Supplementary file 1: Search terms and flowcharts

Assessing scientific soundness and translational value of animal studies on DPP4 inhibitors for treating type 2 diabetes mellitus

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A. Search terms

Human search terms

"Vildagliptin"[Mesh] AND (("placebos"[MeSH Terms] OR "placebos"[All Fields] OR "placebo"[All Fields]) AND controlled[All Fields]) AND (("glucose"[MeSH Terms] OR "glucose"[All Fields]) OR ("glycated hemoglobin a"[MeSH Terms] OR "glycated hemoglobin a"[All Fields] OR "hba1c"[All Fields])) AND Clinical Trial[ptyp] 62

'non insulin dependent diabetes mellitus'/exp AND 'vildagliptin'/exp AND ('glucose'/exp OR 'hemoglobin a1c'/exp) AND 'clinical trial'/exp AND placebo AND controlled AND ('human'/de OR 'randomized controlled trial'/de) AND 'article'/it AND 'placebo'/de

placebo | Completed Studies | Type 2 Diabetes | Vildagliptin | glucose OR HbA1c

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(("placebos"[MeSH Terms] OR "placebos"[All Fields] OR "placebo"[All Fields]) AND controlled[All Fields]) AND (("Sitagliptin Phosphate"[Mesh] AND "Diabetes Mellitus, Type 2"[Mesh]) AND ("Glucose"[Mesh] OR "Glycated Hemoglobin A"[Mesh])) AND Clinical Trial[ptyp] 86

'non insulin dependent diabetes mellitus'/exp AND 'sitagliptin'/exp AND ('glucose'/exp OR 'hemoglobin a1c'/exp) AND 'clinical trial'/exp AND placebo AND controlled AND ('human'/de OR 'randomized controlled trial'/de) AND 'article'/it AND 'placebo'/de

placebo | Completed Studies | Type 2 Diabetes | Sitagliptin | glucose OR HbA1c

//

(("placebos"[MeSH Terms] OR "placebos"[All Fields] OR "placebo"[All Fields]) AND controlled[All Fields]) AND ((alogliptin AND "Diabetes Mellitus, Type 2"[Mesh]) AND ("Glucose"[Mesh] OR "Glycated Hemoglobin A"[Mesh]))

'non insulin dependent diabetes mellitus'/exp AND 'alogliptin'/exp AND ('glucose'/exp OR 'hemoglobin a1c'/exp) AND 'clinical trial'/exp AND placebo AND controlled AND ('human'/de OR 'randomized controlled trial'/de) AND 'article'/it AND 'placebo'/de

placebo | Completed Studies | Type 2 Diabetes | Alogliptin | glucose OR HbA1c

//

(("placebos"[MeSH Terms] OR "placebos"[All Fields] OR "placebo"[All Fields]) AND controlled[All Fields]) AND ("linagliptin"[MeSH Terms] AND "Diabetes Mellitus, Type 2"[Mesh]) AND ("Glucose"[Mesh] OR "Glycated Hemoglobin A"[Mesh]) AND Clinical Trial[ptyp]

'non insulin dependent diabetes mellitus'/exp AND 'linagliptin'/exp AND ('glucose'/exp OR 'hemoglobin a1c'/exp) AND 'clinical trial'/exp AND placebo AND controlled AND ('human'/de OR 'randomized controlled trial'/de) AND 'article'/it AND 'placebo'/de

placebo | Completed Studies | Type 2 Diabetes | Linagliptin | glucose OR HbA1c

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(("placebos"[MeSH Terms] OR "placebos"[All Fields] OR "placebo"[All Fields]) AND controlled[All Fields]) AND ((("saxagliptin"[Supplementary Concept] OR "saxagliptin"[All Fields]) AND "Diabetes Mellitus, Type 2"[Mesh]) AND ("Glucose"[Mesh] OR "Glycated Hemoglobin A"[Mesh])) AND Clinical Trial[ptyp]

'non insulin dependent diabetes mellitus'/exp AND 'saxagliptin'/exp AND ('glucose'/exp OR 'hemoglobin a1c'/exp) AND 'clinical trial'/exp AND placebo AND controlled AND ('human'/de OR 'randomized controlled trial'/de) AND 'article'/it AND 'placebo'/de

placebo | Completed Studies | Type 2 Diabetes | Saxagliptin | glucose OR HbA1c

Animal search terms

Embase: sitagliptin AND animal experiment AND glucose OR hemoglobin a1c

PubMed: sitagliptin AND ("Hemoglobin A, Glycosylated"[Mesh] OR "Blood Glucose"[Mesh])) AND "animals"[MeSH Terms:noexp] AND (Animals[Mesh:noexp])

Web of Science: Topic=(sitagliptin) AND Topic=(blood glucose OR hemoglobin A) AND Topic=(animal). Search filter for animals suggested by Carlijn R Hooijmans.

