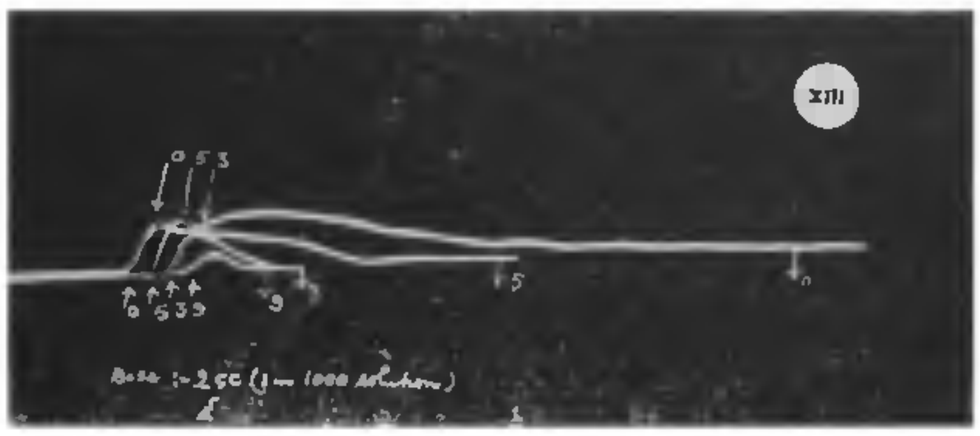
ethylamine (No. 4), ω-amino, α-acetonaphthone (No. 5), β, 1-naphthyl ethylamine (No. 7), 4-hydroxy, ω-aminoacetonaphthone (No. 9), N, N'-trimethylene bis-tyramine (No. 14) and 4-hydroxy naphthyl ethylamine (No. 21). These compounds were divided into convenient groups which were each compared with tyramine in the same animal. The results obtained are embodied in the kymograph tracings of the blood-pressure. entitled graphs XIII-XV.



The dosage consisted of 1 c.c. of a one-in-thousand solution of each of the drugs, corresponding to one mg. of the hydrochlorides, in two of the experiments (Graphs XIV and XV). The administration of doses of 2 c.c. in one experiment gave rise to the Graph XIII.

The present set of graphs serve to reveal the active pressor amines which appear to merit further detailed study. These are β, β-1 : 1'-dinaphthyl, β-hydroxy ethylamine (No. 1), β, 2- and β, 1-naphthyl, β-hydroxy ethylamines (Nos. 2 and 4), ω-amino- α-acetonaphthone (No. 5), β, 1-naphthyl ethylamine (No. 7) and N, N'-trimethylene bis-tyramine (No. 14). Whether any of the six aforementioned compounds is likely to find a place in medicine will be settled by their complete pharmacological examinations now in progress

Dept. of Pure & Applied Chemistry,
Indian Institute of Science,
Bangalore, S. RAJAGOPALAN.
The Research Unit,
Medical College,
Madras, K. VENKATACHALAM.
September 12, 1944.

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FATTY OIL FROM THE SEEDS OF *MAPPIA FOETIDA* (N.O.: Olacaceae)

THE fruit of *Mappia foetida* (Marathi: *Kalgur; Ghamera*) was collected for this investigation from the Dajipur forests, about forty miles south-west of Kolhapur, in the Western Ghats. It is a small ellipsoidal fruit resembling *Jambul* fruit in colour and in appearance and even in taste. The seed is enclosed in a stony-hard shell, is uncovered and yellowish white in colour.

The seeds of the dry ripe fruit were crushed and the oil was extracted with benzene in a soxhlet. The solvent was then removed by distillation, the last traces of it being removed under vacuum The oil is reddish yellow and has a slight fluorescein. On examination it gave the following physical and chemical constants:—Yield, 48 per cent.; specific gravity at 27° C., 0·9319; refractive index at 27°, 1·4781, acid number 3·7; saponification value, 185·4; iodine value (Wiji's method), 45·6; Reichert-Meissel value, 0·68; Polenske number, 0·41; acetyl value, 5·77; unsaponifiable matter, 0·81 per cent.

Chemistry Department,
Rajaram College,
Kolhapur,
July 29, 1944.
M. D. NADKARNI.
J. W AIRAN.
S. V. SHAH.

A PRELIMINARY NOTE ON 'POLYPORIN'

BY growing a Polyporus in Czapeck-Dox medium (pH 7) at room temperature (29° to 32° C.), a filtrate through Seitz-filter has been obtained which has been tested to be highly bactericidal. When the filtrate in the concentration of 1 to 20 is poured in a broth culture of *Staphylococcus aureus*, the latter becomes clear in the course of four to five days with a little sediment at the base of the tube. A subculture of the sediment after nine days shows no growth in the broth-culture tube when examined both visually and microscopically.

The animal-experiment of the whole filtrate proved to be completely non-toxic, the animals employed were guinea-pigs with one control in each case. The filtrate has pH value of 5·8 and it retains its potency at 22° to 28° C. (room-temperature) for about a month as far as we have been able to test.

Genetic change is not possible in this group of fungi by application of chemicals or strong doses of ultra-violet, X-ray and radium.[1]

Chemical isolation of the active principle of the filtrate is being attempted. Clinical trials of the crude filtrate on ulcers and surgical abscesses of a few patients have been very

encouraging. Further work on different aspects is actively proceeding.

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Botanical and Pathological Lab.,
Carmichael Medical College,
Calcutta, S. R. BOSE.
August 23, 1944. ANIL C. CHOUDHURY.

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TIP-BURN OF *PIPER BETLE* IN THE CENTRAL PROVINCES

TIP-BURN, a physiological disease of *Piper betle*, has been observed to cause considerable damage to the crop in this Province during the hot and dry months. The disease is characterised at first by wilting of the tissues at the extreme tips or sometimes at the margins, followed later by a browning and death of the tissue (Fig. 1). These dead and brown-coloured patches later turn hard and brittle and

FIG. 1. Tip-burn of *Piper betle*

are often broken or torn. A part or the whole of a leaf may succumb to this disease. Unlike fungal or bacterial infections the diseased leaves do not drop off but remain attached to the vines in a flaccid condition. Young and immature leaves are more severely affected than the old and mature ones. *Kapuri* variety of pan, whose leaves are of softer and thinner texture, has been observed to be highly susceptible to this disease than *gangeri*, *kakher* and *bangla* varieties with thicker leaves. *Bangla* variety of pan has been observed to be most resistant of all the varieties under observation. It has been further noticed that leaves on the vines affected with foot-rot disease (*Phytophthora parasitica* var. *piperina* Dast.) with poor root system succumb more readily to tip-burn than those on healthy plants.

The disease is caused by excessive loss of moisture from the leaves due to hot and dry weather conditions which prevail during the months of March to June in this Province. It is first observed towards the end of March or beginning of April and reaches to its maximum severity about the middle of May. The incidence of the disease is not marked after the rains set in. Repeated isolations from the diseased portions have given negative results about the presence of any pathogenic micro-organism.

It has been worked out and experimentally shown that this tip-burn disease could easily be kept in check or its incidence considerably reduced if the *barejas* (pan-gardens) are properly shaded at the top, the vines are lowered latest by the second week of March and the garden is kept moist by adequate irrigation during the hot and dry months.

Agricultural Research Institute,
Nagpur, R. P. ASTHANA.
July 21, 1944. K. A. MAHMUD.

VERNALISATION OF MUSTARD

IN their note on "Studies on the Physiology of Mustard", published in the June 1944 number of *Current Science*, J. C. Sen Gupta and N. K Sen have reported their interesting observations on photoperiodic and vernalisation studies with Tori No. 7 and Rai No. 5. The authors observed that Rai No. 5 sown on September 1, 1943, took 46 days to flower, whereas from a sowing of November 15, 1943, flowers were observed in 27 days. On the basis of this observation the authors have concluded that "the vegetative period shortens with lower temperature". But further on in their note, they state that "Rai shows a lengthening of vegetative period with the shortening of the light period and a greater shortening of the vegetative period is observed with increased temperature range and this confirms Sen and Chakravarti's findings (1942)." It is difficult to reconcile these two statements which appear to be directly contradictory. As a matter of fact, it has been our experience that, under otherwise similar cultural conditions, lower temperature invariably lengthens the vegetative period.

The authors observed the effect of prechilling of "soaked unsprouted seeds" of Tori and Rai at 2-4° C. for 10, 20 and 30 days. They state, "Sen and Chakravarti (1942) ..... have reported a clear earliness of flowering in mustard due to presowing low temperature treatments. The results reported here do not confirm their findings .." In reply, we wish to point out that we have never asserted that all strains of mustard will respond to vernalisation, but we[3] have stated that all the five strains of mustard with which we worked—T 27, C 11, C9, *raya* O|B I and yellow *sarson*—do give a very definite vernalisation response. In the Discussion on Vernalisation[2] held by the I. C. A. R. in December 1939, points strongly