Letter to a Student

July 24, 2007

You and your classmates will travel many different roads to meet in a Place and a Community called Trinity College. From a student who made his journey to the College many years ago from the small town of Fayetteville West Virginia, welcome.

President Jones invited me to write a letter to you. I am at a time in my life when I am occasionally asked how I found what my friend Wendell Berry has called "Meaningful Work." You are at a time in your life when moving away from familiar people and surroundings will cause an uneasy feeling and a new awareness of Future. Even with the benefit of hindsight, I remain impressed with how unknowable my Future was when I had your vantage point as a new Trinity College student. *Moving forward through my remembered past*, my Future resolves into discrete experiences, choices, and turning points. I also recall many *roads not taken*.

TO COLLEGE: My first visit to Trinity was 32 years ago in January 1975. Frank Kirkpatrick, Henry DePhillips, and Dirk Kuyk, all still Professors at the College, interviewed me for admission to the College's innovative Individualized Degree Program. I was an unlikely applicant to Trinity College. I had dropped out of high school. My grades were poor, standardized test scores were unremarkable, and neither indicated an aptitude for science. No one imagined I would become a physician. I had been away from school for 6 years. First, working as a boiler man on steam-powered ore boats on the Great Lakes, then, in 1970, near the end of the Vietnam War, I was drafted into military service and reluctantly joined the US Navy, to do the same work.

When I first left high school I imagined I would become a writer, but over the years I had written little. As a past time at sea I read widely and studied complex problems. In this way I had developed an interest in the subjects of neurobiology and developmental psychology. Apparently, letters of support from two former high school teachers, my application essay and admission interviews indicated that I had some non-traditional promise as a college student. Dr. Kirkpatrick told me at the end of my meeting with him that I would be accepted into the Individualized Degree Program and that, in fact, I could start my studies at Trinity immediately.

I was an older student, 24. For three years I lived alone off-campus in a small apartment at 117 Oak Street, near the Capital. I walked or rode a bicycle to the College library daily, where I spent so much time the staff eventually paid me to work at the reference desk. Challenged by the sense that I may be out-of-place at Trinity, and might well fail my courses, I was a serious student from the first. I soon appreciated that College was a reprieve, not only from hard work in the engine rooms of ships, but also from the social chaos of the 1960s.

My parent's generation was your age during the Great Depression and during World War II – I was aware that those difficult times affected them in many ways. My generation remembers the day President Kennedy was shot, Bobby Kennedy was shot, Martin Luther King was shot. I remember a door in the movie theater in my small-town, which was owned by the Principal of my Grade School, that said in large letters "Colored." That door led to a dirty balcony where black people were expected to sit. I remember too my 8th grade Civics teacher, who was the only black school-teacher in my town, the only school teacher with a PhD, too. I recall little, if anything, about the subject she taught, but I remember her dignified manner. If she ever went to that theater, I am sure she walked through the "White Only" door. My generation remembers the days other African Americans walked and ran through the streets of Mobile, Philadelphia, Washington, and many other cities. We remember too the Vietnam War protests in Chicago, and students shot and killed by the Federal Troops at Kent State College. We find names of our childhood friends on a long black wall in Washington - the name on Panel 16W, Line 15 of the Vietnam Memorial is William David Sirocco Jr. Bill was age 20, the current age of my son, when he stepped on a land mine, was maimed terribly, suffered, and bled to death on forgotten ground in Binh Duong, Vietnam. By the time I started Trinity, the imaginary boundaries that Bill and other boys patrolled, the maps they carried, the military mission of November 1, 1969, and, soon, the whole county of South Vietnam had faded into what our Secretary of Defense Robert McNamara would later, too much later, call "The Fog of War" – McNamara's enlightenment came toward the end of his long life, and far beyond the time of his responsibilities when such insights about war could have protected Bill Sirocco. I am aware that those difficult times of the 1960s affected me in many ways.

I started dating Caroline, my wife, during my final two years at Trinity. She was in graduate school at the Harvard School of Education. She had spent a year in Vietnam with the Red Cross. Afterward, worked to establish, and find money for, preschool programs in small coal towns of southern West Virginia. Both of us had returned to school in the mid 1970s, in part, hoping to find places of reason within a world that had too often appeared to us unreasonable, or worse, indifferent. At the doors of the classrooms and libraries of Trinity and Harvard we left much behind. We were serious students, searching for "Meaningful Work." It would be 12 years, and three children, later before Caroline and I found that work in a Place and a Community called Lancaster County Pennsylvania.

