Soni[3] have reported the chemical examination of the oil from the seeds of *G. asiatica*. No work has been reported on the chemical constituents of *G. arborea* and the isolation of luteolin from the leaves of this plant is reported herein.

The leaves of *G. arborea*, collected around Waltair, were air-dried, powdered and extracted successively with petroleum-ether, chloroform and alcohol. The petroleum-ether extract residue when chromatographed over alumina gave a neutral substance crystallising as white shining plates from benzene, m.p. 87°. The chloroform extract residue was amorphous.

The alcoholic extract was concentrated under reduced pressure and almost all the alcohol was removed by adding water at intervals. The aqueous liquid thus obtained was extracted successively with petroleum-ether, ether and chloroform. The ether extract on concentration deposited an yellow solid which on repeated crystallisations from dilute alcohol gave an yellow crystalline substance (yield, 0·1% of the dried material), m.p. 322–25°. The substance answered the characteristic colour reactions of flavones. Found: C, 62·3; H, 3·8; OCH_3, nil per cent. $C_{15}H_{10}O_6$ (tetrahydroxy flavone) requires: C, 63·0; H, 3·5%. It formed a tetraacetate, feathery needles from alcohol, m.p. 224-26°. Found: C, 61·2; H, 3·8%. $C_{23}H_{18}O_{10}$ requires C, 60·8; H, 4·0%. It formed a tetramethyl ether, prisms from benzene-petroleum ether, m.p. 189–91°. Found: C, 67·1; H, 4·8; $-OCH_3$, 36·3%. $C_{19}H_{18}O_6$ requires: C, 66·7, H, 5·3, $-OCH_3$ (4), 36·2%. The properties of the flavone and its acetate and methyl ether indicated that it might be identical with luteolin. This was confirmed by a mixed melting point determination between the acetate and authentic luteolin acetate[4] obtained in this laboratory. Further confirmation was obtained by paper chromatography including co-chromatography of our flavone with authentic luteolin in the following solvent systems: phenol-water, *n*-butanol-acetic acid-water and acetic acid-water.

We thank Dr. S. Sankara Subramanian of the Medical College, Pondicherry, for the paper chromatographic comparison. One of us (D. V. R.) thanks the University Grants Commission for a scholarship.

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SOME 2-3-DISUBSTITUTED QUINAZOLONES AS CENTRAL NERVOUS SYSTEM DEPRESSANTS

THE interest in the study of quinazolones was revived after they were reported as central nervous system depressants.[1] The discovery of QZ-2 (2 methyl-3-*o*-tolyl quinazolone) is an important landmark in the field of synthetic non-barbiturate hypnotics.[2] It has low toxicity, with a favourable therapeutic index (4) as compared to phenobarbitone (2·5). In clinical trials[3] QZ-2 has been found to be a useful and a safe hypnotic. QZ-2 is available commercially as Melsedin (Boots Pure Drug Co.) and Hypnodyne (Standard Pharmaceuticals) and so far no toxic effects worth mentioning have been reported in the literature. The anticonvulsant properties of QZ-2 have been reported in mice, rats and dogs.[4-7]

A large number of quinazolone compounds have been synthesized in an attempt to resolve the anticonvulsant activity from the hypnotic activity.[8] A potent anticonvulsant activity of B.D.H. 1880 (2-methyl-3-bromophenyl quinazolone hydrochloride) has been reported against metrazol-induced convulsions in mice.[9]

In the present study seven newly synthesized 2-3-disubstituted quinazolones have been tested in rats for their sedative and hypnotic activities. Table I gives the list of compounds tested.

TABLE I

Code No.	Chemical name	M.P.° C.
PQZ-1	2 Methyl 3-(isopropyl)-quinazolone hydrochloride	263
PQZ-2	2-Methyl 3-(*n* butyl)-quinazolone hydrochloride	208
PQZ-3	2-Methyl 3-(hydroxy ethyl)-quinazolone hydrochloride	195
PQZ 4	2-Methyl-3-(2 pyridyl) quinazolone	164
PQZ-5	2-Methyl-3-(4-pyridyl) quinazolone	144
PQZ-6	2-Methyl 3-(anilino)-quinazolone	203
PQZ-7	2 Methyl-3-(2, 5-dimethyl phenyl)-quinazolone hydrochloride	216

The sedation was evaluated by a test[10] based on the assumption that pre-sleep or somnolence as indicated by a reduction of spontaneous activity, assumption of sleep posture and eye

closure without loss of arousability is the equivalent of the clinical state of sedation. For more objective evaluation of the sedative effects in mice the effect of compounds on forced locomotor activity[11] was studied. The percentage effect against different doses of compounds was determined on the forced locomotor activity in mice. Percentage reduction in group performance was then calculated at the time of peak effect. The ED_{50} of active compounds was calculated.[12] Hypnotic activity was assessed in rats in terms of loss of righting reflex. Doses of compounds for specified percentage effects were determined. The quantal response data were analysed by the probit method based on the maximum likelihood principle.

