SCHEDULING STATUS

S3

1. NAME OF THE MEDICINE

PYROCAPS Capsule

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each **PYROCAPS** capsule contains 20 mg Piroxicam.

Contains sugar: lactose 214 mg per capsule

For full list of excipients, see section 6.1

3. PHARMACEUTICAL FORM

Capsules

PROCAPS

Capsules with an opaque white body and opaque maroon cap.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Pyrocaps® is indicated for a variety of conditions requiring anti-inflammatory and /or analgesic activity, such as rheumatoid arthritis: osteo-arthritis (arthrosis, degenerative joint disease); ankylosing spondylitis: acute musculoskeletal disorders and acute gout.

4.2 Posology and method of administration

Rheumatoid arthritis, osteo-arthritis (arthrosis, degenerative joint disease); ankylosing spondylitis:

The usual daily dose for the relief of signs and symptoms of rheumatoid arthritis or osteo-arthritis is 20mg given in single or divided doses. Since steady state concentrations in plasma

are not reached for seven to ten days, maximal therapeutic responses should not be expected for two weeks. Long-term administration of doses higher than 30 mg carries an increased risk of gastrointestinal side-effects.

Acute musculoskeletal disorders:

Therapy should be initiated with 40mg daily for the first two days given in single or divided doses. For the remainder of the seven to fourteen days treatment period, the dose should be reduced to 20mg daily.

Acute gout:

Therapy should be initiated by a single oral dose of 40mg followed on the next four to six days by 40 mg given in a single or divided dosage. **PYROCAPS** is not indicated for the long-term management of gout.

Method of administration

PYROCAPS is for oral administration.

4.3 Contraindications

Hypersensitivity to piroxicam or to any of the excipients of **PYROCAPS** (see section 6.1)

PYROCAPS should not be used in:

- Patients who have previously shown sensitivity to piroxicam
- Patients who have hepatic dysfunction
- Patients with a history of gastrointestinal disorders that predispose to bleeding disorders such as ulcerative colitis. Crohn's disease, gastrointestinal cancers or diverticulitis.
- Patients with active peptic ulcer, inflammatory gastrointestinal disorder or gastrointestinal bleeding.
- Concomitant use with other NSAIDs, including COX-2 selective NSAIDs and acetylsalicylic acid at analgesic doses at analgesic doses.

- Concomitant use with anticoagulants.
- History of previous serious allergic medicine reaction of any type, especially cutaneous reactions such as erythema multiforme, Stevens-Johsnon syndrome, toxic epidermal necrolysis.
- Previous skin reaction (regardless of severity) to piroxicam, other NSAIDs and other medications.
- Patients in whom aspirin and other non-steroidal anti-inflammatory medicines induce the symptoms of asthma, rhinitis or urticaria.
- Severe heart failure.
- During the last trimester of pregnancy
- Pregnancy and lactation: The use of **PYROCAPS** around 20 weeks gestation or later in pregnancy may cause a rare but serious foetal renal dysfunction leading to oligohydramnios and, in some cases, neonatal renal impairment. (see Section 4.4 and 4.6).

Safety in pregnancy, lactation and children under 12 years of age has not been established.

4.4 Special warnings and precautions for use

Undesirable effects may be minimised by using the minimum effective dose for the shortest duration necessary to control symptoms (see section 4.2, and GI and cardiovascular (CV) risks below).

The clinical benefit and tolerability should be re-evaluated periodically and treatment should be immediately discontinued at the first appearance of cutaneous reactions or relevant gastrointestinal events.

Gastrointestinal (GI) Effects, Risk of GI Ulceration, Bleeding, and Perforation

NSAIDs, including **PYROCAPS**, can cause serious gastrointestinal adverse events including bleeding, ulceration, and perforation of the stomach, small intestine or large intestine, which can be fatal.

NSAID exposures of both short and long duration have an increased risk of serious GI events (see section 4.2). Administration of doses of greater than 20 mg per day carries an increased risk of GI side effects. Evidence from observational studies reported suggests that piroxicam may be associated with a high risk of serious gastrointestinal toxicity, relative to other NSAIDs. These serious adverse events can occur at any time, with or without warning symptoms, inpatients treated with NSAIDs.