Four and one-half years after my January interviews, I graduated with majors in Biology and Psychology. I went to Harvard Medical School, studied Pediatric Medicine at Children's Hospital in Boston, and Biochemical Genetics with Richard Kelley at Children's Hospital of Philadelphia and Johns Hopkins. Today, I work at a non-profit clinic that my wife and I founded called the Clinic for Special Children. We care for children who have genetic disorders, many of which disrupt the growth and development of the brain. The Biology and Chemistry programs at Trinity strengthened my interests in medical science through excellent courses in Biochemistry, Human Physiology and Analytical Chemistry, and provided a foundation for my later studies of inherited metabolic diseases. William Mace's courses in Developmental Psychology and Experimental Vision Research required critical thinking about the assumptions behind experimental designs, extensive reading about the historical and philosophical basis of scientific reasoning, and, in all of his classes, Dr. Mace required careful writing. I have always found it remarkable that at no other time in my education was I asked to think in a critical way about scientific methods, about the errors in logic and experiment that result in flawed systems of scientific information, or about the reasons for sudden and broad shifts in paradigms of scientific research, which are found throughout the history of science.

I am reminded each day of the importance of my education at Trinity. Although I make a living as a Pediatrician, my daily work is enriched and sustained by broad interests in the humanities and sciences. Years later I would write, *I was never an easy person to teach. I doubted, questioned, and argued my way through an unusual education. My interests in people and art, medicine, and science, which are the sustenance of my work each day, were inspired by a few teachers of literature, writers, scientists, and doctors. I remember them as gifted teachers and thoughtful people. The influence of important teachers endures as friendships do and shows in our work long after schooling ends……..The longer I am away from school the more aware I am of the importance of these few teachers to my education and my work.* (dhm, From the Lecture *Meaningful Work, Virginia Episcopal School, April 1994)* Many of my *important teachers* were at Trinity College. An important part of your education will be to find *your* teachers.

FUTURE & EDUCATION: *Moving forward through my remembered past,* I realize that the directions of my endless education, the nature of my current work as a physician, the scientific questions that I have asked and answered, could not have been anticipated when I had your vantage point. *Medium chain acyl dehydrogenase deficiency* and *glutaric aciduria type 1*, two genetic disorders that have consumed much of my professional life, had not been discovered in 1976. The use of tandem mass spectrometry to do population screening of newborns for these, and dozens of other inherited disorders, which is now routine, was not feasible until the early 1990s. Much of the information about amino acid metabolism in the brain, and the technologies for brain Magnetic Resonance Imaging and Positron Emission Tomography, which recently have provided crucial insights into the biochemical and vascular mechanisms of brain injuries in infants with glutaric aciduria, were all technologies in their infancies, awaiting the development of high speed computers. The vast storehouse of information in the Genome Project found in the public data bases of the *National Center for Biotechnology Information (NCBI)* were not only non-existent in 1975, they were not imagined. The very language of the questions and answers that are fundamental to my current professional life did not exist when I started my studies at Trinity.

If you Google *"NCBI*" and select *National Center for Biotechnology Information <http://www.ncbi.nlm.nih.gov/sites/entrez>* you will find the search window for *PubMed*. There enter "GCDH" and you will pull-up 46 references including: *Multimodal imaging of striatal degeneration in Amish patients with glutaryl-CoA dehydrogenase deficiency. Brain. 2007 Jul;130(Pt 7):1905-20. Epub 2007 May 3. By* Strauss KA, Lazovic J, Wintermark M, Morton DH. Our paper is there, free, for you to print and read. If you put in the search term "MTHFR deficiency" you will have 427 references, one of which is by *Strauss KA, Morton DH, Puffenberger EG,*

*Hendrickson C, Robinson DL, Wagner C, Stabler SP, Allen RH, Chwatko G, Jakubowski H, Niculescu MD, Mudd SH.*Titled *Prevention of brain disease from severe 5,10-methylenetetrahydrofolate reductase deficiency. Mol Genet Metab.2007 Jun;91(2):165-75. Epub 2007 Apr3.* This paper too is free for you to print and read. If you pull down GENE in the data based menu on the left side of the page, then put in the gene symbol MTHFR, the gene sequence and the protein structure will appear. When Erik Puffenberger in our lab sequenced MTHFR to look for the disease causing mutation reported in this paper, he pulled up the sequence of MTHFR, linked out to PRIMER, designed and ordered the PCR primers on-line, received them in two days, then, sequenced the gene in two days and found the mutation - base-pair change at position 1129 C->T (R377C) - all for a cost less than $200. Not very long ago a graduate student in molecular biology would work for years to locate and sequence a single gene.