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Embase: saxagliptin AND animal experiment AND glucose OR hemoglobin a1c
PubMed: saxagliptin AND ("Hemoglobin A, Glycosylated"[Mesh] OR "Blood Glucose"[Mesh])) AND "animals"[MeSH Terms:noexp] AND (Animals[Mesh:noexp])
Web of Science: Topic=(saxagliptin) AND Topic=(blood glucose OR hemoglobin A) AND Topic=(animal). Search filter for animals suggested by Carlijn R Hooijmans.
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Embase: linagliptin AND animal experiment AND glucose OR hemoglobin a1c
PubMed: linagliptin AND ("Hemoglobin A, Glycosylated"[Mesh] OR "Blood Glucose"[Mesh])) AND "animals"[MeSH Terms:noexp] AND (Animals[Mesh:noexp])
Web of Science: Topic=(linagliptin) AND Topic=(blood glucose OR hemoglobin A) AND Topic=(animal). Search filter for animals suggested by Carlijn R Hooijmans.
//
Embase: vildagliptin AND animal experiment AND glucose OR hemoglobin a1c
PubMed: vildagliptin AND ("Hemoglobin A, Glycosylated"[Mesh] OR "Blood Glucose"[Mesh])) AND "animals"[MeSH Terms:noexp] AND (Animals[Mesh:noexp])
Web of Science: Topic=(vilagliptin) AND Topic=(blood glucose OR hemoglobin A) AND Topic=(animal). Search filter for animals suggested by Carlijn R Hooijmans.
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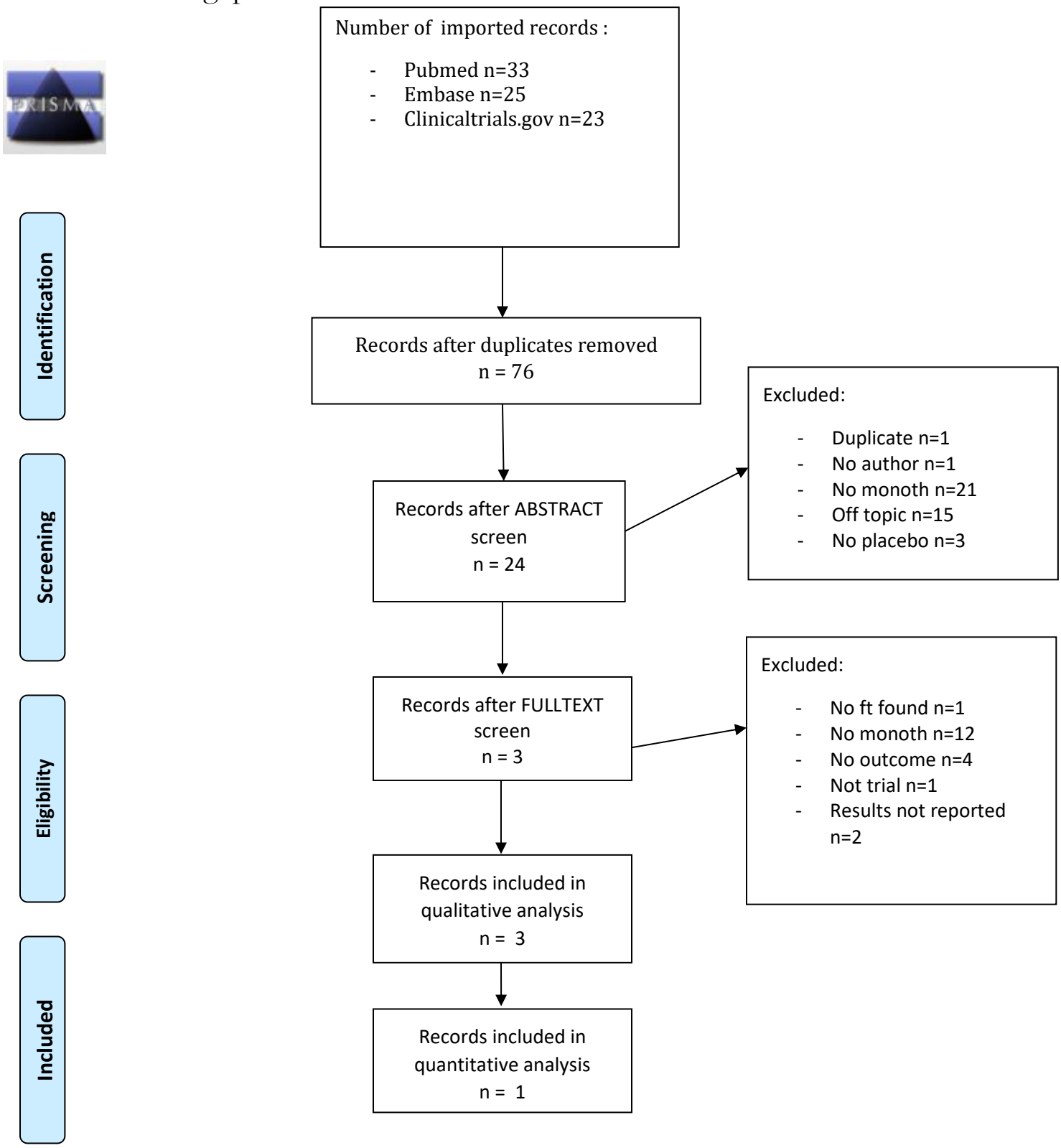
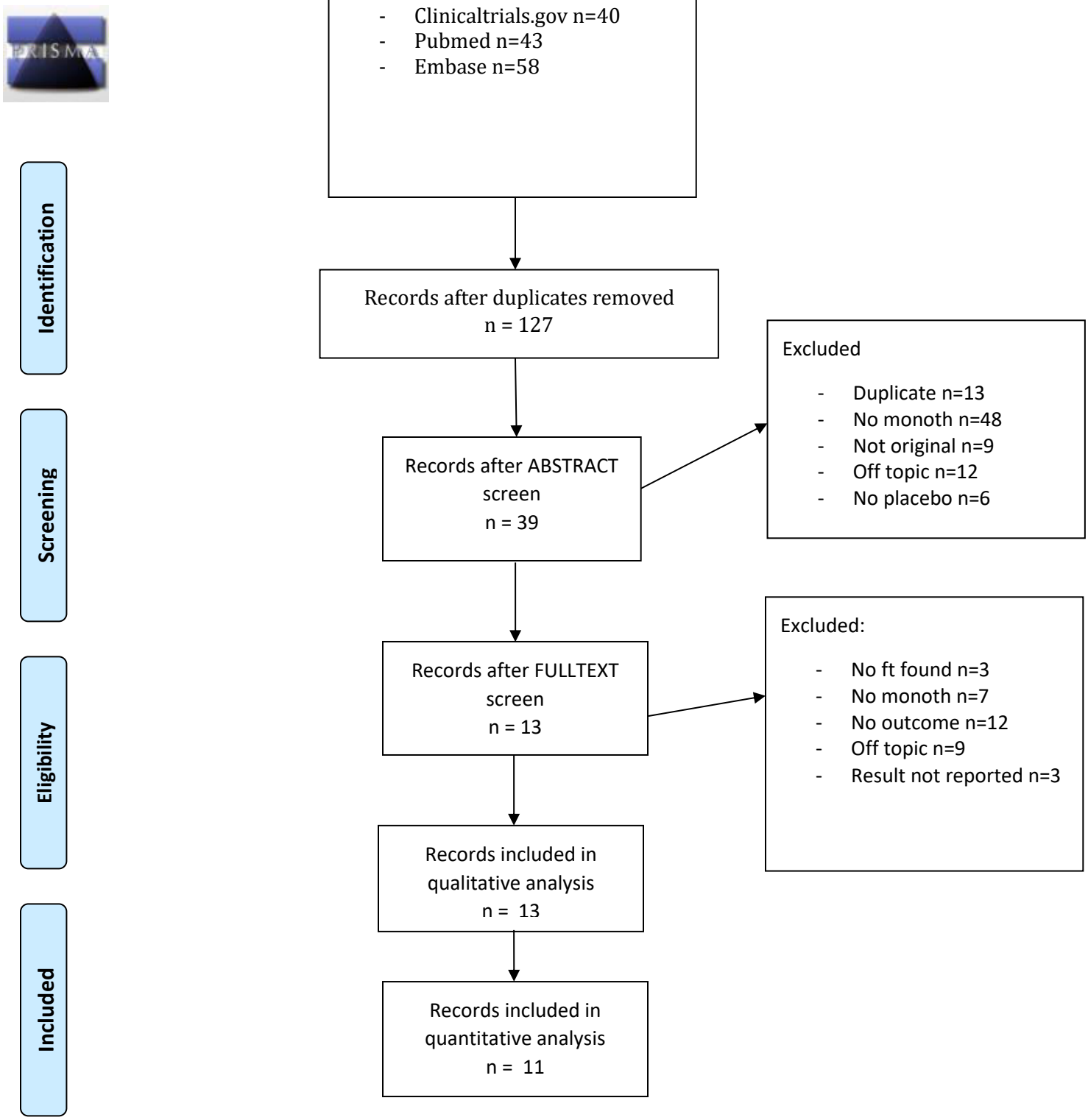
Embase: alogliptin AND animal experiment AND glucose OR hemoglobin a1c
PubMed: alogliptin AND ("Hemoglobin A, Glycosylated"[Mesh] OR "Blood Glucose"[Mesh])) AND "animals"[MeSH Terms:noexp] AND (Animals[Mesh:noexp])
Web of Science: Topic=(alogliptin) AND Topic=(blood glucose OR hemoglobin A) AND Topic=(animal). Search filter for animals suggested by Carlijn R Hooijmans

