

## II. HISTORY

# The Growth and Development of Genetics at MCV

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Genetics was well established at the Medical College of Virginia by the time I joined the faculty in 1960. At least one course in genetics was required of students in the Schools of Medicine, Dentistry, Pharmacy, and Nursing. The Department of Biology and Genetics, which was in the School of Pharmacy and chaired by Dr. Roscoe D. Hughes, also had a modest graduate program in genetics and two genetics research programs, one on facial growth in twins, supported by a grant from the National Institutes of Health, and the other on the genetics of drosophila, supported by the National Science Foundation.

In 1938, Dean Wortley Fuller Rudd of the School of Pharmacy had hired Dr. Hughes to teach general biology and comparative anatomy to the undergraduate pharmacy students. Dr. Hughes, a graduate of the US Naval Academy at Annapolis, had just received his Ph. D. degree at Columbia University for cytogenetic studies on drosophila under the tutelage of the distinguished cytologist, Franz Schraeder; this was the same department in which the Nobel Prize winner, Thomas Hunt Morgan, had begun his pioneer work three decades earlier. Dr. Hughes had the added advantages of direct association with Morgan and other great geneticists, including Leslie C. Dunn and Calvin B. Bridges.

It is hardly surprising then that after his arrival at MCV, Dr. Hughes wanted to introduce genetics into the various professional curricula; however, except for simple Mendelian principles taught in the

general biology course to pharmacy and nursing students, no opportunities arose until sometime after World War II. By the late 1940s, the controversy over the dangers of fallout from atomic bomb tests had made the general public as well as clinicians aware that genes affect the health of everyone and undoubtedly helped to create the opportunities that Dr. Hughes had been looking for. Dr. Hughes<sup>1</sup> reported, "Beginning in 1949, three or four lectures in genetics were given to second-year dental students. The number gradually increased to eleven. In 1954, the course was placed on a formal basis and from then on carried academic credit. Also, during this period occasional lectures were given on special topics to other classes." This was, I believe, the first required genetics course in a dental curriculum anywhere.

Medical Genetics first appeared as a required eleven-hour course in the *MCV Bulletin*, Winter, 1951. While this was probably not the first required genetics course in a medical curriculum, it was certainly among the first. Genetics remains a required subject in the Schools of Medicine and Dentistry.

In 1953, Marion Waller, now Professor of Medicine at MCV, received the first graduate degree to be earned in the Department of Biology. As has been true of all research conducted in that department or in one of its successors, her research was in genetics.

The next year, Dr. Bertram L. Hanna, a mathematical geneticist, joined the faculty of the department, doubling the number of faculty above the rank of Instructor. Expansion of genetics courses in the various professional schools led to the department being renamed, Department of Biology and Genetics. (Although this name appeared in the *MCV Bulletin* for years beginning in April, 1956, Dr. Hughes once

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This is paper #42 from the Department of Human Genetics of the Medical College of Virginia.

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told me that he amended the name himself and soon everyone followed his lead without there ever having been any official approval.)

In 1963, the department was offering nine courses in its graduate program. By the fall of 1965, there were seven genetics graduate students in residence; this number had risen to nine by the fall of 1972.

After MCV and Richmond Professional Institute merged to form Virginia Commonwealth University in 1968, and Dr. Hughes retired in 1970, the responsibility for teaching anatomy to the pharmacy students was assigned to the Department of Anatomy; the Department of Biology and Genetics had become, in effect, a department of genetics. The newly appointed president of VCU, Dr. Warren W. Brandt, decided, however, that four faculty members were too few to constitute a "viable" department; so the department's name was changed to Program in Human Genetics, and the program was transferred to the School of Basic Sciences and in 1974, moved from McGuire Hall to the eleventh floor of Sanger Hall.

Although the genetics faculty has ceased having any role in the education of undergraduate pharmacy students, it has maintained responsibility for lectures on the genetics of special pathological conditions discussed in Nursing Health Science. Lectures on appropriate genetics topics are still given in the dietetic intern program and to students in blood banking.

Because a study<sup>2</sup> made by the Virginia State Council of Higher Education in 1971 considered the number of graduate degrees earned in the Program in Human Genetics at MCV to be too few, the VCU administration approved a plan to expand the program at the earliest opportunity. Implementation began when Dr. Walter E. Nance was recruited as

Chairman in September 1975. There shortly followed the third name change to succeed Department of Biology—Department of Human Genetics.

Since 1975, rapport with clinical departments has been strengthened, especially with the Department of Pediatrics, which had been closely involved with the Program in Human Genetics, and with the Department of Obstetrics and Gynecology, which had not. Faculty joint appointments have been made to several clinicians who have especial interest in genetics and are involved in teaching clinical genetics or in sponsoring graduate students in genetics.

In addition, both the space occupied by Human Genetics in Sanger Hall and the number of graduate students in the Department have doubled; the number of nonprofessional employees in the Department has grown more than sixfold; the amount of external grant support awarded to the Department's faculty has increased to more than \$600,000 per year; and the Department has received a predoctoral training grant from the National Institutes of Health which will provide stipends for six students. During the coming year two additional faculty members will be recruited, increasing to six the number with primary appointments in Human Genetics. After the benign neglect of genetics, these developments promise to fulfill the dream of having an outstanding human genetics center at MCV, a dream long held by MCV's first geneticist, Dr. Hughes.

#### REFERENCES

1. HUGHES RD: Genetics in the dental curriculum, in Witkop CJ Jr (ed.): *Genetics and Dental Health*. New York, McGraw-Hill Book company, 1962, pp 281-284.
2. State Council of Higher Education for Virginia: *A Study of Graduate Degree Productivity*, June 1, 1971.