From GENE you can link to data bases that show pathways of protein to protein interaction with MTHFR, relevant biochemical pathways, data bases that list known mutations in the human gene. You can compare the conserved regions of the gene and protein of MTHFR in humans, chimps, dogs, mice, rats, chicken, fugu, zebra fish, and, recently, the opossum. This kind of comparative data across species has generated a literature that includes book a by the biologist Sean Carroll *Endless Forms Most Beautiful* that explores the molecular basis of pattern formation in embryology, which depends upon a family of genes common to all multi-cell life and therefore are *primitive* in a deep evolutionary sense. A search in *PubMed* of "*mitochondrial DNA* AND *human populations"* yields more than 1000 references that use the gradual changes of the maternally inherited DNA of mitochondria as molecular clocks or molecular fossils to trace the origins of human populations - methodologies discussed in the remarkable book by Jared Diamond *Guns, Germs and Steel*, *The Fates of Human Societies* and Bryan Sykes' *The Seven Daughters of Eve; The Science the Reveals our Genetic Ancestry.* The NCBI data bases also include the complete sequence of the mitochondrial DNA of the brook trout, information which my daughter Mary and I will use to estimate how long two isolated mountain-top populations of brook trout have been separated by geological barriers that have long prevented upstream migration, at least since the most recent ice age 10,000 years ago, but probably much longer. Molecular information about the age and relatedness of life forms also stimulated recent books such as Francis Collins' *The Language of God*, and Sean Carroll's *The Making of the Fittest,* and E.O. Wilson's *The Creation: An Appeal to Save Life on Earth.* Collins, the Director of the Human Genome Project, explores the broad implication of modern molecular biology with reference to his own Christian beliefs. Sean Carroll not only argues that modern molecular biology provides overwhelming support for Darwin's Theory of Evolution, but directly confronts religious leaders and educators who suggest that creationism is a scientifically viable alternative to evolutionary biology. Wilson's book is a biologist's expression of reverence for life, and an appeal for people of all cultures and beliefs to understand the deep interdependence of life forms.

The NCBI databases contain a deep storehouse of raw data. When connected to these databases a personal computer becomes a library and a *Bioinformatics* research laboratory. The term *Bioinformatics* means many different things, but these databases appear to be a new form of public knowledge, a new manner of recalling information, a new way to ask and answer questions. Routine use of the NCBI site began at our Clinic about 10 years ago, when Erik Puffenberger came to work in the Clinic's laboratory, and the databases have since fundamentally changed the practice of medicine in our small Clinic, which is in the middle of an Amish farm, far from university laboratories and libraries.

Beyond the unanticipated emergence of such technology, the other reason my Future was unknowable in 1975 was because the personal experiences, observations, and the children I cared for as a young physician, that collectively defined for me the *important questions*, and defined too what answers were *meaningful*, would unfold over a period 20 years - long after my formal education at Trinity College was finished. All this is to say that your uncertainty about your Future is well justified. Whatever the immediate goals of your *Education* at Trinity College in the next four years, what you learn must allow you to continue to learn from *experience and reason* long after lectures have stopped. Your Education must allow you to sustain what I have called "Difficult Learning."

DIFFICULT LEARNING: If I ask you to listen to the Bach Cello Suites and become familiar enough with the music to name the Suite number and key of one of the Preludes, that assignment presents little difficulty. It is typical of much ordinary school work. In contrast, if I ask you to learn to play this same music, well, from memory, with an appreciation for the complexity of its musical structure, and

with the kind of controlled expression that makes the cello playing of Pablo Casal's distinctively different from the playing of Matt Haimovitz, you would find this a difficult assignment, regardless of your musical aptitude. The most significant learning that you will do over your lifetime is similar to learning to play the Bach Cello Suites. *Difficult Learning* takes sustained effort, sustained interest, tolerance of frustration, and, in my work, the ability to recover, and learn from, great failures.

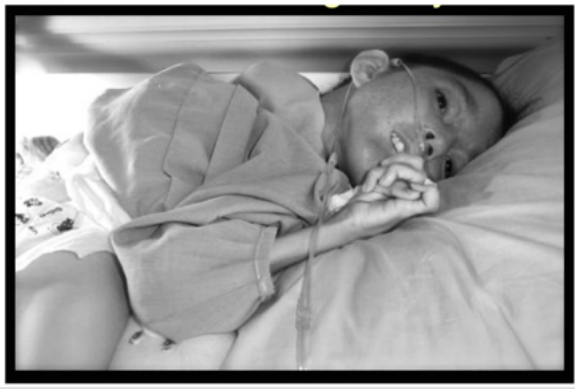
In the Wenzinger Edition of the JS Bach Suites for Solo Cello is printed on 35 pages and contain approximately 360 lines of music. Pablo Casals' recording of all six Suite runs for 2 hours and 10 minutes, Mstislav Rostropovich's recording totals 2 hours and 27 minutes. This music was written by Johann Sebastian Bach in 1720, but was unknown to 19th or 20th century cellists until Pablo Casals, at 13 years of age in 1890, found a copy of the music for the six Suites in a used book store in Spain. There is no history to suggest that the Suites had ever been played in concert or in their entirety. Pablo Casals from age 13 studied Bach's music everyday as part of his practice routine. Casals was arguably the 20th century's greatest cellist, yet, it was 25 years before he played one of the Suites in a public concert, and it was 35 years before he recorded all six cello suites – playing from memory.

