Summary of Product Characteristics

1. Name of the Medicinal Product

Vivus 50 mg Tablets

2. Qualitative and Quantitative Composition

Each film-coated tablet contains vildagliptin 50 mg.

Excipients with known effect
Each tablet contains Lactose.
For a full list of excipients, see section 6.1.

3. Pharmaceutical Form

White, circular, biconvex film-coated tablets, plain on both sides.

4. Clinical Particulars

4.1 Therapeutic Indications

Vivus tablets are indicated for the treatment of type 2 diabetes mellitus in adults:

As monotherapy:

- In patients inadequately controlled by diet and exercise alone and for whom metformin is inappropriate due to contraindications or intolerance.

As dual oral therapy in combination with:

- Metformin, in patients with insufficient glycaemic control despite maximal tolerated dose of monotherapy with metformin.
- Sulfonylurea, in patients with insufficient glycaemic control despite maximal tolerated dose of a sulfonylurea and for whom metformin is inappropriate due to contraindications or intolerance.
- Thiazolidinedione, in patients with insufficient glycaemic control and for whom the use of a thiazolidinedione is appropriate.

As triple oral therapy in combination with:

- Sulfonylurea and metformin when diet and exercise plus dual therapy with these medicinal products do not provide adequate glycaemic control.

Vildagliptin is also indicated for use in combination with insulin (with or without metformin) when diet and exercise plus a stable dose of insulin do not provide adequate glycaemic control.

4.2 Posology and Method of Administration

The recommended dose of vildagliptin is 50 mg once or twice daily. The maximum dose of vildagliptin is 100 mg. Vildagliptin can be administered orally with or without food.

Adults: When used as monotherapy, in combination with metformin, in combination with thiazolidinedione, in combination with metformin and a sulfonylurea, or in combination with insulin (with or without metformin), the recommended daily dose of vildagliptin is 100 mg, administered as one dose of 50 mg in the morning and one dose in the evening.

When used in dual combination with a sulfonylurea, the recommended dose of vildagliptin is 50 mg once daily administered in the morning.

If a dose of vildagliptin is missed, it should be taken as soon as the patient remembers. A double dose should not be taken on the same day.

Special populations:

Patients with renal impairment: No dose adjustment is required in patients with mild renal impairment (creatinine clearance ≥50 ml/min). In patients with moderate or severe renal impairment or with end-stage renal disease (ESRD), the recommended dose of vildagliptin is 50 mg once daily.

Patients with hepatic impairment: Vildagliptin should not be used in patients with hepatic impairment, including patients with pre-treatment alanine aminotransferase (ALT) or aspartate aminotransferase (AST) >3 times the upper limit of normal (ULN).

Paediatric population: Vildagliptin is not recommended for use in children and adolescents (<18 years).

4.3 Contraindications

Vildagliptin is contraindicated in patients with known hypersensitivity to vildagliptin or to any excipient of the product.

4.4 Special Warnings and Precautions for Use

General: Vildagliptin should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis.

Renal impairment: Vildagliptin should be used in patients with ESRD or haemodialysis.

Liver enzyme monitoring: Rare cases of hepatic dysfunction (including hepatitis) have been reported. Liver function tests should be performed prior to the initiation of treatment. Liver function should be monitored during treatment with vildagliptin at three-month intervals during the first year and periodically thereafter. Patients who develop jaundice or other signs suggestive of liver dysfunction should discontinue vildagliptin.

Cardiac failure: Vildagliptin use is recommended in patients with NYHA functional class IV.

Skin disorders: In diabetic patients, monitoring for skin disorders, such as blistering or ulceration, is recommended.

Acute pancreatitis: Use of vildagliptin has been associated with a risk of developing acute pancreatitis. If pancreatitis is confirmed, vildagliptin should be discontinued and if acute pancreatitis is confirmed, vildagliptin should not be restarted. Caution should be exercised in patients with a history of acute pancreatitis.

Hypoglycaemia: Sulfonylureas are known to cause hypoglycaemia. Patients receiving vildagliptin in combination with a sulfonylurea may be at risk for hypoglycaemia. Therefore, a lower dose of sulfonylurea may be considered to reduce the risk of hypoglycaemia.

4.5 Interaction with Other Medicinal Products and Other Forms of Interaction

Vildagliptin has a low potential for interactions with co-administered medicinal products. Since vildagliptin is not a cytochrome P450 (CYP450) enzyme substrate and does not inhibit or induce CYP450 enzymes, it is not likely to interact with active substances that are substrates, inhibitors or inducers of these enzymes. As with other oral antidiabetic medicinal products, the hypoglycaemic effect of vildagliptin may be reduced by certain active substances, including thiazides, corticosteroids, thyroid products and sympathomimetics.

4.6 Fertility, Pregnancy and Lactation

Pregnancy

There are no adequate data from the use of vildagliptin in pregnant women. Due to lack of human data, vildagliptin should not be used during pregnancy.

Nursing mothers

It is unknown whether vildagliptin is excreted in human milk. Animal studies have shown excretion of vildagliptin in milk. Vildagliptin should not be used during breast-feeding.

4.7 Effects on Ability to Drive and Use Machines

No studies on the effects on the ability to drive and use machines have been performed. Patients who experience dizziness as an adverse reaction should avoid driving vehicles or using machines.