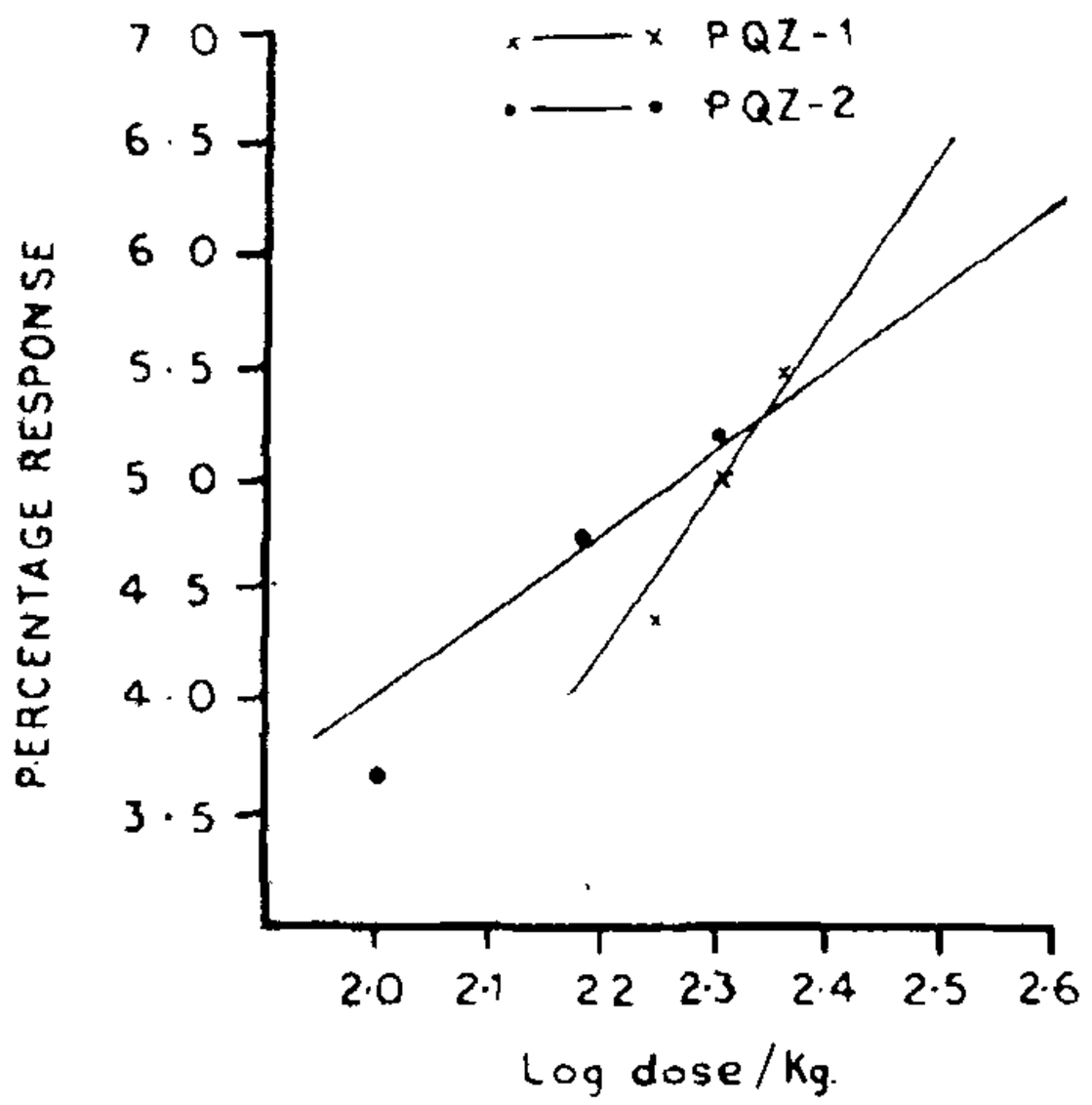

FIG. 1

Two compounds, *viz.*, PQZ-2 and PQZ-4 reduced the forced locomotor activity in mice. Other compounds showed positive sedative effect when tested. Because of the subjectivity of the latter test however and failure of these compounds to show positive effect when tested by their effect on the forced locomotor activity, these compounds were disregarded. The ED_{50} values of the two active compounds are $50 \pm 2{\cdot}5$ and $176 \pm 4{\cdot}5$ mg./kg. respectively. These values are less than 1/5th the approximate lethal dose. Compounds PQZ-1 and PQZ-2 have been found to possess hypnotic activity. The ED_{50} values are $181 \pm 1{\cdot}7$ and $157 \pm 6{\cdot}3$ mg./kg. Figure 1 shows the regression lines of these compounds for the hypnotic activity.

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POST-NATAL CHANGES IN LIVER AND BRAIN LIPIDS OF RATS

RECENTLY it was reported that a sudden increase occurred in total lipids of mouse liver, following separation from maternal environment.[3] These changes in lipid content were not found to be identical in all the species.[1,2,4] While comparing these values with those obtained in the cases where gestation period was longer, it was found that the latter values were significantly lower or at times identical with those before birth.

Though the rise in total lipid content is reported, no mention is made as to whether there is an overall increase in all the lipid fractions or there is a specific increase in one or more lipid constituents. It is also interesting to see whether this increase in lipids is related to liver, or other tissues also participate. Therefore, it was desired to investigate the values of total lipids and total cholesterol in liver and brain of young rats during the post-natal period of 15 days.

Rats having identical gestation period were selected. Liver and brain were homogenized mechanically. This homogenate was shaken with ethanol : ether (3 : 1) mixture. The lipid extract of the homogenate was collected in a container and dried at 60° C. This was then preserved overnight under nitrogen in a desiccator.