FILE NAME: Chemical Abstracts (CHAB)

DATE: 1953

DOC#: CHAB036

OCUMENT DESCRIPTION: Abstract Originally Published in 1952 by Fairhill

the VI as much at a dose of 25 mg./kg. as II did at 50 mg./kg. III, IV, and V were inactive at doses of 500 mg./kg. In mice the oral LD_{50} doses, in g./kg., were, 1.5–2 for I, 12 for II, 5–6 for III, and > 10 for IV and V. I was 20 times more toxic intraperitoneally than orally. C. D. J.

Estimation and comparison of histamine release by muscle relaxants in man. W. Sniper (Victoria Infirmary, Glasgow, Scot.). *Brit. J. Anesthesia* 24, 232–7(1952).—*d*-Tubocurarine (I), dimethyltubocurarine (II), gallamine triethiodide (III), and decamethonium iodide (IV), at concns. said to be equiv. in muscle relaxing potency, were injected intradermally into human subjects. The area of the wheal, presumed to arise from histamine release, was compared in each case with that caused by a control injection of H_2O. I and II were equally potent in causing histamine release. III was 75% and IV about 50% as potent as I. C. D. J.

The black-rotten sweet potato. II. Toxic action of the essential oil of the black-rotten sweet potato. Hiroyasu Watanabe and Hisayoshi Iwata (Kyushu Univ., Fukuoka). *J. Agr. Chem. Soc. Japan* 26, 180–3(1952); cf. *C.A.* 46, 9263*h*.—Rats (60–70 g. body wt.) were not affected noticeably in growth when they received orally 0.01–0.02 g. of the essential oil (I), prepd. from the black-rotten sweet potato as formerly reported, per day for 20 days. They were affected remarkably with 0.02–0.03 g. I. Oral administration of 0.1–0.2 g. I to rats (120–150 g.) and abdominal injection of 0.0075–0.010 g. I into mice (20 g.) were fatal within 27–42 hrs. and 24–48 hrs., resp. On autopsy both victims showed fatty degeneration of liver, hemorrhage of lung, retrogressive change of heart, and injury of small intestine, kidneys, and stomach. Fowls lost their appetite when 0.2 g. I per kg. body wt. was given, and some parasites in them were expelled. Dosage of 0.3 g. I/day was harmless to adult humans. In the urine of adult rabbits orally administered 0.1 g. I/day for 10 days, there was observed 1.3-fold increase of creatinine, and 1.5–3.0-fold increase of acetone bodies; creatine increased remarkably for the first 2–3 days followed by gradual decrease; glucuronic acid slightly increased; urea did not change in amt., and neither protein nor indican was found. III. **Chemical properties of ipomeamarone.** Hiroyasu Watanabe and Sadao Nishiyama. *Ibid.* 200–2.—The semicarbazone of the main fraction, b_4 127–8°, of the crude I was decompd. with 5% oxalic acid to give pure ipomeamarone (II), $C_{15}H_{22}O_3$, d_4^{19} 1.0260, n_4^{19} 1.4831 $[\alpha]_D^{19}$ 21.6°. II was reduced catalytically in AcOH soln. to form hexahydro-II(III), and in EtOH soln. to form tetrahydro-II (IV); III gave the reactions of alc., while IV gave no reactions of alc. but those of ketone. These indicated the presence of 2 C:C groups and 1 CO group in II. II, III, and IV gave the reaction of a methylenedioxy group, OCH_2O, and the detn. of phloroglucide produced by warming II at 80° with 1% phloroglucine in 19% HCl soln. indicated the presence of one OCH_2O. II did not react with carbazole (cf. Votocek and Vesely, *C.A.* 1, 1287), thus excluding the possibility of having OCH_2O attached to singly bound C atoms. If OCH_2O were attached to a benzene ring, it would form acridine (cf. Freudenberg, *C.A.* 33, 3143⁹), but the expt. gave a neg. result. From these data, II must have 2 rings other than benzene, one of which contains OCH_2O. S. Kawamura and I. Uritani

The hypnotic action of antihistaminics. Kiyoshi Tanaka (Tottori Univ.). *Folia Pharmacol. Japon.* 47, No. 2, 30–2 (1951).—Benadryl hardly shows hypnotic action in rabbits, mice, and children; this suggests a close relation with brain development. In rabbits a hypnotic action appears when applied directly to the sleeping center or its vicinity in the brain. By ordinary injections the other parts of the brain appear to be excited simultaneously so that other excitations suppress that of the sleeping center. Injections after administration of urethan produce further hypnosis in rabbits. S. Kitoaka

The influence of cocaine and nicotine on the tissue respiration of cocainized and nicotinized animals. Iwao Yamamoto and Yutaka Kurogochi (Nara Med. Coll.). *Folia Pharmacol. Japon.* 47, No. 2, Proc. 50–1(1951).—As detd. by the Warburg manometer the changes (%) of tissue respiration in brain cortex between normal and cocainized rabbit with daily 2 cc./kg. injection of 0.1% cocaine-HCl for 60 days, and for 120 days when given in 0.005 and 0.01 *M* cocaine soln. were: −28, −41; −33, −40; −45, −57, in kidney: −15, −31; −14, −36; −25, −53, and in liver: +14, concn. of nicotine from 0.01 to 0.2 *M* for 60 days and when given for 100 days in 0.005 and 0.01 *M* nicotine soln. were in brain cortex: −10, −22; −8, −18; −7, −12; in kidney: −20, −35; −15, −26; −7, −22; and in liver: +5, +33; 0, +13; +10, +35. S. Kitaoka

Significance of spinal cord for the action of caffeine, cocaine, etc., on blood pressure. Bunzaburo Nuki, Wataru Kaida, and Hideo Nozuhara (Kyushu Univ., Fukuoka). *Folia Pharmacol. Japon.* 47, No. 2, 66–7(1951).—Caffeine, cocaine, and morphine raised blood pressure of decapitated rabbits. They lost the action when the spinal cord was destroyed, while pituitrin, $BaCl_2$, and digitalis retained their actions. Cocaine injected intraspinally (cervical) in normal rabbits notably lowered blood pressure and later raised it. Percamine did not show this delayed effect. Caffeine increased pulsation of decapitated rabbits; after destruction of the spinal cord the effect was reduced and in some cases, the pulsation decreased. S. Kitaoka

Pharmacological study of Digitaria ischaemum. II. The influence on the blood picture. Yoshie Kajimoto and Kaichiro Harada (Tokushima Univ. Med. Coll.). *Folia Pharmacol. Japon.* 47, No. 2, 81(1951).—*D. ischaemum* has been reported to have desirable therapeutic effects on patients subjected to irradiations (x-ray, γ-ray, neutron, etc.) of the at. bomb at Hiroshima in 1945. It was extd. with water at 80° for 2 hrs. and treated with $Pb(OAc)_2$ to give MeOH-sol. prisms (I). Rabbits irradiated with x-ray (voltage 153 kv., secondary current 3 ma., distance 26 cm.) for 20 min. were observed for changes in blood picture and after 3 weeks were injected intravenously with 0.174 g./kg. body wt. of I. I increased the leucocyte no. to max., 2 times as much as before the irradiation, at the 5th day and then decreased it to the original no. in 1 week. The percentage of lymphocytes decreased by the irradiation was further decreased by the I injection, while that of the pseudoeosinophile leucocytes was increased abruptly. The blood pigment and the erythrocyte no. were affected slightly by I. S. Kitoaka

The colored compound excreted in santonin-urine. Yoshito Kobayashi and Takeo Bando (Univ. Tokyo). *Folia Pharmacol. Japon.* 48, No. 3, 213–14(1952).—Human urine obtained within 5 hrs. after giving 0.1 g. santonin was colored red by adding 5% KOH and it was fractionated. No relation between the effect on *Ascaris* and the coloring intensity was found. S. Kitoaka

The influence of irgapyrin on water retention and carbohydrate metabolism (irgapyrin-edema and irgapyrin-glucosuria). H. K. v. Rechenberg (Kantonsspitals, St. Gallen, Switz.). *Klin. Wochschr.* 29, 726–30(1951).—The literature on the pharmacodynamic action of pyrazole compds. is reviewed. Of the side effects of pyrazole derivs., the antidiuretic and the glucosuric effects under irgapyrin (Geigy) (IP) medication were given special consideration. In 20 patients out of 450 treated with IP extensive edema was observed, and in 5 cases glucosuria without hyperglucemia. Examn. of 12 persons showed a clear diuretic retardation under IP similar to that produced by its two components, 4-dimethylamino-1,5-dimethyl-2-phenyl-3-pyrazolone and 4-butyl-1,2-diphenyl-3,5-pyrazolidinedione sodium. The sp. gr. of the urine increased appreciably following intravenous injection of IP, whereas, in the controls it decreased slightly. This effect is similar to that of hypopituitarism. Glucose dosages and the detn. of blood-sugar values during 3 hrs. immediately following the IP injection gave no essential difference in the curve followed from that of the untreated control. It is suggested that the action of pyrazole compds. is through the midbrain and thus parallels the mode of action of adrenocorticotropic hormone and cortisone. 42 references. Eleanor Grunwald Kuhn

Toxicology. Lawrence T. Fairhall (Yale Univ.). *Ann. Rev. Med.* 3, 265–82(1952).—A review with particular reference to the toxicology of arsine, Be, Cd, F, Ga, Pb, Hg, agene, rare earths, Si, asbestos, C_6H_6, halogenated methanes, amino and nitro C derivs., silicones, CS_2, and insecticides. 139 references. Theresa McKee

Curariform substances from roots of Cissampelos pareira. S. N. Pradhan, C. Roy, and K. S. Varadan (Central Drug Research Inst., Lucknow). *Current Sci.* (India) 21, 172 (1952).—The alkaloidal ingredients of curare are increasingly important in medicine as muscle relaxants because of their neuromuscular blocking effect. The curariform