4.8 Undesirable Effects

The following adverse reactions have been reported during the use of vildagliptin:

Treatment setting	**Frequency**	**Adverse reactions**
Monotherapy	Common	Dizziness.
Monotherapy	Uncommon	Hypoglycaemia, headache, oedema peripheral, constipation and arthralgia.
Monotherapy	Very rare	Upper respiratory tract infection and nasopharyngitis.
Combination with metformin	Common	Hypoglycaemia, tremor, headache, dizziness and nausea.
Combination with metformin	Uncommon	Fatigue.
Combination with sulfonylurea	Common	Hypoglycaemia, tremor, headache, dizziness and asthenia.
Combination with sulfonylurea	Uncommon	Constipation.
Combination with sulfonylurea	Very rare	Nasopharyngitis.
Combination with thiazolidinedione	Common	Weight increase and peripheral oedema.
Combination with thiazolidinedione	Uncommon	Hypoglycaemia, headache and asthenia.
Combination with metformin and sulfonylurea	Common	Hypoglycaemia, dizziness, tremor, hyperhidrosis and asthenia.
Combination with insulin	Common	Decreased blood glucose, headache, chills, nausea and gastro-oesophageal reflux disease.

Combination with insulin	Uncommon	Diarrhoea and flatulence.

Reporting of suspected adverse reactions: Healthcare professionals are asked to report any suspected adverse reactions via pharmacy and poisons board, Pharmacovigilance Electronic Reporting System (PvERS) https://pv.pharmacyboardkenya.org

4.9 Overdose

In the event of an overdose, supportive management is recommended. Vildagliptin cannot be removed by haemodialysis. However, the major hydrolysis metabolite (LAY 151) can be removed by haemodialysis.

5. Pharmacological Properties

5.1 Pharmacodynamic Properties

Pharmacotherapeutic group: Drugs used in diabetes, dipeptidyl peptidase-4 (DPP-4) inhibitors.

ATC code: A10BH02.

Mechanism of action

The administration of vildagliptin results in a rapid and complete inhibition of DPP-4 activity, resulting in increased fasting and postprandial endogenous levels of the incretin hormones GLP-1 (glucagon-like peptide 1) and GIP (glucose-dependent insulinotropic polypeptide).

5.2 Pharmacokinetic Properties

Absorption

Following oral administration in the fasting state, vildagliptin is rapidly absorbed, with peak plasma concentrations observed at 1.7 hours. The absolute bioavailability is 85%.

Effect of food

Food slightly delays the time to peak plasma concentration to 2.5 hours, but does not alter the overall exposure (AUC). Administration of vildagliptin with food resulted in a decreased Cmax (19%).

Distribution

The plasma protein binding of vildagliptin is low (9.3%) and vildagliptin distributes equally between plasma and red blood cells. The mean volume of distribution of vildagliptin at steady state after intravenous administration (Vss) is 71 litres, suggesting extravascular distribution.

Metabolism

Metabolism is the major elimination pathway for vildagliptin, accounting for 69% of the dose. The major metabolite (LAY 151) is pharmacologically inactive and is the hydrolysis product of the cyano moiety, accounting for 57% of the dose, followed by the glucuronide (BQS867) and the amide hydrolysis products (4% of dose). Vildagliptin is not metabolised by CYP450 enzyme to any quantifiable extent.

Elimination

Following oral administration of [14C] vildagliptin, approximately 85% of the dose is excreted into the urine and 15% of the dose is recovered in the faeces. Renal excretion

of unchanged vildagliptin accounted for 23% of the dose after oral administration. The elimination half-life after oral administration is approximately 3 hours.

5.3 Preclinical Safety Data

Intra-cardiac impulse conduction delays were observed in dogs with a no-effect dose of 15 mg/kg (7-fold human exposure based on Cmax).

Accumulation of foamy alveolar macrophages in the lung was observed in rats and mice. The no-effect dose in rats was 25 mg/kg (5-fold human exposure based on AUC) and in mice 750 mg/kg (142-fold human exposure).

Gastrointestinal symptoms, particularly soft faeces, mucoid faeces, diarrhoea and, at higher doses, faecal blood were observed in dogs. A no-effect level was not established.

Vildagliptin was not mutagenic in conventional in vitro and in vivo tests for genotoxicity.

6. Pharmaceutical Particulars

6.1 List of Excipients

Microcrystalline cellulose pH 102, dummy lactose granules, croscarmellose sodium, hydroxypropyl methylcellulose 5 CPS, sodium starch glycolate, magnesium stearate, polyethylene glycol 6000, purified talc, titanium dioxide, isopropyl alcohol and methylene dichloride.

6.2 Incompatibilities

None known.

6.3 Shelf Life

24 months.

6.4 Special Precautions for Storage

Store in a dry place below 30°C. Protect from light and moisture.

Keep all medicines out of reach of children.

6.5 Nature and Contents of Container

Packed in blisters of 1x10's, 2x14's, 4x14's, 2x10's, 3x10's, 6x10's and 10x10's and contained in a unit box along with literature insert.

6.6 Special Precautions for Disposal

Any unused product or waste material should be disposed of in accordance with local requirements.

6.7 Distribution Category

Prescription Only Medicine (POM).

7. Marketing Authorization Holder

Company Name: Laboratory & Allied Ltd.

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Manufacturer

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8. Marketing Authorization Number

H2025/CTD10491/22608

9. Date of first authorization/renewal of the authorization

12 August 2025.

10. Date of revision of the text

July 2022.