The Sarabande of Suite V in C minor has 4 lines and 107 notes. There are 39 notes in the first section, and 68 in the second section. Each section is repeated once. The piece is played by Casals in 2.8 minutes and by Matt Haimovitz in 3.5 minutes. I have played this piece on my cello thousands of times, last year I played the piece on a 1697 Stradivarius Cello. The music remains enjoyable to play, it has a mysterious quality. I also work to learn to play the Prelude and Sarabande of the First Suite, the Prelude of the Second Suites, and the Allemande of the 6th. In reality, much of the music of the Bach Cello Suites is too difficult and will remain for me unplayable. This is the nature of "difficult learning."

I do not have much musical aptitude. Yet, my sustained interest, my stubborn determination to learn, my willingness to practice day after day, the great value I assign to the task of learning to play the cello, has allowed me to develop some of the necessary skills over time. The apparently talented student who has little interest, makes little effort, assigns no value to the task of learning to use his or her talent, will never play the Cello Suites - regardless of his or her native abilities.

The intelligent student who has little interest in his or her studies, beyond completion of an assignment and a test, assigns little value to the process of learning, will not solve difficult problems whose solutions require sustained effort, tolerance of uncertainty, and where the reward of hard work is as often failure as success. Over the past 20 years I have spent more than 20,000 hours of my life working to understand the effects of maple syrup urine disease and glutaric aciduria upon the brain. Working to develop methods of diagnosis and treatment that will rescue patients from the metabolic crisis that cause coma, brain edema, strokes, mental retardation, and a lifetime of disability. Medical care for these problems is now available, but success comes at a high cost in terms of time and money. But, failure has higher costs, and long suffering too. (dhm, Notes from a lecture at the National Youth Science Camp, *The Cello and the Brain*.)

Ruthie, Amish GA1, age 39 years,
She was injured during an otherwise uncomplicated varicella infection.



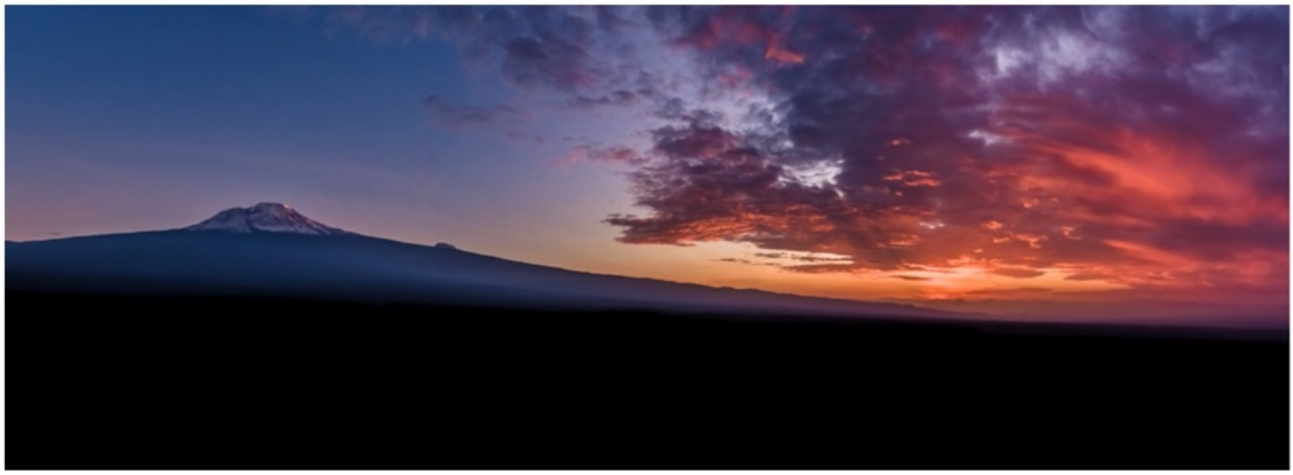
Midnight, January, 15, 1997 - Half asleep, I am waiting for amino acids to finish running. A blood sample was brought in by a hired driver from a hundred miles away. A sample from a new baby who has maple syrup urine disease. He is not ill, and because of timely diagnosis, he can be easily treated. His sister will be happy to have a brother to share her special diet and formula with. He is the fourth child for these young parents, their first son, the second of their children with the disease. His mother is 25 years old and has four children, two with this disease. How much of the next 20 years of her life will be given to this child and his trouble? How many hours of my life will he claim? I always think of that as I examine a newborn with maple syrup disease or glutaric aciduria or Crigler-Najjar disease - each child takes, needs, defines another piece of my life, a few more hours from nights and holidays, a few less hours of needed rest or reading or writing or playing the cello. Meaningful work? Yes. No doubt what I know, what I learn helps these children - interesting life, interesting work too. Exile too? Yes. Child by child, hour by hour as I am needed, my future is taken, decided, shaped. Yours too? Unaware, have these children already begun to take your time, your life? Was that part of the cost of coming here, searching for,

seeing, meaningful work? Was that the ultimate cost of looking into the eyes of such children? Will you give them that much? (dhm, Letter to a medical student)

A NOTE FROM "THE STUDENT" 2024

From Marieke - What.. stays is the role that you have played in my entire life since, shaping and driving my everyday work even if it is different and remote. I would not have wanted to miss any of our correspondence and any of the support and inspiration you have given me (and still do).

