experimental conditions. However in the experimental set up chosen, equation 4 describes various descriptors, which may play an important role in rationalizing the design of new pyrrole molecules with COX-2 inhibitory activity.

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UV Spectrophotometric Methods for the Determination of Celecoxib and Tizanidine Hydrochloride

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Two UV spectrophotometric methods have been developed for the determination of celecoxib and tizanidine hydrochloride in pure and in its pharmaceutical formulations. Celecoxib having absorption maximum at 251.2 nm in 0.1 N sodium hydroxide, where as tizanidine HCl exhibiting maximum absorption at 228 nm in distilled water.

Celecoxib (CXB) is a new NSAID, Which is a specific COX-2 inhibitor, and chemically it is benzenesulfonamide, 4-[5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-l-yl). Tizanidine hydrochloride (TZN) is chemically 2,1,3-benzothiadiazol-4-amine 5-chloro-N-(4,5-dihydro-1H-imidazole-2-yl) monohydrochloride and is used as a central muscle relaxant[1]. It acts presynaptically on the excitatory spinal interneurons and specifically on the polysynaptic pathways. Both the drugs are not official in any pharmacopoeia. So for, only a HPLC method[2] has been reported for the estimation of CXB in human plasma, where as for TZN cyclic voltammetric[3] and visible sectrophotometric methods

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TABLE 1: OPTICAL CHARACTERISTICS AND PRECISION

Parameters	Celecoxib	Tizanidine
Beer's law limit (μg/ml)	2.0-12.0	2.0-10.0
Sandell's sensitivity (μg/cm²/0.001 absorbance unit)	0.0165	0.0129
Molar extinction coefficient (1 mole⁻¹.cm⁻¹)	2.3009×10^4	2.2488×10^4
%Relative standard deviation	0.5598	0.9213
%Range of error		
0.05 confidence limits	±0.4681	±0.7704
0.01 confidence limits	±0.6925	±1.1398
Correlation coefficient	0.9997	0.9996
Regression equation (Y*)		
Slope (a)	0.0609	0.0727
Intercept (b)	-0.0010	0.0191

Y*=b+aC, where "C" is concentration in μg/ml and Y is absorbance unit.

have been reported. The authors have developed two simple sensitive and reproducible UV spectrophotometric methods for the determination of CXB and TZN in pure form as well as in dosage forms, which are described in the present communication.

All chemicals used were of analytical grade. Sodium hydroxide (0.1 N) was prepared by dissolving 4 g of NaOH in 1000 ml of distilled water. The commercially available tablets [Revibra (Dr. Reddy Labs), CELIB (Unichem), CELACT (Sun Pharma), TIZAN (Sun Pharma) and SIRDALUD (Novartis)] were procured from the local market. Spectral and absorbance measurements were made on a Systronics UV-Visible spectrophotometer model 117 with 10 mm matched quartz cells.

About 100 mg of CXB (pure or formulation) was accurately weighed and dissolved in 100 ml of 0.1 N NaOH. The above stock solution was further diluted with the same to get a working standard solution of 100 μg/ml. The stock solution of TZN (1 mg/ml, pure or formulation) was prepared in distilled water and further suitable dilutions were made with distilled water to get a working standard solution of 100 μg/ml.

Aliquots of working standard solution of CXB ranging from 0.2 to 1.2 ml (1 ml containing 100 μg) were transferred in to a series of 10 ml volumetric flasks and the final volume was brought to 10 ml with 0.1 N NaOH. The absorbance was measured at 251.2 nm against 0.1 N NaOH as blank and the amount of CXB present in the sample solution was computed from the calibration curve.

To a series of 10 ml graduated test tubes, aliquot sample of working standard solutions of TZN ranging from 0.2 to 1.0 ml (1 ml containing 100 μg) were transferred and the volume was brought to 10 ml with distilled water. The absorbance was measured at 228 nm against distilled water as blank. The amount of TZN present in the sample solution was computed from its calibration curve.

The optical characteristics such as Beer's law limits, Sandell's sensitivity, molar extinction coefficient, percent relative standard deviation, (calculated from the eight measurements containing 3/4th of the amount of the upper Beer's law limits of CXB and TZN), % range of error (0.05 to 0.01 confidence limits) were calculated for both the methods and the results are summarized in Table. The methods were applied for the analysis of the drugs in their tablet form. To evaluate the validity and reproducibility of the methods, known amounts of pure drug was added to the previously analyzed pharmaceutical preparations and the mixtures were analyzed by proposed methods and the percent recoveries was found to be 99.89 and 99.92 for CXB and TZN respectively. Interference studies revealed that the common excipients and other additives usually present in the dosage form such as parabens, lactose, sucrose, starch, sodium benzoate, sodium phosphate, calcium gluconate, gelatin, talc, magnesium stearate did not interfere in the proposed methods. In conclusion, the proposed methods appear to be economical simple, sensitive and accurate enough for

the routine determination of CXB and TZN in bulk as well as in pharmaceutical preparations.

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Antiinflammatory Activity of *Elephantopus scaber* in Albino Rats

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To study the antiinflammatory activity of *Elephantopus scaber* in acute, sub-acute and chronic experimental models in albino rats, aerial parts of *Elephantopus scaber* were extracted with hydroalcoholic solvent and purified by chromatographic procedure. The compound separated was studied by carrageenan-induced hind paw oedema in rats and the paw volume was measured plethysmometrically at 0 and 3 h after injection. The compound was also subjected to turpentine oil induced granuloma pouch in rats. The pouch was opened on day 7 under anaesthesia and the exudates collected by a syringe was measured The compound was also investigated in formalin-induced oedema models in rats. Degree of inflammation was measured plethysmometrically on day 1 and 7 and compared with control and standard, diclofenac. All the drugs were administered orally. The higher dose of compound significantly reduced carrageenan-induced pedal oedema (57%) and formalin-induced pedal oedema in rats (58%). The compound also decreased exudate volume (36%) in turpentine oil-induced granuloma formation compared to control.

The roots of *Elephantopus scaber* Linn (Family Compositae) were widely used as an antipyretic, cardiatonic and diuretic. The leaves are used as an antidote for snakebite and antidiarrhoeal[1]. In the present study, we assessed the antiinflammatory activity of a compound isolated from hydroalcoholic extraction using *in vivo* pharmacological models. The aerial parts of fresh unadultred *Elephantopus scaber* were collected, identified and authenticated by comparing with a voucher specimen. The air dried and powdered aerial parts of *Elephantopus scaber* were successively extracted with hydroalcoholic solvent in a Soxhlet. The extract obtained was made free of solvent by distillation. Then it was purified by silica gel chromatography[2]. The compound was used as an emulsion in 5% suspension with gum acacia and administered orally at the dose of 30 and 60 mg/kg.

In vivo antiinflammatory activity of the compound from *Elephantopus scaber* was assessed using adult male Wistar rats (150±5 g). The animals were fed with standard laboratory feed and water *ad libitum*. They were segregated into groups of 10 for different experimental schedules (acute, sub-acute and chronic). Animals were divided into four groups comprising 10 animals in each

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