- (27) G. Bertrand, "Sur la nature de la bufonine," Comp. rend. de l'Acad. Sc., exxxv (1902), 49.
- (28) H. Wieland and R. Alles, "Über den Giftstoff der Kröte," Ber. deut. chem. Gesellsch., lv (1922), 1789.
- (29) H. Handovsky, "Ein Alkaloid im Gifte von Bufo vulgaris," Arch. exp. Path. Pharm., lxxxvi (1920), 138.
- (30) V. Novaro, "Action pharmacodynamique du venin de crapaud," Comp. rend. soc. biol., lxxxviii (1923), 371.
- (31) Y. W. Lee, "A New Chinese-English Dictionary," Commercial Press, Ltd., Shanghai, (1918), 566 and 657.
 - (32) S. C. Li, "Pentsao Kang Mu," 1596 A.D., chap. 42.
- (33) H. Hayashi, "Senso (ein chinesisches Arzneimittel)," Deut. med. Wchnschr., xxxvii (1911), 624.
- (34) S. Shimizu, "Pharmacological and Chemical Studies on 'Senso,' the Dried Venom of the Chinese Toad," Jour. Pharm. Exp. Ther., viii (1916), 347.
- (35) K. Kodama, "Beiträge zur Pharmakologie von 'Senso,' " Acta Schol. Med. Univ. Imp. Kioto, iii (1920), 299.
 - (36) K. Kodama, "Uber Bufagin," Acta Schol. Med. Univ. Imp. Kioto, iv (1921-22), 201.
- (37) M. Kotake, "Die Zusammensetzung des chinesischen Arzneimittels 'Senso,' "Liebig's Ann. Chem., cdxv (1928), 1.
- (38) F. Nieden, "Das Tierreich, Bufonidae," Walter de Gruyter and Company, Berlin and Leipsig, Lfg., 46 (1923), 64.
- (39) S. T. Zarevskij, "On a New Species of Bufo from South Mongolia," Ann. Mus. Zool. Acad. Sc. Union Rep. Soviet, xxv (1925), 152.
- (40) Y. C. Tu, T. T. Tu, T. L. Wu, C. H. Ling and C. C. Hsü, "Zoölogical Nomenclature," Commercial Press, Ltd., Shanghai (1923), 2354.
- (41) S. F. Peng, L. Wang and Y. H. Wang, "Biological Dictionary," Chung Hua Book Company, Shanghai (1921), 300.
- (42) M. Kotake, "Die giftigen Bestandteile des Sekretes der japanischen Kröte," Liebig's Ann. Chem., cdixv (1928), 11.
 - (43) K. K. Chen, "Chinese Drug Stores," Ann. Med. Hist., vii (1925), 103.
- (44) K. K. Chen, "A Pharmacognostic and Chemical Study of Ma Huang (Ephedra vulgaris var. helvetica)," JOUR. A. Ph. A., xiv (1925), 189.

PYORRHEA.

Bacteriologic study of pyrorrhea alveolaris. T. J. Cook and E. C. Stafne.—Dental Cosmos, 61 (1929), 115.—Through Squibb Abstract Bulletin, Feb. 13, 1929.

The present study was undertaken for the purpose of throwing further light on the relationship of pyorrhea alveolaris to metastatic infection. Streptococci were isolated from pyorrhea pockets and inoculated into animals to determine their virulence and selective affinity. Pathologic lesions resembling those of arthritis were found in 30% of the rabbits that were injected intravenously with the streptococci from the pyorrhea pockets of patients suffering from arthritis; in those injected with cultures obtained from patients suffering from ulcerative colitis; similar results were obtained in the case of ulcers of the stomach and duodenum, nephritis, cholecystitis, etc., in each case streptococci from the pyorrhea pockets of such patients producing similar pathologic conditions in a certain percentage of the animals so injected. The mortality rate of the infected rabbits was 44%; the controls received injections of cultures from pyorrhea pockets of subjects showing no sumptoms of any of the above diseases and displayed the various lesions mentioned above only to a very limited degree. This contrast of the percentages in the two groups is evidence, the authors contend, of the elective localizing power of streptococci obtained from pyorrhea pockets. The specific powers of elective localization of streptococcus viridans was not evident with other organisms present in pyorrhea alveolaris. Bacteria and their toxins which are produced in deep pyorrhea pockets can find access to distant parts of the body by way of its abundant vascular supply, this study proves.—J. P.