

Twenty ninth meeting.

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Heredity of some human physical characteristics.

By **C. B. DAVENPORT.**

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It has already been shown¹ that dark brown eye color is a Mendelian dominant to gray and gray to blue. It now appears that the form of the hair also follows Mendel's law. Thus, if the three grades of straight, wavy and curly be recognized then straight hair is recessive to curly. But "wavy" is peculiar in that it appears to be a hybrid or heterozygous condition indicating the presence of both straight and curly germ cells. It follows from the foregoing facts that two blue eyed, straight haired parents will have only children like themselves; but two brown eyed, curly haired parents may have a variety of these characters in their families. Again, the records collected by Mrs. Davenport and myself show that two flaxen haired parents have flaxen haired children and probably only such; two parents with light brown hair have children with hair of that color and lighter, but not darker; while children of two parents each with dark brown or black hair produce children with all of the varieties of hair color. Also two golden haired parents have only golden haired children and none with red hair. Consequently two blue eyed, flaxen or golden and straight haired parents will have only children like themselves. And the reason is that the germ cells as well as the somatic cells of such parents lack the dark and curly characters.

In the foregoing cases of heredity the more advanced condition is dominant over the less advanced. This is often, if not usually, true and this rule enables us to predict the outcome of

¹Gertrude C. and Charles B. Davenport, *Science*, November 1, 1907.

untried matings between parents having dissimilar characteristics. The more highly developed condition dominates over the less highly developed; and in the extreme case the presence of a character dominates over its entire absence. This extreme case gives results that accord with Mendel's law; the cases in which the characteristics of the parents differ merely in degree are often not inherited precisely in accordance with that law.

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The experimental production of the maternal part of the placenta in the rabbit.¹

By **LEO LOEB.**

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In a former communication² I stated that I had been able to produce at will, decidual tumors in the uterus of the guinea-pig by making deep incisions into the wall of the uterus, at certain periods of the sexual cycle. The nodules thus produced belong to that class of formations which I designated as "transitory tumors." Since then, further investigations³ have demonstrated that these deciduomata are produced under the influence of an internal secretion of the ovaries. There are indications that it is the corpus luteum which produces this internal secretion. If such a "preparing substance" has been secreted by the ovaries, indifferent stimuli are sufficient to call forth the development of the deciduomata. In the guinea-pig the new formations show a structure identical with that of the decidua. Large cells of connective tissue origin show an epithelial arrangement. The nuclei of many cells are hypertrophic, the cytoplasm is, on the whole, solid, and stains well with eosin. The decidual tissue of the placenta of the rabbit differs in some important respects from that of the guinea-pig, if we compare the placentas at the corresponding stages of development. In the rabbit the decidual cells are quite vacuolar and the

¹ This investigation was carried out under a grant from the Rockefeller Institute for Medical Research.

² Loeb: This journal, 1907, iv, p. 93.

³ A report on these further investigations appeared in the Journal of the American Medical Association, June, 1908.