Rat, Naunyn Schmiedeberg Arch. Exp. Path. 248: 195, 1964.)

PSEUDOCHOLINESTERASE Dibucaine inhibits normal pseudocholinesterase about 80 per cent and the atypical enzyme only 20 per cent. The degree of inhibition expressed as percentage has been termed the "dibucaine number." Heterozygotes contain a mixture of the atypical and normal pseudocholinesterase and possess intermediate dibucaine numbers ranging from 52 to 69. Between 3 and 4 per cent of a normal Canadian population are heterozygotes and abnormal homozygotes occur with a frequency of approximately 1 in 3,000. *Nixon, J. C.: Apnea Due to Inheritance of Atypical Pseudocholinesterase, Canad. Med. Ass. J. 90: 1125 (May 9) 1964.)*

LEVOMEPROMAZINE Apart from its ability to potentiate the action of narcotics, levomepromazine, a phenothiazine derivative, was shown to possess its own analgesic activity comparable to that of morphine at a 3:2 dose relationship. In a double-blind crossover study of 18 patients suffering from chronic pain, levomepromazine (15 mg.) was compared with morphine (10 mg.) and placebo. Three hours after intramuscular administration, levomepromazine proved to be significantly superior to placebo and indistinguishable from morphine. The potent analgesic effect of levopromazine was obtained at the price of excessive sedation but this was considered an acceptable side effect in patients suffering from chronic pain. *(Bloomfield, S., and others: Comparative Analgesic Activity of Levomepromazine and Morphine in Patients with Chronic Pain, Canad. Med. Ass. J. 90: 1156 (May 16) 1964.)*

INTRAVENTRICULAR MORPHINE Electroencephalographic arousal and motor excitation elicited by morphine, injected into cerebral ventricles of rabbits, were abolished by local anesthetics introduced into the cerebrospinal fluid. Local anesthetics seem to paralyze intraventricular chemoreceptors, stimulation of which is the origin of morphine excitement. *(Tanaka, K., and Kadowaki, Y.: Inhibitory Effects of Local Anesthetics on the Excitement Elicited by Intraventricularly Injected Morphine, Naunyn Schmiedeberg Arch. Exp. Path. 248: 9, 1964.)*

NARCOTIC ADDICTION Phasecontrast-microphotography was used to study the behavior of human malignant epithelial cells (carcinoma of the cervix) when exposed to increasing doses of morphine sulfate. The cells grew in a perfusion chamber over a period of several months and were exposed to different concentrations of morphine. The cells showed fatty degenerative changes which did not interfere with the ability of the cells to reproduce. After three weeks there was a definite tolerance so that they could survive in concentrations of morphine which were fatal for untreated cells. When morphine was suddenly withdrawn from the treated cells, marked functional and morphologic changes occurred within a few hours. Cytoplastic activity stopped; the cells shrank and cell membranes became rigid. These symptoms of abstinence disappeared promptly when morphine was again supplied. Dependence on and increased tolerance to morphine is not a phenomenon confined to nerve cells but can also occur in epithelial cells. *(Corssen, G.: Morphine Addiction of Human Epithelial Cells in Tissue Culture, Der Anaesthesist 13: 106 (Apr.) 1964.)*

BLOCKADE OF NOREPINEPHRINE Effect of intravenous norepinephrine infusions in conscious dogs is modified by pretreatment with dibenzyline (D) or isopropylmethoxamine (I). Effects blocked or reduced by D but not by I are: rise in arterial blood pressure, electrocardiographic changes, rise in hematocrit, presence of inclusion bodies in liver cells, necrosis of the adrenal cortex and accumulation of pericardial fluid rich in lactic acid dehydrogenase. Effects blocked by I but not by D are: rise of free fatty acids and of glucose in plasma and accumulation of triglycerides in the liver. Both drugs block, at least partially, the accumulation of triglycerides in the heart. Neither drug will prevent norepinephrine-induced depletion of glycogen in the liver. *(Maling, H. M., and others: Influence of Phenoxybenzamine and Isopropylmethoxamine on Some Cardiovascular, Metabolic and Histo-*