This experience proves that human melanoblasts can multiply by mitosis in non-malignant conditions. I have also recently observed occasional instances of mitosis of benign nevus cells in ordinary papillomatous nevi.

A Comparative Study of Malignant Melanoma Among Negro and White Patients.

RUDOLPH J. MUELLING, JR. & WALTER J. BURDETTE.

Departments of Pathology and Surgery, Louisiana State University School of Medicine, New Orleans, La.

The admissions to Charity Hospital of Louisiana at New Orleans are nearly equal for white and Negro males and females. During the period from 1937 to date, there have been 101 cases of malignant melanoma among 26,800 malignant tumors in 686,293 admissions. That is, approximately 4 cases of malignant melanoma occurred per 1,000 cases of malignancy.

Approximately one-third (32%) of these melanomas occurred in Negro and two-thirds in white patients. The sex incidence in the Negro group was equal, whereas the incidence in white females was slightly higher than in white males. The majority of cases (88%) occurred between the ages of 30 and 80 years, those in Negroes having highest incidence some ten years later than those in white persons.

The foot was the most common site for the primary lesion in the Negro (50%) while in the white race the trunk was most common (33%). A pre-existing mole was described in one-third of the cases, mostly white. A history of trauma was elicited in one-half of the Negroes and one-tenth of the white patients. It is not possible to tell how much of the trauma was coincidental and falls in the *post hoc, ergo propter hoc* class. Clinical evidence of regional lymph node metastasis was found in about one-half of the cases. Better results of therapy were obtained when it was administered in the hospital rather than as hospital outpatients or in a physician's office and when the metastases as well as the primary lesions were included in the plan of treatment. Inadequate excision with recurrence of the primary lesion was recorded in 17 cases. Two cases of melanoma appearing during pregnancy were found to be of anaplastic histological appearance and were fatally terminated in a short time. The mean duration of life was 4 years and 5 months for the entire group. Eighteen out of 42 patients had a family history of at least one other individual with cancer. None of these had melanoma, however.

The sex incidence of malignant melanomas found is in agreement with that reported by Pack and co-workers (8) in an analysis of 862 cases. Dawson also found a history of the presence of a mole in one-third of the cases. However Pack et al (8) and Broders and MacCarthy (4) record this finding in one-half of their cases. Perhaps this discrepancy may be explained by the low incidence of antecedent moles among Negroes. The incidence of concomitant trauma is similar to that given by Pack et al (8) but much lower than that given by Horwitz (5), 57%. The tumor may arise from any portion of the Negro's skin or eye as Sutton and Mallia (10) have reported. However, when the lesion occurs, it is more apt to arise in the less pigmented areas of the body, such as the foot (7). The individuals in which they appeared were not all lightly pigmented but in many instances were exceedingly dark. The rapidity of the process in two Negro males followed to termination demonstrates that de Lignis' (6) conclusion that malignant melanoma in the native of Northern Transvaal is a less intense process does not always hold true for the Negro in America. The evidence given here would indicate that the American Negro is not as peculiarly immune to malignant melanoma as one might assume from the literature. (1, 2, 3).

SUMMARY.

1. Malignant melanoma was approximately one-half as frequent in Negroes as in white persons in a population of patients equally divided as to race and sex. This is a higher incidence than that usually quoted for Negroes.

2. Malignant melanomas arose more frequently from a mole in white than in Negro patients.

3. Metastases to regional lymph nodes occurred frequently.

4. Early therapy is better performed by those capable of treating not only the primary but also secondary lesion.

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Second Session: Genetical.

Introduction.

W. E. HESTON.

National Cancer Institute, Bethesda, Md.

Since the birth of his science at the turn of the century, the geneticist has had a profound interest in pigment. Color variations readily attracted his attention. It was through the study of coat color characters in mice and other rodents, plumage color in the fowl and eye color in *Drosophila* that much of the basic information on gene segregation, linkage, sex-linked characters, etc., was derived.

In his book on the Genetics of the Mouse, Grüneberg lists coat color genes located at 10 different loci, and two series have 5 alleles each. To this list could be added several more recently discovered coat color mutants as well as three genes controlling distribution of pigmented areas. Analyses of these characters by Cuenot, Little, Castle, Morgan, Dunn and others constituted a major portion of the mammalian genetics of the first quarter of the century.

Beyond the study directed at the gene itself, the geneticist is next interested in linking the gene to the biological character. He wants to analyze the physiological and biochemical steps between the primary gene action and the end result. Here again the study of pigment has offered especial advantages as emphasized by the work of those reporting at this conference and of others, particularly Beadle and Ephrusi, and Wright and his students. As compared to other gene action paths those concerned with color appear to be relatively simple. Furthermore the processes occur in cells readily accessible, and the history of these processes may be accurately recorded in such structures as the hair or feathers.

It is in studies such as these that the geneticist meets face to face with the biochemist, for final analysis of the gene action paths is on the biochemistry level. On the other hand the geneticist can be of great aid to the biochemist for already the geneticist has identified many of the genes related to the enzymes involved.

The pigmented tumors afford a special field of physiological genetics. Those in the fruit fly and the platyfish hybrids have been of particular value because of the adaptability of both organisms to genetic and cytologic analysis and also because of the vast knowledge of the genetics of both organisms but particularly of the fruit fly. Along with the physiology of pigment formation is that of the malignant transformation, thus presenting a picture in which there is some danger in confusing the two sets of processes. Are the genes which are responsible for the presence of the pigment cell, also in part at least responsible for the abnormal growth of the cell, or is the inheritance of the pigment cell more in line with that of eye and hair color, and the inheritance of the control of the growth of the cell in line with the genetics of neoplasms derived from other types of cells? In either case, what are the processes involved? As will be indicated in the reports of this section, much progress has been made in answering the basic questions in these fields of physiological genetics.

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Significance of Quantitative Histological Studies of Pigment Found in the Coat Color Mutants of the Mouse to Questions of Normal and Atypical Cell Growth.

ELIZABETH SHULL RUSSELL.

Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Me.

Differences in visual effect of pigments in mouse hair are determined by variations in seven attributes of the melanin granules deposited there. Quantitative histological studies have shown four key pigmentation characteristics, relatively independent of