Patients with significant risk factors for serious GI events should be treated with **PYROCAPS** only after careful consideration (see sections 4.2, 4.3 and below).

The possible need for combination therapy with gastro-protective agents (e.g. misoprostol or proton pump inhibitors) should be carefully considered (see section 4.2).

Serious GI Complications

Identification of at-risk subjects: The risk for developing serious GI complications increases with age. Age over 70 years is associated with high risk of complications. The administration to patients over 80 years should be avoided.

Patients taking concomitant oral corticosteroids, selective serotonin reuptake inhibitors (SSRIs) or anti-platelet agents such as low-dose acetylsalicylic acid as well as those ingesting excessive amounts of alcohol are at increased risk of serious GI complications (see below and section 4.5). As with other NSAIDs, the use of **PYROCAPS** in combination with protective agents (e.g. misoprostol or proton pump inhibitors) must be considered for these at-risk patients.

Patients and physicians should remain alerted for signs and symptoms of GI ulceration and/or bleeding during **PYROCAPS** treatment. Patients should be asked to report any new or unusual abdominal symptom during treatment. If a gastrointestinal complication is suspected during treatment, **PYROCAPS** should be discontinued immediately and additional clinical evaluation and treatment should be considered.

Appropriate monitoring and advice are required for patients with a history of hypertension and/or mild to moderate congestive heart failure as fluid retention and oedema have been reported in association with NSAID therapy.

Patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease should only be treated with **PYROCAPS** after careful consideration. Similar consideration should be made before initiating longer-term treatment of patients with risk factors for cardiovascular (CV) events (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking).

Clinical trial and epidemiological data suggest that use of some NSAIDs (particularly at high doses and in long term treatment) may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke). There are insufficient data to exclude such a risk for Piroxicam. The relative increase of this risk appears to be similar in those with or without known CV disease or CV risk factors. However, patients with known CV disease or CV risk factors may be at greater risk in terms of absolute incidence, due to their increased rate at baseline.

PYROCAPS should be used with caution in patients with a history of bronchial asthma (see also section 4.3).

Poor Metabolisers of CYP2C9 Substrates

Patients who are known or suspected to be poor CYP2C9 metabolizers based on previous history/experience with other CYP2C9 substrates should be administered **PYROCAPS** with caution as they may have abnormally high plasma levels due to reduced metabolic clearance (see section 5.2).

Skin reactions

Life-threatening cutaneous reactions (Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN)) have been reported with the use of piroxicam.

Patients should be advised of the signs and symptoms and monitored closely for skin reactions. The highest risk for occurrence of SJS or TEN is within the first weeks of treatment.

If symptoms or signs of SJS or TEN (e.g. progressive skin rash often with blisters or mucosal lesions) are present, **PYROCAPS** treatment should be discontinued. The best results in managing SJS and TEN come from early diagnosis and immediate discontinuation of any suspected medicine. Early withdrawal is associated with a better prognosis.

If the patient has developed SJS or TEN with the use of **PYROCAPS**, **PYROCAPS** must not be re-started in this patient at any time.

Serious skin reactions, some of them fatal, including exfoliative dermatitis, Stevens-Johnson syndrome, and toxic epidermal necrolysis, have been reported very rarely in association with the use of NSAIDs (see section 4.8). Evidence from observational studies reported suggests that piroxicam may be associated with a higher risk of serious skin reaction than other non-oxicam NSAIDs.

Patients appear to be at a highest risk of these reactions early in the course of therapy, the onset of the reaction occurring in the majority of cases within the first month of treatment.

PYROCAPS should be discontinued at the first appearance of skin rash, mucosal lesions, or any other sign of hypersensitivity.

Cases of fixed drug eruption (FDE) have been reported with piroxicam. Piroxicam should not be reintroduced in patients with history of piroxicam-related FDE. Potential cross reactivity might occur with other oxicams. Piroxicam should be discontinued at the first appearance of skin rash, musical lesions, or any other sign of hypersensitivity.

