

# **Public Assessment Report**

## **Scientific discussion**

### **Finasterid Actavis**

#### **Finasteride**

**SE/H/635/01/MR**

**This module reflects the scientific discussion for the approval of Finasterid Actavis. The procedure was finalised at 2006-10-04. For information on changes after this date please refer to the module 'Update'.**

## **I. INTRODUCTION**

Actavis Nordic A/S, Denmark has applied for a marketing authorisation for Finasterid Actavis 5 mg film-coated tablets claiming essential similarity to Proscar marketed in the EU by Merck, Sharpe & Dohme. The product contains finasteride as active substance and is indicated for the treatment and control of benign prostatic hyperplasia (BPH) in patients with an enlarged prostate to cause regression of the enlarged prostate, to improve urinary flow and improve the symptoms associated with BPH, and to reduce the incidence of acute urinary retention and the need for surgery including transurethral resection of the prostate (TURP) and prostatectomy.

The reference product used in the bio-equivalence study is Proscar 5 mg film-coated tablets marketed by Merck, Sharpe & Dohme in Germany.

## **II. QUALITY ASPECTS**

### **II.1 Introduction**

Finasterid Actavis is presented in the form of film-coated tablets containing 5 mg of finasteride. The excipients are lactose monohydrate, microcrystalline cellulose, pregelatinised maize starch, lauroyl macroglycerides, sodium starch glycollate, magnesium stearate, hypromellose, macrogol, titanium dioxide and indigocarmine. The tablets are packaged in blisters or plastic bottles.

### **II.2 Drug Substance**

Finasteride is a white to almost white, crystalline powder which is practically insoluble in water and freely soluble in ethanol and methylene chloride. The structure of finasteride has been adequately proven and its physico-chemical properties sufficiently described. The route of synthesis has been adequately described and satisfactory specifications have been provided for starting materials, reagents and solvents. The active substance specification includes relevant tests and the limits for impurities/degradation products have been justified. The analytical methods applied are suitably described and validated.

### **II.3 Medicinal Product**

Finasterid Actavis is formulated using excipients which are all tested according to their monographs in the Ph. Eur, except for the colorant indigocarmine, which is tested according to an in-house specification. All raw materials used in the product are of vegetable origin or has been demonstrated to be in compliance with Commission Directive 2003/63/EC and the NfG on Minimising the risk of transmitting Animal Spongiform Encephalopathy Agents via human and veterinary medicinal products (EMEA/410/01).

The product development has taken into consideration the physico-chemical characteristics of the active substance. The manufacturing process has been sufficiently well described and critical steps identified. Results from the process validation studies confirm that the process is under control and ensure both batch to batch reproducibility and compliance with the product specification. The tests and limits in the specification are considered appropriate to control the quality of the finished product in relation to its intended purpose.

Stability studies under ICH conditions have been performed and data presented support the shelf life and storage conditions claimed in the SPC.

### **III. NON-CLINICAL ASPECTS**

#### **III.1 Discussion on the non-clinical aspects**

Since this product has been shown to be essentially similar and refer to a product approved based on a full application with regard to preclinical data, no further such data have been submitted or are considered necessary.

### **IV. CLINICAL ASPECTS**

#### **IV.1 Pharmacokinetics**

One bioequivalence study (including bioanalysis) was performed at Farmovs-Parexel, South Africa. The relative bioavailability of Finasteride 5 mg film-coated tablets (Omega Farma ehf., Iceland) and Proscar 5 mg (manufactured by Merck Sharp & Dohme Ltd, UK, marketed in Germany) was determined by comparing the pharmacokinetics of finasteride following administration of the two different formulations in a randomised, two-way, cross-over single dose study in healthy volunteers.

The results of the study are presented below. Bioequivalence, using the standard acceptance range 80-125% for  $C_{max}$  and AUC, was demonstrated.

The results are given in the following table as mean  $\pm$ SD for  $C_{max}$  and AUC and median (range) for  $T_{max}$ .

<b>Formulation</b>	<b><math>C_{max}</math> (ng/ml)</b>	<b>AUC<sub>0-∞</sub> (ng*h/ml)</b>	<b><math>T_{max}</math> (h)</b>
Reference	44.4 $\pm$ 10.3	287 $\pm$ 84.5	1.33 (1.0-5.0)
Test	43.0 $\pm$ 9.84	292 $\pm$ 87.0	1.33 (0.5 – 3.0)
90% CI	92.2-102	97.4-106.0	na

#### **IV.2 Discussion on the clinical aspects**

Since this product has been shown to be essentially similar and refer to a product approved based on a full application with regard to clinical efficacy/safety data, no further such data have been submitted or are considered necessary.

### **V. OVERALL CONCLUSION, BENEFIT/RISK ASSESSMENT AND RECOMMENDATION**

The risk/benefit ratio is considered positive and Finasterid Actavis 5 mg film-coated tablets is recommended for approval.

## Public Assessment Report – Update

Scope	Procedure number	Product Information affected	Date of start of the procedure	Date of end of procedure	Approval/ non approval	Assessment report attached
						Y/N (version)