July 12, 2024 ***Greetings from the airport in Kilimanjaro where I am waiting for a flight.*** *The photo of Sunset over the Lake at Green Wood Park that you sent reminds me of this one my friend made of sunset over Mount Kilimanjaro & The Serengeti. - (Bianca from Kaliwa).*



I had a month alone in Tanzania being the only neurologist for the ridiculous number of 30-million people, worked hard but also felt the immensity of the bottomless pit underneath it all. Correspondence with you gave me plenty of occasion to start seeing things in perspective. Alas for now I will just hang in there.

Now doing 1 month of Netherlands: covering all open shifts in the holiday period (small hospital where my friends work, I have done it before) and the other half enjoying seeing my children.

MEANINGFUL WORK: When asked how he found the time & energy to carry-on a busy solo general practice and write, William Carlos Williams remarked: *the actual calling on people, at all times and under all conditions, the coming to grips with the intimate conditions of their lives, when they were being born, when they were dying, watching them die, watching them get well ...has always absorbed me....That is why as a writer I have never felt that medicine interfered with me but rather that it was my very food and drink, the very thing that made it possible for me to write….*

We catch a glimpse of something, from time to time, which shows us that a presence has just brushed past us, some rare thing .... For a moment we are dazzled. (William Carlos Williams from *The Autobiography*)

In clerkships of medical school and during my residency in Pediatrics, I realized that my manner of independent learning and my enjoyment of the study of complex problems was a great advantage to me, and to my patients. Children with puzzling medical problems became my Teachers. I often recalled the remark by the Harvard Physician Francis Peabody, *The Secret of Caring for the patient is Caring for the Patient.*

The humanitarian need for our work at the Clinic for Special Children is apparent, but the scientific importance of our daily work should not be underestimated. Many facets of the natural history of genetic disorders only become apparent to physician-scientists who care for individual patients over long periods of time and who are interested in the practice of medicine, pathophysiology, and biology in the most general sense. The identification of underlying molecular lesions alone usually provides little insight into the

phenotypic diversity that we encounter in patients in Lancaster County. The complex neurological syndromes of Glutaric Aciduria, Maple Syrup Urine Disease, and Phenylketonuria arise from single gene mutations, but the complex mechanisms of brain injury and dysfunction are linked to vulnerabilities during critical periods of early brain development. In patients with Glutaric Aciduria episodes of metabolic illness that cause acute striatal necrosis in a 12 month old infant are well tolerated in the 6 year old and adult. The unbalanced amino acid transport into the brain that leads to mental retardation in the infant with Maple Syrup Urine Disease or Phenylketonuria will cause attention deficit disorder and mood disorders in teenagers and presenile dementia in older adults. Single gene disorders give rise to disease states through the disruption of critical biological processes such as metabolic adaptation to fasts and infectious illnesses, cell volume regulation, brain amino acid homeostasis, and postnatal brain growth and development. Scientists who work as physicians and care for many patients with the same genetic disorder over long periods of time develop a different understanding of genetic disease than scientists who study disease mechanisms in cell cultures in the laboratory. It is often through the daily work of a physician caring for a patient that new opportunities for treatment are realized. The every day practice of medicine is the true frontier of Translational Genetics. (dhm, from *The Clinic for Special Children as a Paradigm of Translational Medicine. 2007)*

TURNING POINTS: My work in Lancaster County Pennsylvania began, unexpectedly in June 1988 with a drive from Philadelphia to an Amish home to examine a boy with a inherited disorder called glutaric aciduria type 1. Glutaric aciduria was then believed to be a very rare metabolic disorder. None of the physicians at Children's Hospital had diagnosed or seen a child with the condition. The Amish boy's parents told me that there were many children similar to Danny in the Amish community. Most, like their son, appeared to be normal at birth, but between six and eighteen months of age were suddenly stricken with a form of paralysis, which was later often called by physicians "cerebral palsy." The boy's parents gave me names of these children, and I began to regularly visit Amish farms in Lancaster County to find the children with glutaric aciduria, and learn more about the biochemical basis of the quick and lasting brain injury that it caused. My early clinical impressions about the natural history of glutaric aciduria suggested the disorder might be treatable. But, as is true for many similar inherited biochemical disorders, the success of any treatment ultimately depends upon finding, and caring for, asymptotic newborns. My preliminary studies in Lancaster County led to an invitation from Hugo Moser and Richard Kelley to spend a research year at Kennedy Krieger in Baltimore. In the Spring of 1989, after learning that my proposed research about glutaric aciduria would not be supported by NIH or Johns Hopkins, Caroline and I founded the non-profit organization called Clinic for Special Children, and we began to work in Lancaster County in December of 1989.