PYROCAPS should be used with caution in patients with renal, hepatic and cardiac impairment. In rare cases, non-steroidal anti-inflammatory medicines may cause interstitial nephritis, glomerulitis, papillary necrosis and the nephrotic syndrome. Such agents inhibit the synthesis of the prostaglandin which plays a supportive role in the maintenance of renal perfusion in patients whose renal blood flow and blood volume are decreased. In these

patients, administration of a non-steroidal anti-inflammatory medicine may precipitate overt renal decompensation, which is typically followed by recovery to pre-treatment state upon discontinuation of non-steroidal anti-inflammatory therapy. Patients at greatest risk of such a reaction are with congestive heart failure, liver cirrhosis, nephrotic syndrome and overt renal disease; such patients should be carefully monitored whilst receiving NSAID therapy.

Because of reports of adverse eye findings with non-steroidal anti-inflammatory medicines, it is recommended that patients who develop visual complaints during treatment with **PYROCAPS** have ophthalmic evaluation.

Impaired female fertility

The use of **PYROCAPS** may impair female fertility and is not recommended in women attempting to conceive. In women who have difficulties conceiving or who are undergoing investigation of infertility, withdrawal of **PYROCAPS** should be considered.

Neonatal renal impairment and Oligohydramnios:

The use of **PYROCAPS** around 20 weeks gestation or later in pregnancy may cause fetal renal dysfunction leading to oligohydramnios and, in some cases, neonatal renal impairment. Complications of prolonged oligohydramnios include limb contractures and delayed lung maturation, which may require invasive procedures such as exchange transfusion or dialysis. If NSAID treatment is determined necessary, limit use to the lowest effective dose and shortest duration possible.

Additionally it should be avoided at 30 weeks and later in pregnancy because of the additional risk of premature closure of the fetal ductus arteriosus. Consider ultrasound monitoring of amniotic fluid if NSAID treatment extends beyond 48 hours. Discontinue the NSAID if oligohydramnios occurs **(see Section 4.3. 4.4 and 4.6).**

Drug Reaction with Eosinophillia and Systemic Symptoms (DRESS) has been reported in patients taking NSAIDs such as **PYROCAPS**. Some of these events have been fatal or life-threatening. DRESS typically, although not exclusively, presents with fever, rash, lymphadenopathy, and/or facial swelling. Other clinical manifestations may include hepatitis, nephritis, haematological abnormalities myocarditis, or myositis. Sometimes symptoms of DRESS may resemble an acute viral infection. Eosinophillia is often present. Because this disorder is variable in its presentation, other organ systems not noted here may be involved. It is important to note that early manifestations of hypersensitivity, such as fever or lymphadenopathy, may be present even though rash is not evident. If such signs or symptoms are present, discontinue **PYROCAPS** and evaluate the patient immediately.

Lactose

PYROCAPS contains lactose. Patients with rare hereditary problems of galactose intolerance e.g. galactosaemia, Lapp lactase deficiency, glucose-galactose malabsorption or fructose intolerance should not take **PYROCAPS**.

4.5 Interaction with other medicines and other forms of interaction

Antacids: Concomitant administration of antacids had no effect on piroxicam plasma levels.

Anti-coagulants: NSAIDs, including **PYROCAPS**, may enhance the effects of anticoagulants, such as warfarin. Therefore, the use of **PYROCAPS** with concomitant anticoagulant such as warfarin should be avoided (see section 4.3).

Anti-platelet agents and selective serotonin reuptake inhibitors (SSRIs): Increased risk of gastrointestinal bleeding (see section 4.4).

Aspirin and other Non-Steroidal Anti-Inflammatory Drugs: **PYROCAPS**, like other non-steroidal anti-inflammatory medicines decreases platelet aggregation and prolongs bleeding time. This effect should be kept in mind when bleeding times are determined.

As with other NSAIDs, the use of **PYROCAPS** together with acetylsalicylic acid or concomitant use with other NSAIDs, including other piroxicam formulations, must be

avoided, since data are inadequate to show that combinations produce greater improvement than that achieved with **PYROCAPS** alone; moreover, the potential for adverse reactions is enhanced (see section 4.4). Human studies reported have shown that concomitant use of piroxicam and acetylsalicylic acid reduces the plasma piroxicam concentration to about 80% of the usual value.

