in more than 33% of the treated patients in the first cycle of S 055746 treatment
3. Safety profile at each visit, assessed by adverse events monitoring, laboratory tests, vital signs and performance status, clinical examination and ECG parameters

Previous primary outcome measures:

1. Maximum Tolerated Dose will be evaluated following Dose Limiting Toxicities at the end of cycle 1 for a given dose measured by adverse events monitoring
2. Safety profile at each visit measured by adverse events monitoring, ECG, cardiac function parameters, physical examination, performance status, vital signs and laboratory tests

## **Key secondary outcome(s)**

Current secondary outcome measures as of 13/03/2018:

1. Pharmacokinetic parameters on blood sample during cycles 1 and 2
2. Preliminary anti-leukaemic activity of S 055746 throughout the study (blood, BMA and biopsy if available)

Previous secondary outcome measures from 13/01/2017 to 13/03/2018:

1. Pharmacokinetic parameters on blood sample during cycles 1 and 2
2. Pharmacodynamic parameters on blood, bone marrow aspiration (BMA) and biopsy if available from cycle 1 to cycle 3 and in any time in case of suspicion of disease progression
3. Optional pharmacogenomic analysis on Cycle 1, D1 pre-dose
4. Preliminary anti-leukaemic activity of S 055746 throughout the study (blood, BMA and biopsy if available)

Secondary outcome measures from 07/09/2016 to 13/01/2017:

1. Pharmacokinetic parameters on blood and urine samples during cycles 1 and 2
2. Assess the influence of food intake on PK profile of S55746

3. Pharmacodynamic parameters from blood samples during cycle 1 or from archival and optional biopsy in case of pharmacodynamic after objective response (complete or partial response)
4. Pharmacogenomic analysis on a blood sample during cycle 1
5. Tumour response based on clinical and radiological evaluation, throughout the study

Original secondary outcome measures:

1. Pharmacokinetics parameters on blood and urine samples during cycles 1 and 2
2. Pharmacodynamics parameters on blood samples and optional biopsy during cycle 1
3. Pharmacogenomics analysis on a blood sample during cycle 1
4. Tumour response based on clinical and radiological evaluation, throughout the study

## **Completion date**

22/10/2018

## **Eligibility**

### **Key inclusion criteria**

Current inclusion criteria:

1. Women or men aged  $\geq 18$  years
2. Patients with a measurable histologically confirmed FL, MCL, DLBCL, SLL and MZL (Arm A) or patients with an evaluable immunophenotypically confirmed CLL (Arm B), or patients with a measurable MM t(11;14) (arm A expansion part) according to IMWG criteria
3. Previously treated relapsed after or refractory disease to standard treatments, and require treatment in the opinion of the investigator
4. Estimated life expectancy  $> 12$  weeks
5. WHO performance status 0-2
6. Adequate bone marrow, renal and hepatic functions
7. No evidence or treatment for another malignancy within 2 years prior to study entry. Curatively treated non-melanoma skin cancer, in situ carcinoma, or cervical intraepithelial neoplasia is allowed

Additional eligibility criteria for food interaction cohort:

8. Patients with B-cell NHL and defined as low risk of TLS according to published criteria (Cairo et al., 2010)
9. Patients not having taken any treatment likely to have an impact on S55746 absorption (antacids, antisecretory including H<sub>2</sub>-receptor antagonists and proton pump inhibitors) within 7 days prior to first S55746 intake

Previous inclusion criteria as of 13/01/2017:

1. Women or men aged  $\geq 18$  years
2. Patients with a measurable histologically confirmed FL, MCL, DLBCL, SLL and MZL (Arm A) or patients with an evaluable immunophenotypically confirmed CLL (Arm B), or patients with a measurable MM t(11;14) (arm A expansion part) according to IMWG criteria
3. Previously treated relapsed after or refractory disease to standard treatments, and require treatment in the opinion of the investigator
4. Estimated life expectancy  $> 12$  weeks
5. WHO performance status 0-2
6. Adequate bone marrow, renal and hepatic functions, normal coagulation profile
7. No evidence or treatment for another malignancy within 2 years prior to study entry. Curatively treated non-melanoma skin cancer, in situ carcinoma, or cervical intraepithelial neoplasia is allowed