The idea of the *Special Child* was part of the culture of the Amish and Mennonite Communities long before I came to Lancaster County. My understanding of the influence of these children upon the cultures came later, in part, through the experience of caring for an Amish boy with a lethal muscle disease. The boy died at home. I went out to the house to pronounce him dead and sign the death certificate so burial could take place.

From the doorway I saw that the harsh white light from a lantern above the bed made the hands and face of the dead boy cold blue-white. Bright silver light flashed from new coins placed over his eyes. But then I saw that the lantern light was softened in colors of the quilt gathered around him and the light was golden on his hair and on the hair of the children who played quietly on the end of his bed. The now softened light washed over the faces of those seated shoulder to shoulder around the room who one by one shook my hand. Several said, "I have heard Dr. Morton's name often and now I am glad to meet you……"

I sat on the chair by the bed for more than an hour…….I talked about how difficult it is to care for children who have illnesses that are not understood and cannot yet be treated. I said that as a doctor and scientist when each new therapy fails I must somehow renew my efforts to learn more. Then the boy's grandfather spoke. As he spoke he smiled and looked first at me then the children on the bed. He said, "we will be glad if you can learn to help these children but such children will always be with us. They are God's gifts. They are important to all of us. Special children teach a family to love. They teach a family how to help others and how to accept the help of others. (dhm, From *The Death and Life of Enos Fisher*)

The above passage was first written in a letter to a high school writing and art teacher of mine, James Hopkins. In my letter to Mr. Hopkins I wrote about the extraordinary light and shadows in Enos' room, and the interesting juxtaposition of Faith and Science that my presence in this home represented. This story recently inspired a series of paintings by my daughter Sarah. As Sarah trained as a painter at the Pennsylvania Academy of Fine Art, she often translated the imagery in my stories, and from her childhood experiences in Lancaster County, into paintings. Like my stories, Sarah's paintings have helped capture the imagination of people who otherwise would have little interest in the scientific work being done at the Clinic.

A few months later this letter to Jim Hopkins and the story *Death and Life* became the central theme of my acceptance speech for the Albert Schweitzer Prize at Johns Hopkins in October 1993. *I will accept the Schweitzer Prize for Humanitarianism. I am honored and happy to have the work at the Clinic for Special Children recognized in this way. The Prize gives me the opportunity to reflect upon an aspect of my work that is at times overshadowed by scientific efforts, here and elsewhere, to describe and prevent genetic disorders. In my work caring for children with complex, sometimes lethal, inherited disorders, I am impressed by the hopes and worth of these children. They hope to suffer less and lead fulfilled lives. Within their families and communities, they are not merely the object of compassion and love but are the very source. The Plain People call them God's Special Children. They shape the Amish and Mennonite cultures and inspire work such as mine in an important and forceful way, which would have been of interest to Dr. Schweitzer as a humanist and physician.* (dhm, From the Acceptance Letter for the Schweitzer Prize to Dr. William Richardson, President of John Hopkins University, June 1993)

The story about Enos was later included in a collection of essays about work at the Clinic called *Through my Window*, which was published in 1994 in a journal called Pediatrics. The essays were translated into at least 16 different languages. I have had letters about the writings from physicians and parents around the world who wanted to tell me that the essays expressed something for them that was helpful and true. In 1999 the story about Enos led to research by Les Biesecker's research group at the *National Institutes of Health* to uncover the disease-causing gene mutation, now known to be a defect in the gene TNNT1, which encodes a protein called Troponin T1. The laboratory of the muscle physiologist JP Jin at Northwestern University has studied Enos' disease for many years and has described the disease process at the molecular level in great detail in an effort to find new opportunities for treatment. If we finally can help these children, this help will be because of the time I sat by the bedside of Enos, and because of his wise grandfather's words. This help will come because of a letter to a teacher who taught me about the use of light in painting and the use of words, because of a painter's translation from words to images on canvas. Because of a new complex technologies that developed years after the boy's death and allowed new insight into cellular mechanisms, and, most importantly, because this child in his need united people from many different cultures and abilities in a common effort to be helpful. This is the nature of my work, through it I am reminded each day of the importance of my education at Trinity College.