B. Flow charts

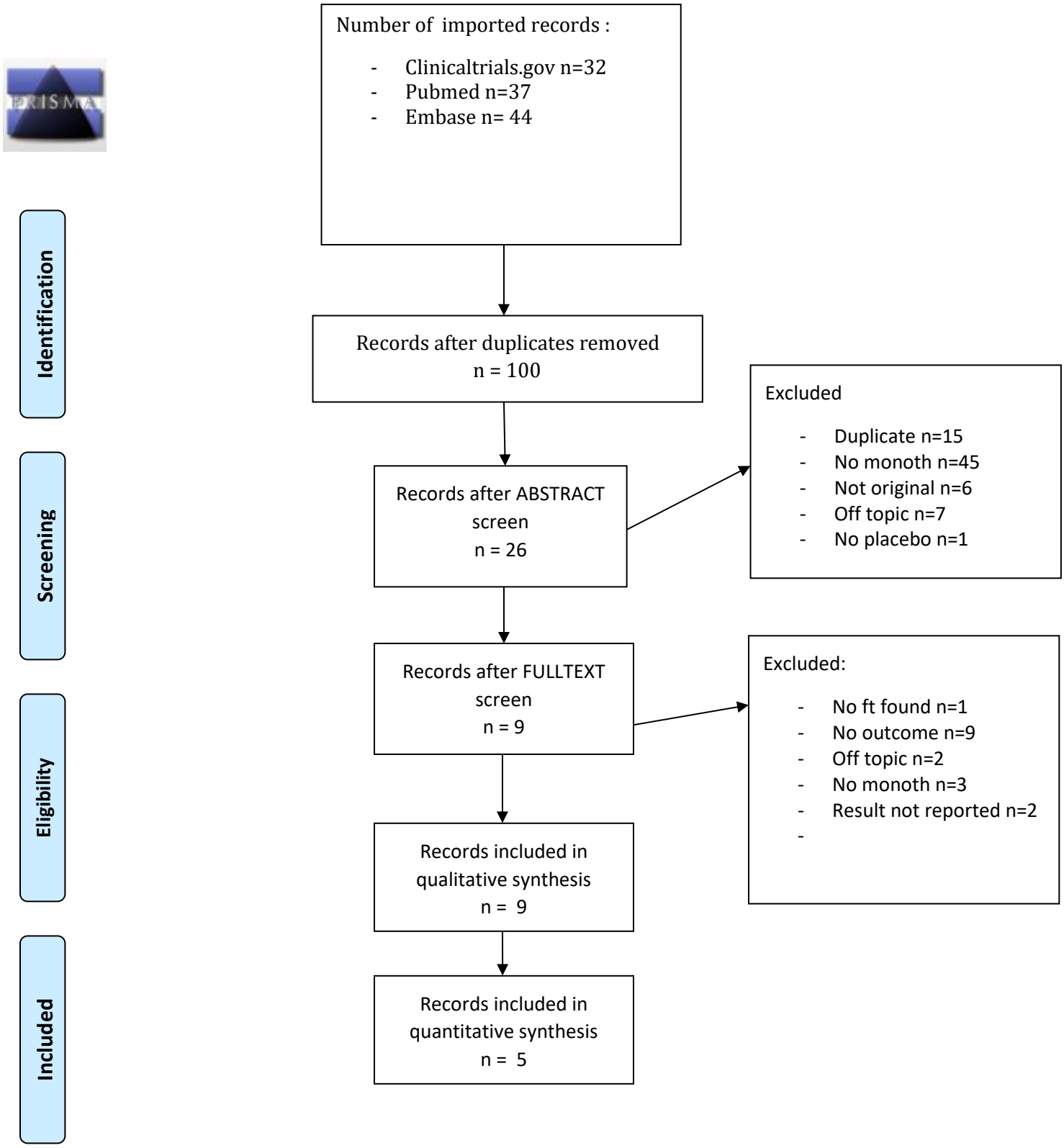
Alogliptin



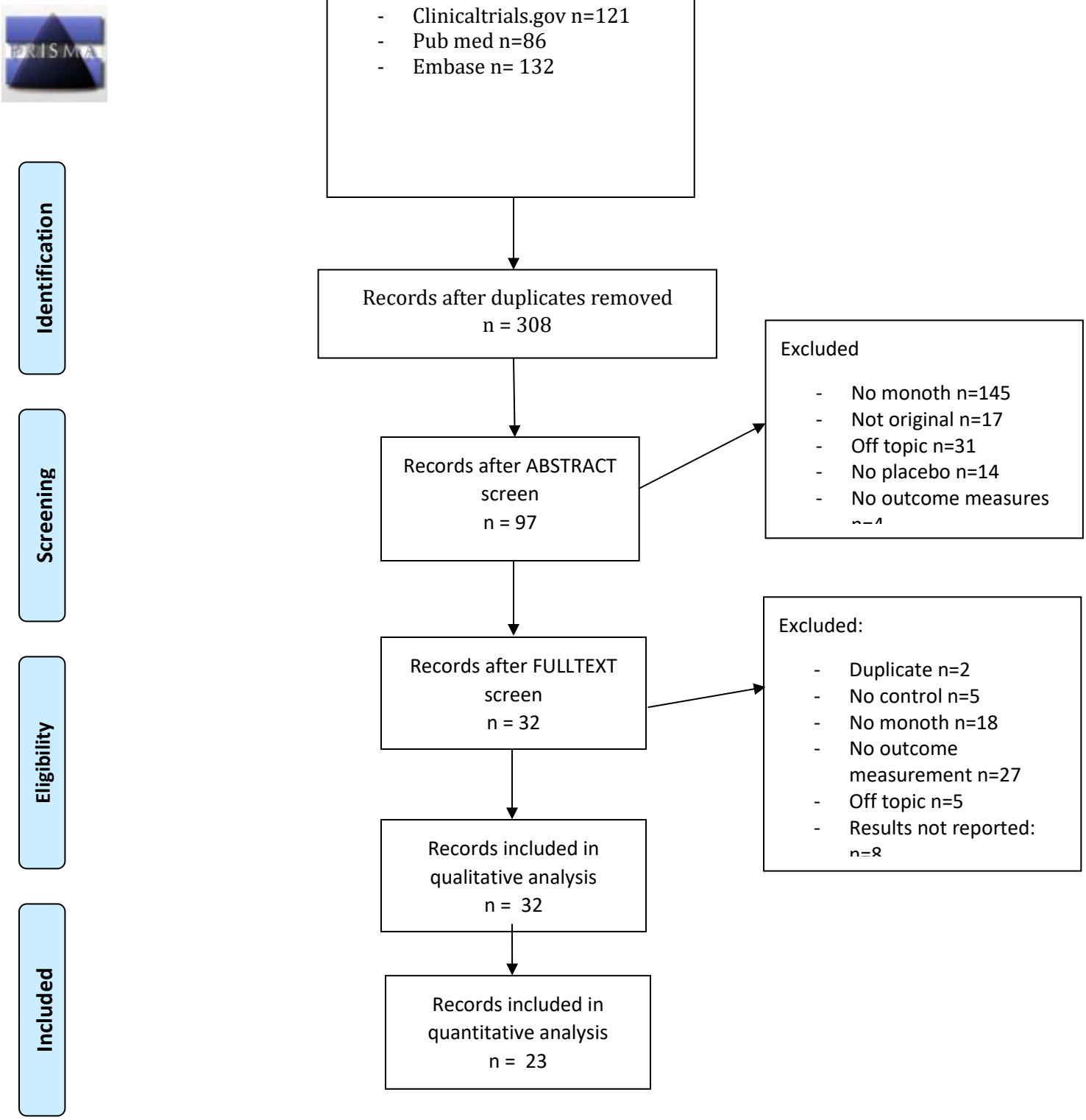