Additional eligibility criteria for food interaction cohort:

8. Patients with B-cell NHL and defined as low risk of TLS according to published criteria (Cairo et al., 2010)
9. Patients not having taken any treatment likely to have an impact on S55746 absorption (antacids, antisecretory including H2-receptor antagonists and proton pump inhibitors) within 7 days prior to first S55746 intake

Inclusion criteria from 07/09/2016 to 13/01/2017:

1. Women or men aged  $\geq 18$  years
2. Patients with a measurable histologically confirmed FL, MCL, DLBCL, SLL and MZL (Arm A) or patients with an evaluable immunophenotypically confirmed CLL (Arm B), or patients with a measurable MM t(11;14) (arm A expansion part) according to IMWG criteria
3. Previously treated relapsed after or refractory disease to standard treatments, and require treatment in the opinion of the investigator
4. Estimated life expectancy  $> 12$  weeks
5. WHO performance status 0-1
6. Adequate bone marrow, renal and hepatic functions, normal coagulation profile
7. No evidence or treatment for another malignancy within 2 years prior to study entry. Curatively treated non-melanoma skin cancer, in situ carcinoma, or cervical intraepithelial neoplasia is allowed

Additional eligibility criteria for food interaction cohort:

8. Patients with B-cell NHL and defined as low risk of TLS according to published criteria (Cairo et al., 2010).
9. Patients not having taken any treatment likely to have an impact on S55746 absorption (antacids, antisecretory including H2-receptor antagonists and proton pump inhibitors) within 7 days prior to first S55746 intake.

Original inclusion criteria:

1. Women or men aged  $\geq 18$  years
2. Patients with a measurable histologically confirmed and previously treated FL, MCL, DLBCL, SLL and MZL or patients with an evaluable immunophenotypically confirmed and previously treated CLL
3. Relapsed after or refractory disease to standard treatments, and required treatment in the opinion of the investigator
4. Estimated life expectancy  $> 12$  weeks
5. WHO performance status 0-1
6. Adequate bone marrow, renal and hepatic functions, normal coagulation profile
7. Kaliemia and calcemia within the local normal range
8. No evidence or treatment for another malignancy within 2 years prior to study entry. Curatively treated non-melanoma skin cancer, in situ carcinoma, or cervical intraepithelial neoplasia is allowed

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

## Lower age limit

18 years

## Sex

All

## Key exclusion criteria

Current inclusion criteria:

1. Previous treatment with a BH3 mimetic
2. Previous chemotherapy within 3 weeks before first intake
3. Radioimmunotherapy, radiotherapy within 8 weeks before first intake
4. Major surgery within 3 weeks before first day of study drug dosing
5. Corticosteroids > 20 mg prednisone equivalent per day within 7 days before first intake
6. Anticoagulant oral drugs, aspirin > 325 mg/day within 7 days prior to first S 55746 intake
7. Positive direct antiglobulin test (Coombs test) and haptoglobin below normal value
8. Prior allogenic stem cell transplant
9. Autologous stem cell transplant within 3 months before the first intake of S55746.
10. NHL patients diagnosed with Post-Transplant Lymphoproliferative Disease, Burkitt's lymphoma, Burkitt-like lymphoma, or lymphoblastic lymphoma/leukaemia
11. Human immunodeficiency virus (HIV)
12. Known acute or chronic hepatitis B or hepatitis C
13. Impaired cardiac function
14. Medications known to prolong QTc interval
15. History or/ clinically suspicious for cancer-related CNS disease
16. Solitary extramedullary plasmacytoma
17. Strong or moderate CYP3A4 inhibitors/inducers (treatment, food or drink products)
18. Treatment highly metabolized by the CYP3A4 or CYP2D6 and/or substrates with a narrow therapeutic index, multienzyme and/or OATP substrates and/or P-gp, or herbal products.
19. Known hypersensitivity to rasburicase
20. G6PD deficiency and other cellular metabolic disorders known to cause haemolytic anaemia
21. Laboratory Signs of Tumor Lysis Syndrome
22. Patients receiving proton pump inhibitor