Cardiac glycosides: NSAIDs may exacerbate cardiac failure, reduce GFR and increase plasma glycoside levels.

Ciclosporin, Tacrolimus: possible increased risk of nephrotoxicity when NSAIDs are given with ciclosporin or tacrolimus.

Cimetidine: Results of two separate studies reported indicate a slight but significant increase in absorption of piroxicam following cimetidine administration but no significant changes in elimination rate constants or half-life. The small increase in absorption is unlikely to be clinically significant.

Corticosteroids: increased risk of gastrointestinal ulceration or bleeding (see section 4.4).

Digoxin, Digitoxin: Concurrent therapy with **PYROCAPS** and digoxin, or **PYROCAPS** and digitoxin, did not affect the plasma levels of either medicine.

Anti-hypertensives including diuretics, angiotensin-converting enzyme (ACE) inhibitors, angiotensin II antagonists (AIIA)and beta-blockers:

NSAIDs can reduce the efficacy of diuretics and other anti-hypertensive medicines including ACE inhibitors, AIIA and beta-blockers. In patients with impaired renal function (e.g. dehydrated patients or elderly patients with the renal function compromised), the co-administration of an ACE inhibitor or an AIIA and/or diuretics with a cyclo-oxygenase inhibitor can increase the deterioration of the renal function, including the possibility of acute renal failure, which is usually reversible.

The occurrence of these interactions should be considered in patients taking **PYROCAPS** with an ACE inhibitor or an AIIA and/or diuretics Therefore, the concomitant administration of these medicines should be done with caution, especially in elderly patients. Patients

should be adequately hydrated and the need to monitor the renal function should be assessed in the beginning of the concomitant treatment and periodically thereafter.

Highly protein-bound medicines: Piroxicam is highly protein-bound and therefore might be expected to displace other protein-bound medicines. The physician should closely monitor patients for change when administering **PYROCAPS** to patients on highly protein-bound medicines.

Lithium: Non-steroidal anti-inflammatory drugs, including **PYROCAPS**, have been reported to increase steady state plasma lithium levels. It is recommended that these levels are monitored when initiating, adjusting and discontinuing **PYROCAPS**.

PYROCAPS, like other non-steroidal anti-inflammatory drugs, may interact with the following medicines / classes of therapeutic agents:

Antihypertensives - antagonism of the hypotensive effect

Quinolone antibiotics - possible increased risk of convulsions

Mifepristone - NSAIDs could interfere with mifepristone-mediated termination of pregnancy.

Methotrexate - Reduced excretion of methotrexate, possibly leading to acute toxicity. When methotrexate is administered concurrently with NSAIDs, including **PYROCAPS**, NSAIDs may decrease elimination of methotrexate resulting in increased plasma levels of methotrexate. Caution is advised, especially in patients receiving high doses of methotrexate.

Care should be exercised with the use of **PYROCAPS** in patients with renal dysfunction. Blood-urea-nitrogen elevation has been observed in some patients. The rise in blood-urea-nitrogen is not associated with elevations in serum creatinine.

PYROCAPS decreases platelet aggregation and prolongs bleeding time. In view of the products inherent potential to cause oedema, heart failure may be precipitated in some compromised patients

PYROCAPS should not be used in patients on coumarin-type anticoagulants. Changes in different liver function parameters have been observed. Some patients may develop increased serum transaminase levels during treatment with **PYROCAPS**.
It should be assumed that **PYROCAPS** will precipitate bronchoconstriction in those patients who are sensitive to aspirin. **PYROCAPS** increases plasma lithium levels.

4.6 Fertility, pregnancy and lactation

Pregnancy:
Although no teratogenic effects were reported in animal testing, the safety of piroxicam during pregnancy or during lactation has not yet been established.
PYROCAPS inhibits prostaglandin synthesis and release through a reversible inhibition of the cyclo-oxygenase enzyme. This effect, as with other non-steroidal anti-inflammatory drugs (NSAIDs) has been associated with an increased incidence of dystocia and delayed parturition in pregnant animals when medicine administration was continued in late pregnancy. In view of the known effects of NSAIDs on the foetal cardiovascular system (risk of closure of the ductus arteriosus), use in the last trimester of pregnancy is contraindicated. The onset of labour may be delayed and the duration increased with an increased bleeding tendency in both mother and child (see section 4.3).
Inhibition of prostaglandin synthesis might adversely affect pregnancy. Data from epidemiological studies reported suggest an increased risk of spontaneous abortion after use of prostaglandin synthesis inhibitors in early pregnancy. In animals, administration of prostaglandin synthesis inhibitors has been shown to result in increased pre- and post-implantation loss.
NSAIDs should not be used during the first two trimesters of pregnancy or labour.

