

residue extracted with ethyl acetate to remove the unreacted starting oxime. The aqueous layer was made acidic with dil. aq. HCl to yield the desired carboxymethoximes (40-90%).

Reaction of ketones with 2-(aminoxy)acetic acid hemihydrochloride: A solution of appropriate ketone (0.01 mol), 2-(aminoxy)acetic acid hemihydrochloride (0.01 mol) and sodium acetate (0.03 mol) in ethanol (60 ml) was refluxed for 18-20 hrs. The solvent was removed under vacuo, and the residue extracted with ethyl acetate. The organic layer was washed with water, dried over anhydrous sodium sulphate and concentrated to yield the desired carboxymethoximes (40-90%).

Acknowledgement

Thanks are due to Dr. Y. P. Gavrilov of Shemyakin Institute of Bioorganic Chemistry, U.S.S.R. Academy of Sciences, Moscow for the 300 MHz PMR spectrum of one of the compounds, Dr. I. M. Chak for LD₅₀ data and Mrs. U. Sharma for technical assistance.

References

1. J. V. DIJK and J. M. A. ZWAGHEMAKERS, *J. Med. Chem.*, 1977, **20**, 1199.
2. E. BUCHLER, *J. Org. Chem.*, 1967, **32**, 261.
3. R. C. SRIMAL and B. N. DHAWAN, *Indian J. Pharmacol.*, 1971, **3**, 4.

Flavonoids of *Ipomoea dissecta*

A. ABDUL MALICK and S. NAGARAJAN*

Department of Chemistry, Autonomous Post-Graduate Centre, University of Madras, Tiruchirappalli-620 020

Manuscript received 27 May 1980, revised 19 August 1980, accepted 29 October 1980

*IPOMOEA dissecta*¹ Willd. [syn. *I. coptica* (L.) Roth.] belonging to the Convolvulaceae is reported to contain chlorogenic acid in the leaves². *Ifistulosa* has been recorded to contain kaempferol in the flowers³ and β -sitosterol in the leaves⁴. We now report the chemical components of the flowers of *I. dissecta*.

Fresh flowers (75 g) of *I. dissecta* collected from the Regional Engineering College Campus, Tiruchirappalli during late winter were extracted with hot 80% EtOH under reflux and the combined extract concentrated *in vacuo* and the aqueous concentrate fractionated successively into petrol (60-80°), ether and ethylacetate (EtOAc) solubles. The petrol fraction did not yield any crystalline solid.

The residue (0.1 g) from the ether fraction on crystallisation from Me₂CO yielded a yellow solid

(0.06 g) m.p. 277-79°, tetraacetate, m.p. 185-87° and was identified as kaempferol by R_f, colour reactions, uv and direct comparison with an authentic sample.

The residue (0.05 g) from the EtOAc fraction was dissolved in methanol and was subjected to preparative PC (Whatman No. 3, 15% HOAc) and the methanolic eluate of the only band that separated had λ_{\max} (MeOH) 243 (sh), 251 (sh), 268, 323 (sh), 365 nm; $\Delta\lambda$ (NaOMe) + 50 nm; $\Delta\lambda$ (AlCl₃) and $\Delta\lambda$ (AlCl₃/HCl) + 59 nm; $\Delta\lambda$ (NaOAc) nil (band II) and $\Delta\lambda$ (NaOAc/H₃BO₃) nil and responded to all the reactions expected of a flavone glycoside. It could be hydrolysed easily with 7% H₂SO₄ (100°, 2 hr) to yield kaempferol and glucose in almost equal quantities. The glycoside could therefore be identified as kaempferol-7-glucoside by R_f and uv data and the identity confirmed by direct comparison with an authentic sample.

This appears to be the first record of isolation of kaempferol and its 7-glucoside from *I. dissecta*.

Acknowledgement

Our thanks are due to the Head of the Department for his continued interest and encouragement.

References

1. J. S. GAMBLE, 'Flora of the Presidency of Madras', Botanical Survey of India, Calcutta, 1957, Vol. 2, p. 645.
2. 'The Wealth of India, Raw Materials', C.S.I.R., New Delhi, 1959, Vol. 5, p. 259.
3. O. C. D. GUPTA, R. GUPTA and P. C. GUPTA, *J. Indian Chem. Soc.*, 1979, **56**, 475.
4. M. SEN, M. DEY and P. KARURI, *J. Indian Chem. Soc.*, 1979, **56**, 326.

Antibacterial and Antialgal Activity of N-Isonicotinylamido-N'-Aryl/Guanidines

SURENDRA N. PANDEYA, V. K. VERMA, R. SINGH and

MAN RAJ

Applied Chemistry Section, Institute of Technology, Banaras Hindu University, Varanasi-221 005

Manuscript received 5 November 1977, revised 12 June 1978, accepted 29 October 1980

CERTAIN alkyl/aryl guanidines or diaryl guanidine derivatives of isonicotinic acid hydrazide have been prepared with a view to evaluating their antibacterial activity. Isonicotinic acid hydrazide has been reacted with aryl amidine chlorides¹ in chloroform solution of the respective arylcyanamide² to afford hydrochloride salts (I and II). The