Previous exclusion criteria as of 13/01/2017:

1. Previous treatment with a BH3 mimetic
2. Previous chemotherapy within 3 weeks before first intake
3. Radioimmunotherapy, radiotherapy within 8 weeks before first intake
4. Major surgery within 3 weeks before first day of study drug dosing
5. Corticosteroids > 20 mg prednisone equivalent per day within 7 days before first intake
6. Anticoagulant oral drugs, aspirin > 325 mg/day
7. Positive direct antiglobulin test (Coombs test) and haptoglobin below normal value
8. Prior allogenic stem cell transplant
9. Autologous stem cell transplant within 3 months before the first intake of S55746.
10. NHL patients diagnosed with Post-Transplant Lymphoproliferative Disease, Burkitt's lymphoma, Burkitt-like lymphoma, or lymphoblastic lymphoma/leukaemia
11. Human immunodeficiency virus (HIV)
12. Known acute or chronic hepatitis B or hepatitis C
13. Impaired cardiac function
14. Medications known to prolong QTc interval
15. History or/ clinically suspicious for cancer-related CNS disease
16. Solitary extramedullary plasmacytoma

17. Strong or moderate CYP3A4 inhibitors/inducers (treatment, food or drink products)
18. Treatment highly metabolized by the CYP3A4 or CYP2D6 and/or substrates with a narrow therapeutic index, multienzyme and/or OATP substrates or herbal products.
19. Known hypersensitivity to rasburicase
20. G6PD deficiency and other cellular metabolic disorders known to cause haemolytic anaemia
21. Laboratory Signs of Tumor Lysis Syndrome
22. Patients receiving proton pump inhibitor

Exclusion criteria from 07/09/2016 to 13/01/2017:

1. Previous treatment with a BH3 mimetic
2. Previous chemotherapy within 3 weeks before first intake
3. Radioimmunotherapy, radiotherapy within 8 weeks before first intake
4. Major surgery within 3 weeks before first day of study drug dosing
5. Corticosteroids > 20 mg prednisone equivalent per day within 7 days before first intake
6. Anticoagulant oral drugs, aspirin > 325 mg/day
7. Positive direct antiglobulin test (Coombs test) and haptoglobin below normal value
8. Prior allogenic stem cell transplant
9. NHL patients diagnosed with Post-Transplant Lymphoproliferative Disease, Burkitt's lymphoma, Burkitt-like lymphoma, or lymphoblastic lymphoma/leukaemia
10. Human immunodeficiency virus (HIV)
11. Known acute or chronic hepatitis B or hepatitis C
12. Impaired cardiac function
13. Medications known to prolong QTc interval
14. History or/ clinically suspicious for cancer-related CNS disease
15. Solitary extramedullary plasmacytoma
16. Strong or moderate CYP3A4 inhibitors/inducers (treatment, food or drink products)
17. Treatment highly metabolized by the CYP3A4 or CYP2D6 and/or substrates with a narrow therapeutic index, multienzyme and/or OATP substrates or herbal products.
18. Known hypersensitivity to rasburicase
19. G6PD deficiency and other cellular metabolic disorders known to cause haemolytic anaemia
20. Laboratory Signs of Tumor Lysis Syndrome

Original exclusion criteria:

1. Previous treatment with a BH3 mimetic
2. Previous chemotherapy within 3 weeks before first intake
3. Radioimmunotherapy, radiotherapy within 8 weeks before first intake
4. Major surgery within 3 weeks before first day of study drug dosing
5. Corticosteroids > 20 mg prednisone equivalent per day within 7 days before first intake
6. Anticoagulant oral drugs, aspirin > 325 mg/day
7. Positive direct antiglobulin test (Coombs test) and haptoglobin below normal value
8. CLL and NHL prior allogenic stem cell transplant
9. Autologous stem cell transplant within 3 months before first intake
10. NHL patients diagnosed with Post-Transplant Lymphoproliferative Disease, Burkitt's lymphoma, Burkitt-like lymphoma, or lymphoblastic lymphoma/leukaemia
11. Human immunodeficiency virus (HIV)
12. Known acute or chronic hepatitis B or hepatitis C
13. Impaired cardiac function
14. Medications known to prolong QTc interval
15. History or/ clinically suspicious for cancer-related CNS disease
16. Treatment, food or drink products known to inhibit or induce CYP3A4

