probability. No tested character shows any difference in values between males and females.

As for the ABO system frequency, our results are very similar to those already published[12,13] for the territory of Yugoslavia. The same holds good for MN and Rh(D) factors, except that the frequencies of Rh negative phenotypes are somewhat lower[13] in our material. According to the published[11,14] and unpublished observations of the distribution of Hp-types in Yugoslavia, the results shown match those from certain areas, bearing in mind the fact that the Hp[1] frequency of our sample is slightly lower than the average frequency found in Yugoslavia until now. We have no data concerning the ABH secretion status of our healthy population[15], but a comparison with some sources[3] shows that the frequency of non-secretors in our sample is lower than the European average (about 23 per cent). The frequency of non-tasters in this test corroborates the existing data[16,17] regarding the distribution of this hereditary character in our populations. Laboratory analyses did not yield a single 'Bombay' type. Generally speaking, frequencies of all tested characters agree with the distribution of the same characters in European populations[2,3,18–20].

This work reports an effort to answer the first of basic questions of human population genetics, propounded so brilliantly by Penrose[21]. We shall attempt to answer other questions in our further work.

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Transferrin Variants in Finland

THE gene responsible for transferrin *C* seems to be very common in all human populations. Of the rare alleles, those producing the faster-moving variants have mainly been found in Caucasoids. The most common of them is B_2, which has been observed in 1 per cent of Canadian Whites, Englishmen and Swedes[1–3]. *Tf* B_1 has been reported in 1 of 139 British Whites[2] and 2 of 1,173 Swedes[3].

The more slowly migrating transferrins (*D* type) are rare in the white populations studied so far, but common in some other races. The phenotype CD_1 is found in about 10 per cent of the New York Negroes and Australian Aborigines[4]. In a Chinese population about 6 per cent of individuals were of the phenotype CD_{Chi}[5]. Reports on the occurrence of the *D*-alleles in Whites have been published by Harris *et al.*[6], who found 2 cases of CD_4 (CD_{0-1}) among 1,000 English and Italian samples; and by Beckman *et al.*, who discovered 6 CD_1 phenotypes among 329 Swedish Lapps[7] and 2 CD_1 phenotypes in 1,173 Swedes[3].

The sera of 354 unrelated Finns were examined by unidimensional starch-gel electrophoresis, using the discontinuous buffer system described by Beckman and Holmgren[7]. The electrophoresis was applied at 6° C with 10–12 V/cm for about 3 h. One drop of bromphenol blue in the gel buffer solution was added to the filter-paper slice soaked with the test serum, so as to make the albumin band visible during the migration. This did not interfere with the staining of proteins with amido black.

The distribution of different phenotypes in the series was: *CC* 338; B_1C 9; B_2C 1; CD_1 6.

None of the CD_1 individuals was born in Lapland, nor did they have parents born in Lapland. It seems that the frequency of the B_1 and D_1 genes in the Finnish population is remarkably high. Six of the families, in which the heterozygotes were found, were investigated more thoroughly. Twelve of their children had the parent's heterozygous phenotype, while nine were of the type *CC*. The pedigrees will be published later.

We wish to thank Dr. L. Beckman for supplying us with *Tf* B_1C, B_2C and CD_1 reference sera.

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VIROLOGY

Antigenic Activity of Tryptic Peptides of Tobacco Mosaic Virus Protein

FRAGMENTS possessing immunological activity related to that of the whole protein have been obtained from several protein antigens. Enzymatic digests of silk fibroin[1], γ-globulin[2,3], and serum albumin[4,5] have exhibited such activity. A recent report from our laboratory showed that fragments of egg albumin obtained by partial acid hydrolysis of the protein inhibited both the *in vitro* interaction of the protein with homologous anti-serum and systemic anaphylaxis in guinea pigs[6]. Although active fragments have been obtained, analysis of their composition and structure is extremely difficult.

Proteins of known amino-acid sequence afford promising tools for studying antigenic determinants. Recently, Brown[7] reported on the antigenic determinants of ribonuclease. We present here our findings on the immunological activity of tryptic peptides of tobacco mosaic virus protein (TMVP), another protein of known amino-acid sequence[8,9].

The TMVP was obtained from the whole virus by treatment with 66 per cent acetic acid[10]. The protein was digested with trypsin for 2 h at 40° C maintained at *p*H 8·0 by a *p*H stat. The digest was passed through a '*G*50 Sephadex' column equilibrated and developed with M/300 phosphate buffer *p*H 8·0. Two fractions were obtained: $G_{50}S_1$ and $G_{50}S_2$, containing materials of molecular weight ranging above and below 10,000 respectively. The peptides contained in the $G_{50}S_2$ fraction were characterized by ion exchange chromatography[11,12] on a 'Dowex 1 × 2' column developed with a polygradient buffer system ranging from a collidine : pyridine buffer of *p*H 8·8 to 50 per cent acetic acid. They were also characterized by electrochromatography using the peptide mapping technique of Woody and Knight[13]. $G_{50}S_2$ contained the peptides characteristic of the tryptic digest of TMVP[12,13].