Pregnant women should not use **PYROCAPS** at 20 weeks or later unless specifically advised to do so by a health care professional because it may cause fetal renal dysfunction

leading to oligohydramnios and, in some cases, neonatal renal impairment. Additionally it should be avoided at 30 weeks and later in pregnancy because of the additional risk of premature closure of the fetal ductus arteriosus (see Section 4.3, 4.4 and 4.6).

Breast-feeding:

A reported study indicates that piroxicam appears in breast milk at about 1-3% of the maternal plasma concentrations. No accumulation of piroxicam occurred in milk relative to that in plasma during treatment for up to 52 days. Piroxicam is not recommended for use in nursing mothers as clinical safety has not been established.

Fertility:

Based on the mechanism of action, the use of NSAIDs, including **PYROCAPS**, may delay or prevent rupture of ovarian follicles, which has been associated with reversible infertility in some women. In women who have difficulties conceiving or who are undergoing investigation of infertility, withdrawal of NSAIDs, including **PYROCAPS**, should be considered.

4.7 Effects on ability to drive and use machines

Undesirable effects such as dizziness, drowsiness, fatigue and visual disturbances are possible after taking NSAIDs. If affected, patients should not drive or operate machinery.

4.8 Undesirable effects

System Organ Class	**Frequency**	**Adverse Reaction**
Blood and lymphatic system disorders	Frequent	Anaemia Eosinophilia Leucopenia Thrombocytopenia
	Frequency Unknown	Aplastic anaemia Haemolytic anaemia

Immune system disorders	Frequency Unknown	Anaphylaxis Serum sickness
Metabolism and nutrition disorders	Frequent Less Frequent Frequency Unknown	Anorexia Hyperglycaemia Hypoglycaemia Fluid retention
Psychiatric disorders	Frequency Unknown	Depression Dream abnormalities Hallucinations Insomnia Mental confusion Mood alterations Nervousness
Nervous system disorders	Frequent Frequency Unknown	Dizziness Headache Somnolence Vertigo Paraesthesia
Eye disorders	Less Frequent	Blurred Vision
Ear and labyrinth disorders	Frequent Frequency Unknowns	Tinnitus Hearing impairment
Cardiac disorders	Less Frequent Frequency Unknown	Palpitations Cardiac failure Arterial thrombotic events

Vascular disorders	Frequency unknown	Vasculitis Hypertension
Respiratory, thoracic and mediastinal disorders	Frequency unknown	Bronchospasm Dyspnoe Epistaxis
Gastrointestinal disorders	Frequent	Abdominal discomfort Abdominal pain Constipation Diarrhoea Epigastric distress Flatulence Nausea Vomiting indigestion
	Frequency unknown	Gastritis Gastrointestinal bleeding (including hematemesis and melena) Pancreatitis Perforation Ulceration
Hepatobiliary disorders	Frequency unknown	Fatal hepatitis Jaundice
Renal and urinary disorders	Less Frequent	Interstitial nephritis Nephrotic syndrome Renal failure

	Frequency unknown	Renal papillary necrosis Glomerulonephritis
Skin and subcutaneous tissue disorders	Frequent Less Frequent Frequency unknown	Pruritis Skin rash Severe cutaneous adverse reactions (Scars): Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) (see section 4.4) Fixed drug eruptions (see section 4.4), Alopecia Angioedema Dermatitis exfoliative Non-thrombocytopenic purpura (Henoch-Schoenlein) Onycholysis Photoallergic reactions Urticaria

		Vesiculo bullous reaction Drug Reaction with Eosinophillia and Systemic Symptoms (DRESS) [see Section 4.4]
Reproductive system and breast disorders	Frequency Unknown	Female fertility decreased
General disorders and administration site conditions	Frequent Frequency Unknown	Oedema (mainly of the ankle) Malaise
Investigations	Frequent Frequency Unknown	Increased serum transaminase levels Weight increase Positive ANA Weight decrease Decrease in haemoglobin and haematocrit unassociated with obvious gastrointestinal bleeding

Gastrointestinal:

These are the most commonly encountered side-effects but in most instances do not interfere with the course of therapy.

Objective evaluations of gastric mucosa appearances and intestinal blood loss show that 20mg/day of Piroxicam administered either in single or divided doses is significantly less irritating to the gastrointestinal tract than aspirin.

Some epidemiological studies reported have suggested that piroxicam is associated with higher risk of gastrointestinal adverse reactions compared with some NSAIDs, but this has not been confirmed in all reported studies. Administration of doses exceeding 20mg daily (of more than several days duration) carries an increased risk of gastrointestinal side effects, but they may also occur with lower doses (see Section 4.2).

Oedema, hypertension, and cardiac failure, have been reported in association with NSAID treatment. The possibility of precipitating congestive heart failure in elderly patients or those with compromised cardiac function should therefore be borne in mind. Clinical trial and epidemiological data suggest that use of some NSAIDs (particularly at high doses and in long term treatment) may be associated with a small increased risk of arterial thrombotic events (for example, myocardial infarction or stroke) (see section 4.4).

Liver function: Changes in various liver function parameters have been observed. Although such reactions are rare, if abnormal liver function tests persist or worsen, if clinical symptoms consistent with liver disease develop, or if systemic manifestations occur (*e.g.* eosinophilia, rash etc.), piroxicam should be discontinued.

Other: Routine ophthalmoscopy and slit-lamp examination have revealed no evidence of ocular changes.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of PYROCAPS is important. It allows continued monitoring of the benefit/risk balance of **PYROCAPS**. Health care providers

are asked to report any suspected adverse reactions to SAHPRA via the "6.04 Adverse Drug Reactions Reporting Form", found online under SAHPRA's publications: https://www.sahpra.org.za/

4.9 OVERDOSE

In the event of overdosage with Piroxicam, supportive and symptomatic therapy is indicated. Studies reported indicate that administration of activated charcoal may result in reduced re-absorption of piroxicam, thus reducing the total amount of active medicine available.

Although there are no studies reported to date, haemodialysis is probably not useful in enhancing elimination of piroxicam since the medicine is highly protein-bound.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

PYROCAPS is a non-steroidal anti-inflammatory agent which also possesses analgesic and antipyretic properties. Oedema, erythema, tissue proliferation, fever and pain can all be inhibited in laboratory animals by the administration of piroxicam. It is effective regardless of the aetiology of the inflammation. While its mode of action is not fully understood, independent studies reported *in vitro* as well as *in vivo* have shown that piroxicam interacts at several steps in the immune and inflammation responses through:

Inhibition of prostanoid synthesis, including prostaglandins, through a reversible inhibition of the cyclo-oxygenase enzyme.

Inhibition of neutrophil aggregation.

Inhibition of polymorphonuclear cell and monocyte migration to the area of inflammation.

Inhibition of lyosomal enzyme release from stimulated leucocytes.

Reduction of both systemic and synovial fluid rheumatoid factor production in patients with seropositive rheumatoid arthritis.

It is established that piroxicam does not act by pituitary-adrenal axis stimulation. In-vitro studies have not revealed any negative effects on cartilage metabolism.

5.2 Pharmacokinetic properties

Absorption:

Piroxicam is well absorbed following oral or rectal administration. With food there is a slight delay in the rate but not the extent of absorption following administration. The plasma half-life is approximately 50 hours in man and stable plasma concentrations are maintained throughout the day on once-daily dosage. Continuous treatment with 20mg/day for periods of 1 year produces similar blood levels to those seen once steady state is first achieved.

Distribution:

Drug plasma concentrations are proportional for 10 and 20mg doses and generally peak within 3 to 5 hours after medication. A single 20mg dose generally produces peak piroxicam plasma levels of 1.5 to 2 mcg/ml while maximum plasma concentrations, after repeated daily ingestion of 20mg piroxicam, usually stabilise at 3 to 8 mcg/ml. Most patients approximate steady state plasma levels within 7 to 12 days.

Treatment with a loading dose regimen of 40mg daily for the first 2 days followed by 20mg daily thereafter allows a high percentage (approximately 76%) of steady state levels to be achieved immediately following the second dose. Steady state levels, area under the curves and elimination half-life are similar to that following a 20mg daily dose regimen.

A multiple dose comparative study of the bioavailability of the injectable forms with the oral capsule has shown that after intramuscular administration of piroxicam, plasma levels are significantly higher than those obtained after ingestion of capsules during the 45 minutes following administration the first day, during 30 minutes the second day and 15 minutes the seventh day. Bioequivalence exists between the two dosage forms.

A multiple dose comparative study reported the pharmacokinetics and the bioavailability of Piroxicam FDDF with the oral capsule has shown that after once daily administration for 14 days, the mean plasma piroxicam concentration time profiles for capsules and Piroxicam FDDF were nearly superimposable. There were no significant differences between the mean steady state Cmax values, Cmin values, T½, or Tmax values. This study concluded that Piroxicam FDDF (Fast Dissolving Dosage Form) is bioequivalent to the capsule after once daily dosing. Single dose studies have demonstrated bioequivalence as well when the tablet is taken with or without water.

Biotransformation:

Piroxicam is extensively metabolised and less than 5% of the daily dose is excreted unchanged in urine and faeces. Piroxicam metabolism is predominantly mediated via cytochrome P450 CYP 2C9 in the liver. One important metabolic pathway is hydroxylation of the pyridyl ring of the piroxicam side-chain, followed by conjugation with glucuronic acid and urinary elimination.

Patients who are known or suspected to be poor CYP2C9 metabolizers based on previous history/experience with otherCYP2C9 substrates should be administered piroxicam with caution as they may have abnormally high plasma levels due to reduced metabolic clearance (see section 4.4).

Pharmacogenetics:

CYP2C9 activity is reduced in individuals with genetic polymorphisms, such as the CYP2C9*2 and CYP2C9*3polymorphisms. Limited data from two published reports showed that subjects with heterozygous CYP2C9*1/*2 (n=9), heterozygous CYP2C9*1/*3 (n=9), and homozygous CYP2C9*3/*3 (n=1) genotypes showed 1.7-, 1.7-, and 5.3-foldhigher piroxicam systemic levels, respectively, than the subjects with CYP2C9*1/*1 (n=17, normal metabolizer genotype) following administration of an oral single dose. The mean elimination half life values of

piroxicam for subjects withCYP2C9*1/*3 (n=9) and CYP2C9*3/*3 (n=1) genotypes were 1.7- and 8.8-fold higher than subjects with CYP2C9*1/*1(n=17). It is estimated that the frequency of the homozygous*3/*3 genotype is 0% to 5.7% in various ethnic groups.

5.3 Preclinical Safety Data

Not applicable

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

The capsule also contains: Lactose 200 mesh (fast flow), magnesium stearate, microcrystalline cellulose and sodium lauryl sulphate.

6.2 Incompatibilities

None known

6.3 Shelf life

36 months

6.4 Special precautions for storage

Store at or below 25 °C in the original pack.

Do not remove the blisters from the carton until required for use.

KEEP OUT OF REACH OF CHILDREN.

6.5 Nature and contents of container

Bottles of 30 capsules.

Patient ready packs of different pack sizes.

6.6 Special precautions for disposal

Return all unused or expired medicines to your pharmacist for safe disposal. Do not dispose of unused medicines in drains or sewerage systems (e.g. toilets).

7. HOLDER OF CERTIFICATE OF REGISTRATION

Ranbaxy Pharmaceuticals (Pty) Ltd

14 Lautre Road

Stormill, Ext. 1

Roodepoort, 1724

South Africa

8. REGISTRATION NUMBER(S)

27/3.1/0187

NS2	04/3.1/1002 (Namibia)
S2	BOT 0500767 (Botswana)

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