- 17. Treatment highly metabolized by the CYP3A4 and with a narrow therapeutic index
- 18. Known hypersensitivity to rasburicase
- 19. G6PD deficiency and other cellular metabolic disorders known to cause haemolytic anaemia

**Date of first enrolment**

26/03/2014

**Date of final enrolment**

26/12/2017

## **Locations**

**Countries of recruitment**

United Kingdom

England

Australia

France

Germany

Hungary

Korea, South

Poland

Singapore

**Study participating centre**

**University Hospital of Nantes (Université de Nantes)**

Hôtel-Dieu

Nantes

France

44093

**Study participating centre**

**Claude Huriez Hospital (Hospital Claude Huriez)**

Rue Michel Polonowski

Lille

France

59000



**Study participating centre**  
**Gustave Roussy Institute of Oncology**  
114 Rue Edouard Vaillant  
Villejuif  
France  
94800

**Study participating centre**  
**Lyon-Sud Hospital (Centre Hospitalier Lyon-Sud)**  
165 Chemin du Grand Revoyet  
Pierre-Bénite  
France  
69310

**Study participating centre**  
**Schwabing Hospital**  
Kölner Platz 1  
München  
Germany  
80804

**Study participating centre**  
**University Hospital of Ulm**  
Ulm  
Germany  
-

**Study participating centre**  
**University Hospital Carl Gustav Carus**  
Dresden  
Germany  
-

**Study participating centre**  
**National Cancer Center (NCC)**  
11 Hospital Drive  
Singapore  
169610

**Study participating centre**  
**National University Cancer Institute**  
Singapore  
119074

**Study participating centre**  
**National Institute of Oncology**  
1122 Budapest Ráth György u. 7-9.  
Hungary

-

**Study participating centre**  
**CRU Hungary Kft**  
Miskolc  
Hungary

-

**Study participating centre**  
**Warsaw Institute of Oncology**  
ul. Roentgena 5  
Warsaw  
Poland

-

**Study participating centre**  
**Medical University of Warsaw**  
Żwirki i Wigury 61  
Warszawa  
Warsaw  
Poland

-

**Study participating centre**  
**St. Mary's Hospital**  
Seoul  
Korea, South  
06591

**Study participating centre**

**Severance Hospital**

50-1 Yonsei-ro, Seodaemun-gu

Seoul

Korea, South

-

**Study participating centre**

**University College London Hospitals**

London

United Kingdom

-

**Study participating centre**

**Freeman Hospital**

Freeman Rd

High Heaton

Newcastle upon Tyne

United Kingdom

NE7 7DN

**Study participating centre**

**The Alfred Hospital Malignant Haematology & Stem Cell Transplantation Services**

Level 1, South Block

55 Commercial Road

Melbourne

Australia

VIC 3004

## Sponsor information

**Organisation**

Institut de Recherches Internationales Servier (France)

**ROR**

<https://ror.org/034e7c066>

## Funder(s)

**Funder type**

Industry

## Funder Name

ADIR

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from <https://clinicaltrials.servier.com> after Marketing Authorisation has been granted.

A plain English summary of results has been uploaded as an additional file (ISRCTN04804337\_ResultsPlainEnglish\_16Sep2019)

Previous publication and dissemination plan:

Summary results and a lay summary will be published on [www.clinicaltrials.servier.com](http://www.clinicaltrials.servier.com) within 12 months after the end of the study.

IPD sharing plan: The datasets generated during and/or analysed during the current study will be available upon request from [www.clinicaltrials.servier.com](http://www.clinicaltrials.servier.com) after the Marketing Authorisation has been granted.

## IPD sharing plan summary

Other

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		16/09/2019	22/11/2019	Yes	No
<a href="#">Basic results</a>		16/09/2019	22/11/2019	No	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes