

ovarian hormone, that W. P. Kennedy (*Quart. Journ. Physiol.*, 1925, vol. 15, p. 103) has found that cold saline extracts of fresh frozen or dried corpora lutea, intravenously injected, prevent ovulation in rabbits: the effect persists for several months after a number of injections. Continued injections cause degenerative changes, not only in the ovaries, where the number of Graafian follicles is reduced, these changes being probably specific, in part at any rate, but also in the liver and adrenal glands, where the effect may be due to the injection of toxic foreign proteins, or alternatively to changes in the carbohydrate metabolism produced by the degeneration of the ovaries. Since extracts of ovarian tissue are being used for the production of the opposite effect, namely, the return of fertility and the secondary sexual characteristics, it is obvious that care should be taken to use only glands in which there are no corpora lutea, or from which these bodies have been removed, for the preparation of such extracts.

The main interest of some recent work by Steinach and his collaborators on the ovarian hormone appears to lie in the true reactivation or rejuvenation of the ovaries of senile animals (E. Steinach, H. Heinlein, and B. P. Wiesner, *Akad. d. Wissensch.*, Wien, 1925, No. 19, p. 189). These investigators have injected extracts of ovary and placenta into animals castrated both before and after puberty, and into senile specimens, using the vaginal smear method to follow the return or not of the œstrual cycle. Extracts from either source favour the development of the secondary sexual characteristics, but only those from the ovary arouse the sexual cycle. In all cases the normal condition of the animal is restored. The effects observed are produced by only a few injections in young animals, and occur within a few days in both rats and guinea-pigs. The fertility of stock female rats ceases when they are about eighteen months old, and the sexual cycle vanishes a few months later. Injections now restore their vigour and produce a reappearance of the œstrual cycle, the latter continuing regularly after the injections have

been discontinued: in other words, the ovaries are reactivated. The next step should be the application of a purified ovarian extract in human therapeutics.

Most of the work on rejuvenation has been performed on mammals. Crew has turned his attention to birds. He has found (F. A. E. Crew, *Proc. Roy. Soc. Edin.*, 1925, vol. 45, p. 249) that unilateral vasoligation in senile cocks is not accompanied by any rejuvenating effect. The only change observed microscopically in the testes was continuation of the degenerative processes seen to be occurring at the time of the operation in a preparation of a portion of the testis on the side of the ligature removed for histological study. No change was observed in their plumage. On the other hand, this author has been successful in obtaining rejuvenation in birds of both sexes by the administration of dried thyroid (*ibid.* p. 252). The doses given corresponded to 0.2-0.8 mgm. iodine daily. The first effect noted was moulting by all birds, and this was followed by an increased egg production by the females, the eggs being fertilised by the males; none of the former, however, became broody. The plumage of cock-feathered cocks became henny, but that of the hens and of hen-feathered cocks remained almost unchanged. The author considers that these results can be explained on the assumption that the sexual glands exert their influence on the plumage, not directly, but by means of an action upon the thyroid. Thus there are two classes of fowls: those whose thyroid responds to a certain low degree of stimulation from the testes with the production of cock-feathering, and to a higher degree of stimulation from the ovaries with the production of hen-feathering; and those whose thyroid responds to the greater degree to testicular stimulation, the cocks thus being hen-feathered. The difference between the thyroids of the two classes is a genetic one. The administration of thyroid can only produce a marked effect on those birds the thyroid gland of which is not normally fully stimulated, that is, cocks with cock-feathering.

### Obituary.

PROF. K. LHOTÁK.

ON January 27 there died in Prague, at the relatively early age of forty-nine years, Dr. Kamil Lhoták, professor of pharmacology and pharmacognosy and director of the institute for the said sciences in the Charles' (Bohemian) University. Prof. Lhoták published many scientific investigations in physiology, in which he had a sound training, in pharmacology and pharmacognosy, but the most prominent are his researches on the active substances of digitalis (digitalin, digitoxin). Lhoták also published the first Bohemian treatise on pharmacognosy (1908); but especially noteworthy is his voluminous "Pharmacology" (1924), including also the theory and art of prescribing.

As a teacher Prof. Lhoták turned his attention to the practical work of students in his laboratory, based on his experience in England. But one of his greatest merits, from the international point of view, is that he gave an impulse to the reprinting of the scientific papers of the Bohemian genius Jan Purkyně (Purkinje), who founded the first physiological research laboratory in Germany, so that his researches, scattered

in less accessible journals, could become accessible to the scientific world. They are published by the Bohemian Society of Medicine, together with two volumes of the very interesting correspondence of a many-sided scientist. Prof. Lhoták was not only of a real, deep scientific nature, but also a great connoisseur of painting, music, and the world's literature. He was a member of the Bohemian Royal Society of Science, the Bohemian Academy of Science and Art, the Ministerial Institute for the Examination of Medicinal Matters, and of the State Hygienic Council, etc.

BOHUSLAV BRAUNER.

WE regret to announce the following deaths:

William J. Green, a pioneer in horticultural investigations and for many years horticulturalist at the Ohio Experiment Station, aged seventy-six years.

A. Witz, formerly professor of physics in the Catholic University of Lille, corresponding member of the Paris Academy of Sciences, who was known for his work on thermodynamics and on internal combustion engines, on January 25, aged seventy-seven years.