MACARTHUR: A man named Will Miller called the Clinic at a prescheduled time, 4 PM on September 13, 2006. My wife was told he would be calling on behalf of a Chicago magazine, which was not true and was intended to conceal the actual purpose of his call. Mr. Miller is an investment banker and is a member of the Board of Directors of the MacArthur Foundation. He said, "I have the pleasure of telling you that you have been awarded a MacArthur Fellowship." He asked that I immediately telephone Daniel Socolow, Director of the MacArthur Fellows Program.

Mr. Socolow said congratulations, and that a letter from the MacArthur Foundation would arrive the next day by Federal Express, just to prove these telephone calls were not an elaborate joke. Then, he briefly explained the selection process for a MacArthur Fellowship, which involves a mysterious process of seeking nominations for possible Fellows from individuals who are affiliated with the MacArthur Foundation, but, who always remain anonymous to the public and the Fellows. No one can apply for a MacArthur "Grant," names cannot be sent directly to the Foundation, the initial selection process depends upon being named by these individuals. Once a person is accepted as a potential Fellow, this initiates a long investigation that includes requests for letters of support from a number individuals who know the nominee and know about her or his work. The selection of Fellows is based upon information collected from many different sources and the final selection of 20-25 Fellows each year is made by a 12-member board. Mr. Socolow suggested the entire process was both very complex and secretive.

His remarks about the purpose of the Fellowship were intriguing, *Your Fellowship carries with it no obligations to the Foundation of any kind. It is a concrete expression of our confidence in you and your future work. You may use the Fellowship in any way you deem most appropriate.* He explained that the selection committee found that I had done unusual and interesting work, but that the Fellowship was not an award or a prize for past work. It was a Fellowship for future work. *Our hope is that this Fellowship will provide you with a period of increased freedom and opportunity.*

FINALE: My wife and I are at a time in our lives when we see in our children the influence of our choices, and our work. Our son Paul plays the Bach Cello Suites on a classical guitar with musical skill and an ease that I can only dream of. He looks for *his* music in the complex compositions for guitar by Heitor Villa-Lobos, and Pavlo Barriros. Sarah's ability to translate experiences and words into paintings came, in part, from years of study to develop technical skills with lines, shadows, composition, and color. But, her art has a restless quality too. She is watching for an instant, an image, that expresses the idea of Carlos Williams' *We catch a glimpse of something, from time to time, which shows us that a presence has just brushed past us, some rare thing .... For a moment we are dazzled.* Her artistic search seems familiar to me. It is a search for "Meaningful Work." Mary moves quickly around a laboratory sequencing genes of people, or trout, with ease, but, as a biologist she is more at home along a mountain stream than in a laboratory. She sees falling water with the eye of a geologist too. She knows the ancient records of mountain building and erosion. She can name exposed strata and predict the forms of fossils found in each ledge. As a biologist she can think about the consequence of interrupted migrations of trout from the Atlantic into inland fresh water streams. Streams that ever-so-slowly rose with mountain tops, and finally held a but few of the ancient progenitors of today's Brook Trout. Separated from the ancients by not only by Place but by adaptations within a finely woven net of sunlight, dark and seasons, ranges of weather and temperature, water, dissolved minerals, and cycles of forests and insects. Linked to the ancients by continuous life and by a fine thread of genes to be read by Mary's generation like the Rosetta stone. She will take her knowledge of Biology, Geology, and Genetics to graduate school in journalism where she will learn to write about scientific problems, as a professional, as her father never did.

Writing to you now about the course of my education I have the advantage of hindsight, but you, and my own children, have the far greater advantage of possibilities. Much of the important work at the Clinic will be done by younger people, like my fellow Pediatrician Kevin Strauss, a brilliant student of biology, and a fine artist too, who started medical school at Harvard 15 years after I did. And, Erik Puffenberger whose PhD in Molecular Biology and Population Genetics provided him with skills in the laboratory and a remarkable working knowledge of the maze-like organization of the NCBI databases. As I write this letter, I am aware too that if our work in Lancaster County has a lasting effect upon the care of children elsewhere with similar problems, and upon Genomic Medicine, this effect will come about because our papers, essays, and stories were read, and were found interesting, by students of the next generation - *You.*

Having your name added to the list of Trinity College students makes you part of the collective history and future of the School. You bring with you too, as I did, the history and future of your family, town, and culture. Accept the uncertainties of your Future, but watch for Turning Points, those important experiences that will gradually give shape to your Future. Search at Trinity College for *your important teachers*. Learn how to learn beyond the classroom. Learning from success is important, enjoyable, but you will soon need to learn from failures too. Write carefully, write thoughtfully about important problems, make enduring friendships with other students and your teachers, play music, draw, paint, in some way that suites your nature, actively search for *Meaningful Work.* Your effort is important to all of us who are part of the Place and Community called Trinity College.