Linagliptin



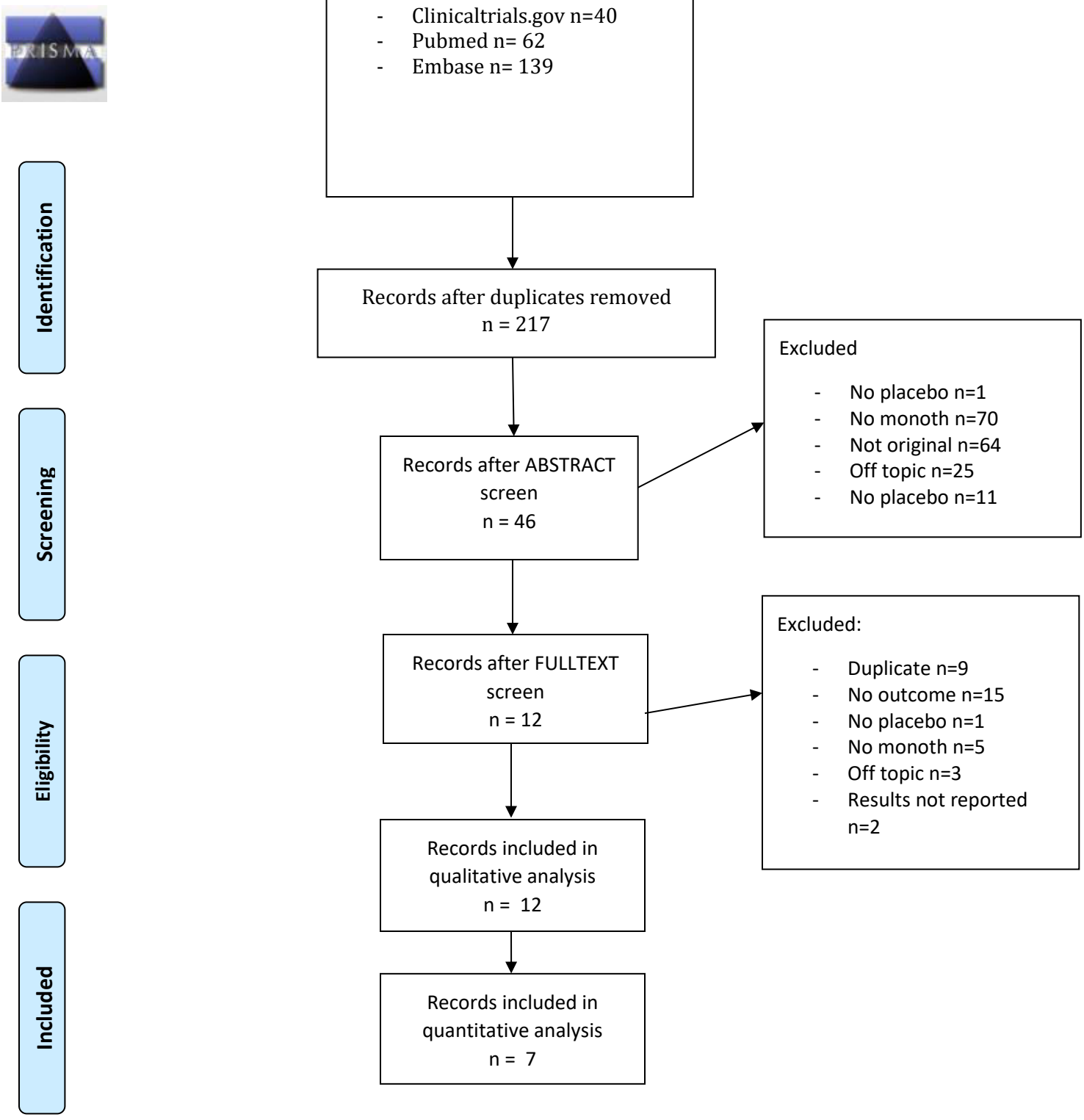
Saxagliptin



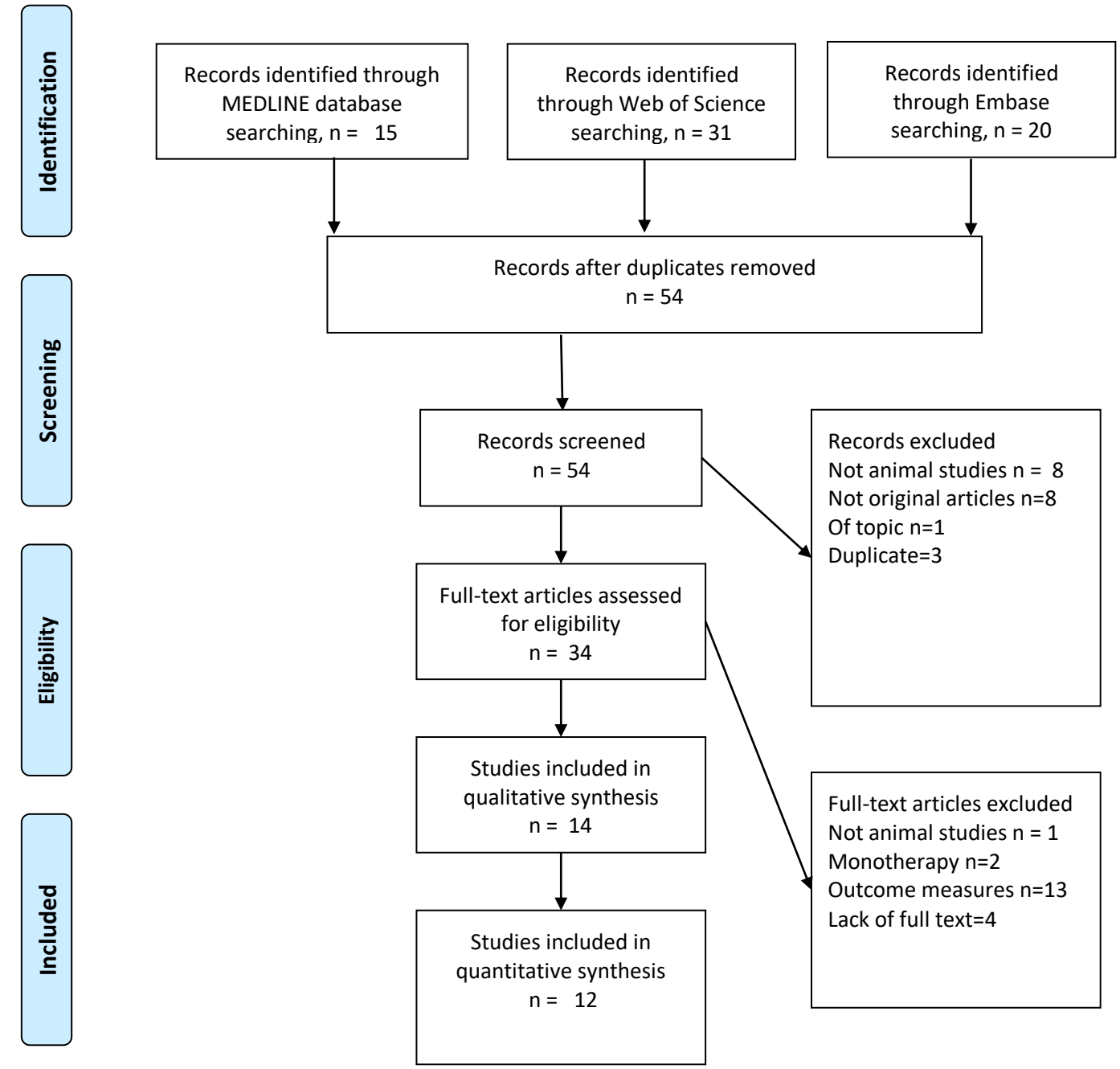
Sitagliptin



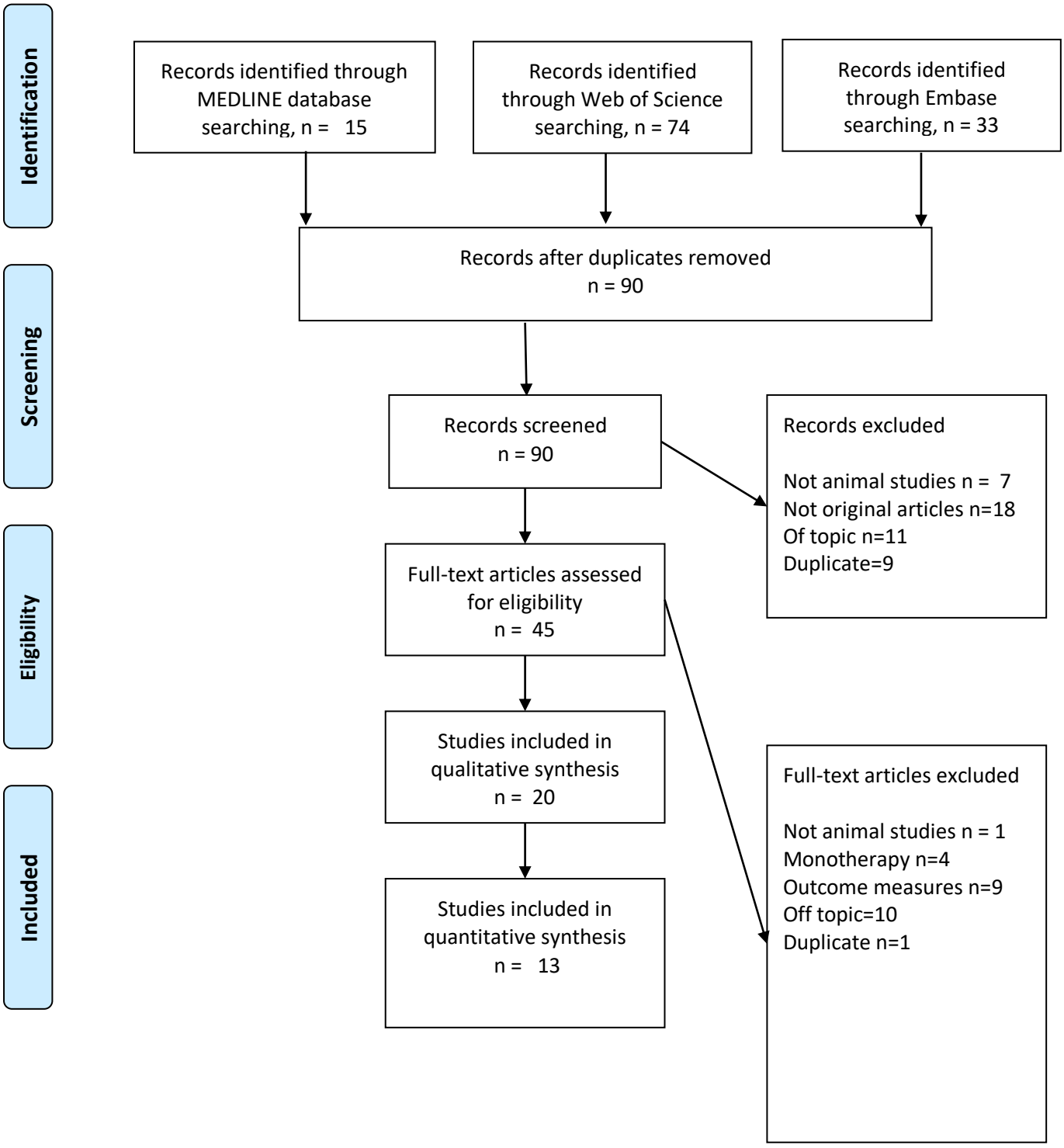
Vildagliptin



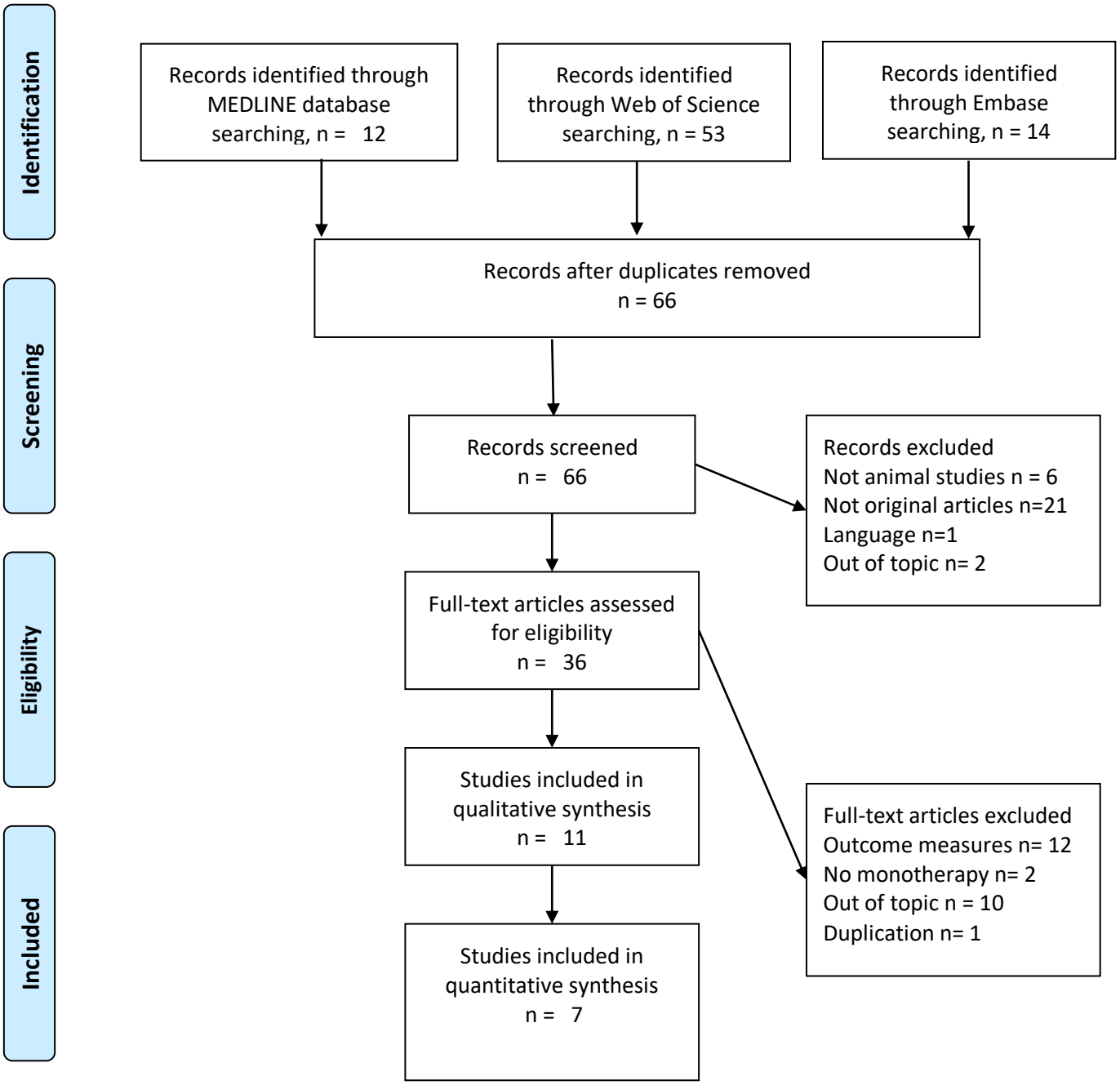
ALOGLIPTIN animal studies



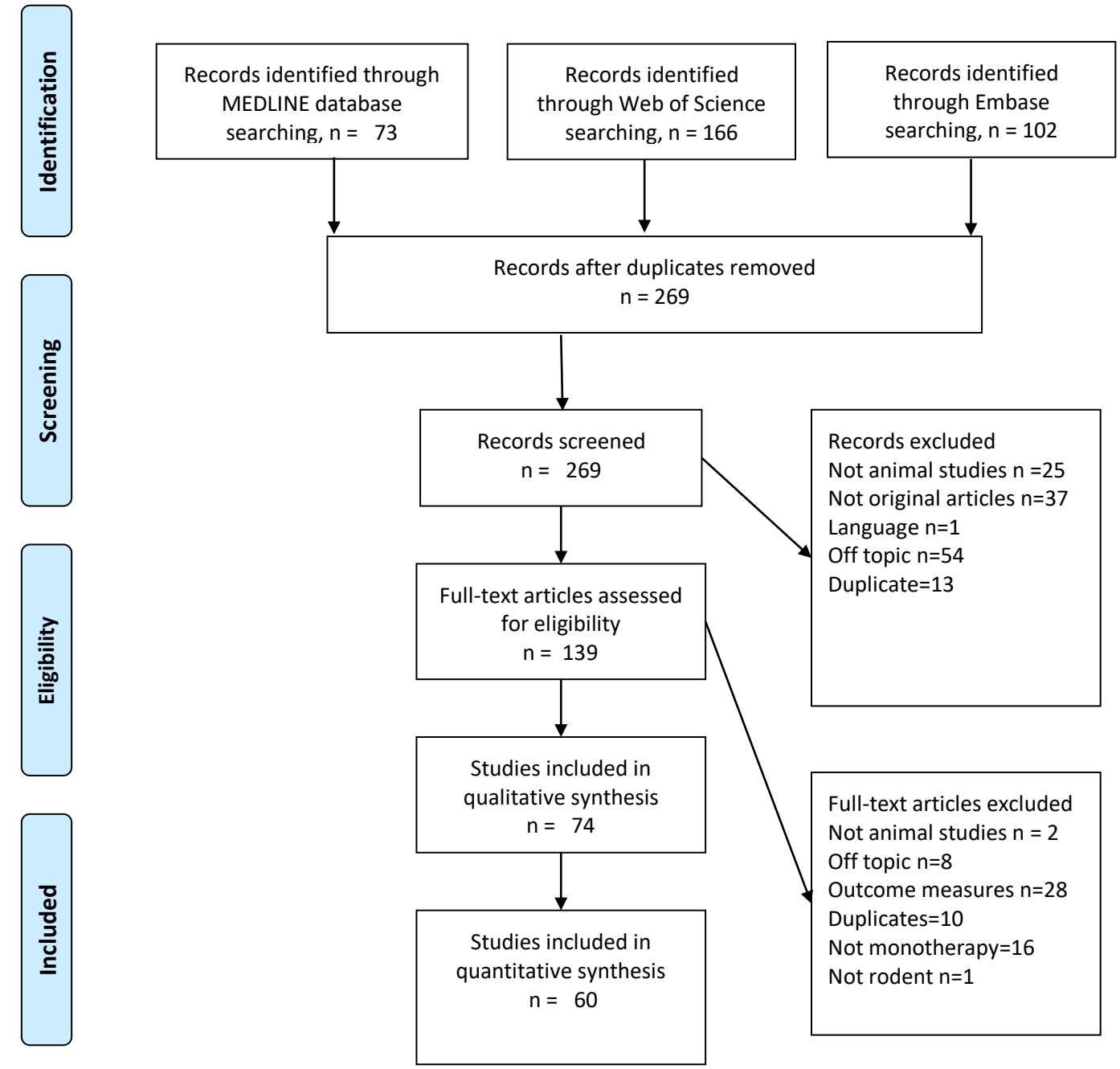
LINAGLIPTIN animal studies



SAXAGLIPTIN animal studies



SITAGLIPTIN animal studies



VILDAGLIPTIN animal studies