

Victor Almon McKusick, MD, 1921–2008, In Memoriam

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Victor Almon McKusick died peacefully in his sleep on the evening of July 22, 2008, at the age of 86 years and 274 days. Fortunately, he was sharp to the end and in not too much discomfort. A genetics enthusiast and an educator to the very last, he spent parts of his final two days enjoying live streaming video of the first two days of the 49th annual Short Course in Medical and Experimental Mammalian Genetics (the “Short Course”) going on at the Jackson Laboratory in Bar Harbor, Maine. I spoke to him twice in those last two days: the first time was to get clarification regarding aspects of the history of genetics (which he readily provided), and the second was to inquire about his condition. In that last conversation only 24 hr before his death, he was palpably pleased with the lectures of the first day and for the honor bestowed on him by the State of Maine for his lifetime achievements culminating in his receipt of the 2008 Japan Prize in Medical Genetics and Genomics. His romance with genetics carried him through to the very end.

The story of Victor’s childhood, growing up with his identical twin, Vincent, on a family dairy farm (the Lone Elm farm) in Parkman, Maine, a small town, really four corners, in the spruce forests of north-central Maine, has been well described by him (McKusick, 2006) (Figure 1). We know from Victor that his family valued education and that the first 8 years of the twins’ education took place in a one-room schoolhouse together with a handful of other kids under the direction of the same teacher for seven of the eight years; one can only imagine what it was like to preside over this crowd!

In addition to his genetic endowment, I expect that many of Victor’s most outstanding personal qualities derived from his childhood experiences. Among these I include intellectual honesty, clarity of thinking, a willingness to work hard, a dedication to education, a wry sense of humor, and an appreciation of the value of a community approach to problems.

Victor’s work ethic was apparent to any that knew him; as Clair Francomano said in her tribute at his funeral, “Victor was always working.” He maintained a dairy farmer’s hours throughout his life, exchanging the predawn childhood chores of tending to the cows for his ceaseless authoring efforts to keep Mendelian Inheritance in Man (MIM) up to date in his adult life. We all continue to benefit from his efforts on MIM and its derivative online version, OMIM, as a resource for clinical problems and, in-



Figure 1. Victor and Vincent McKusick on a Neighbor’s Farm, circa 1932

The boy without shoes is Victor.

creasingly, as a research tool (Jimenez-Sanchez et al., 2001; Goh et al., 2007). A less well known but valuable resource exemplary of his clarity of thought and communication are the contents of the forward materials in the printed versions of MIM (editions 1–12). Here Victor worked hard to clarify our understanding of Mendelian inheritance and how it applied to human conditions (McKusick, 1998).

We all know that Victor had an encyclopedic knowledge base and he never ceased to amaze with the facts he could recall. Perhaps less well recognized was his intellectual honesty and willingness to admit when there was something he did not know. I experienced this as an intern at Hopkins in July 1969 when, for the first time, I presented a patient to him. He listened to the history, examined the dysmorphic infant, and then looked up and said, “I don’t know.” Many others in that scenario would have guessed and in so doing would have clouded any subsequent thinking about that patient.

Throughout his life, Victor often assembled groups of experts to tackle big problems and I’d like to think that his one-room schoolhouse experiences might have contributed to his comfort with this “community approach.” Examples include the Birth Defects conferences, the Human Gene Mapping workshops, and the Short Course. In my

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Figure 2. Victor McKusick and Patients in the Moore Clinic in the 1970s

The edge of his red leather chair is seen on the right.

experience, the power of this approach was best exemplified by the Moore Clinic, a chronic disease clinic instituted at Hopkins by J. Earle Moore in 1952 and taken over by Victor in 1957 to serve as the clinic for his new Division of Medical Genetics within the Department of Medicine. I first participated in the Moore clinic in the early 1970s. The patients were seen by fellows or residents and then presented in person to a group of 30 or more physicians, counselors, students, social workers, and others presided over by Dr. McKusick sitting in his red leather chair at the right front of the room (Figure 2). Although this was an awkward experience for some, each patient was the beneficiary of the focused and interactive attention of a group of experts—radiologists, neurologists, dentists, dermatologists, orthopedists, physical and occupational therapists, ophthalmologists, endocrinologists, and the like—on the diagnosis and management of their problems. In addition to providing an excellent educational experience for those of us learning clinical genetics, this concentrated attention of a community of experts was of great benefit to individual patients and a far cry from our current system in which patients are seen by individual physicians, often as dictated by insurance companies, over a time frame of days, weeks, or even months, with communication between physicians limited largely to brief written documents and with little opportunity for intellectual give and take to think through an individual patient's problem.

Victor was committed to education and the Bar Harbor Short Course is a special example of his commitment. He conceived of the course on a visit to the Jackson Labs in 1959, and as a result it was first offered in 1960. Since then more than 5000 students and 250 faculty have participated. He loved his time there, lecturing, moderating, asking questions, and interacting with students and faculty.



Figure 3. Victor and Anne McKusick at Their Wedding, June 11, 1949

Over the years, those of us at Hopkins, in particular, benefited enormously from our annual migration up the East coast and the chance to refresh our intellectual batteries, catch up with colleagues, and strengthen connections with model organism genetics. We saw Victor in a more relaxed mode at the Short Course and had a better chance to experience his sense of humor. At a memorable celebration of the 40th anniversary of the course, Victor took great delight in being serenaded by Francis Collins, backed up by the duo of Clair Francomano and Susan Valle singing a somewhat irreverent song written by the latter entitled "Never say Vic!" and beginning "Deep in the woods of Parkman, Maine, one zygote divided, giving two of great fame" (Valle, 1999).

Any tribute to Victor would be incomplete without mention of his wife and constant companion, Dr. Anne B. McKusick. Married for more than 50 years, they were a team whose abilities truly exceeded the sum of the parts (Figure 3). In addition to her medical prowess, Anne has been a gracious and enthusiastic supporter of all of us and we extend to her our sympathy and best wishes for the future.

In closing, we will miss Victor for his energy, experience, wisdom, and insight. If we could reach him now, I am sure he would tell us that he will miss the ongoing excitement of participating in the rapidly developing interaction of genetics and medicine. Driving home after the morning lectures in the Short Course several years ago, he confided in me that one of his goals was to be "on the podium" for the 50th anniversary. Sadly, that is not to be. We will miss him sorely but his spirit will be there for all to treasure.

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