Sincerely,

D. Holmes Morton M.D.

I DROVE TO LANCASTER CONTY FROM PHILADELPHIA ON 19 JUNE 1988 TO SEE THE FIRST AMISH BOY WIT GA1. OVER THE SUMMER & FALL I FOUND 20 CASES AND IT BECMOE APPARENT THAT GA1 WAS ANOTHER OF THE FAMOUS FOUNDER GENE-MUTATIONS IN THE LANCASTER AMISH POPLUATION. THE CONDITION IS STILL MISDIAGNOSED AS "CEREBRAL PALSY" IN POPULATIONS LIKE ECUADOR & TANZANIA WHERE NEWBORN SCREENING IS NOT DONE, KNOWLEDGE OF METAOBLIC DISORDERS AND THE TECHNOLOGY – BIOCHEMICAL GC/MS, MS/MS, LCMS, OR MOLECULAR GCDH SEQUENCING - TO DIAGNOSE THE DISORDER IS NOT AVAILABLE .

On September 20 1989 when Frank Allen's article below appeared in the Wall Street Journal I was giving Grand Rounds at Johns Hopkins Hospital about my studies of the Amish cases of GA1. Dr. Victor McKusick sat on the front row in that famous auditorium, writing notes into a small notebook former used by nurses to write reports about patients, as he always did at Grand Rounds. Seated behind him were Amos & Susie Miller…..

Amos, You say you are a medical doctor?

Yes. I said.

Amos, we haven't heard of you. Other doctors thought they knew about these children too. Have you ever heard of Dr. McKusick? He was here before. He studied our children at John's Hopkins, spent a lot of money, and couldn't give us an answer.

Yes. I know Dr. McKusick. The disorder I suspect is not one for which he would have tested . I said.

Amos, well, you can come in. My supper is on the table but I am sure my wife will want to talk to you.

Years after my first visit Susie still told others, I was so surprised when Amos let Dr. Morton in the house. Amos can be tough with salesmen, especially, when they come at suppertime. Amos went to the door determined to send him away so we could finish our supper. At first, I just couldn't imagine why Amos let him in.

Amos remembers, Morton talked for more than an hour. He said he thought he knew what happened to John and Ida's Danny and suspected that our children were crippled by the same disease.

GRAND ROUNDS AT JOHNS HOPKINS

A year later on September 20, 1989 I gave a *Grand Rounds Lecture* at Johns Hopkins about Glutaric Aciduria Type I in the Amish. Dr McKusick sat in the from row, taking notes as he always did. Seated behind him with Rik Kelley were Amos & Susie Miller. I was introduced as the speaker by Dr. Hugo Moser, Dr. McKusick's close friend. Dr. Moser introduced me by holding-up the front page of the *Wall Street Journal* which had one of those iconic sketches of me in the upper right-hand corner.

The Wall Street Journal, Wednesday, September 20, 1989, Page 1A

Country Doctor

How a Physician Solved Riddle of Rare Disease In Children of Amish

Holmes Morton Toiled Alone Until He Made a Diagnosis He Links to Cerebral Palsy

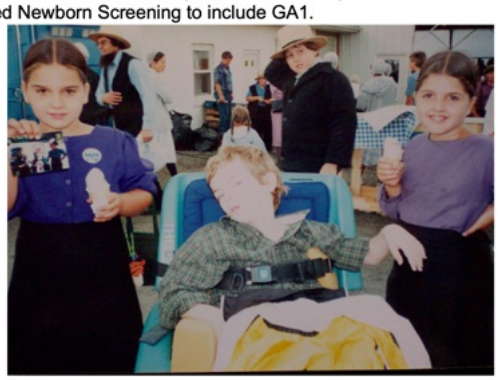
But No Money for a Clinic

By FRANK ALLEN

Staff Reporter for THE WALL STREET JOURNAL

I called Dr. McKusick's office November of 1988, not long after my first meeting with Amos Miller, and ask if I could talk to him about the Miller children, to explain to him why I thought they had Glutaric Aciduria Type 1, and how I thought he had missed the diagnosis when he evaluated the Miller children at Johns Hopkins. At the time urine organic acids were run at Children's of Philadelphia with an insensitive screening test using paper chromatography. Few organic acidurias could be found with this test, but reports were issued from CHOP as "Normal Urine Organic Acids." Glutaric Aciduria could only be recognized by Gas-Chromatography combined with Mass-Spectrometry to quantify and identify pathological concentrations Glutaric Acid & 3-OH-Glutaric Acids in urine. He had seen a report the the Miller children had "Normal Urine Organic Acids" but did not realize the limitation of the so-called screening test.

The First Successfully Treated Amish Girls with GA1 were Jake's Grandchildren. The sisters were diagnosed by Newborn Screening at the Clinic in 1990 & 1992. they are now married with children of their own. Michael, non-Amish with GA1, disabled at 12 months, died at age 18 years. This photo, taken by the father of the disabled boy, was later used by the CDC to advocate for Expanded Newborn Screening to include GA1.



Through My Window,
D Holmes Morton MD, Spring 1994

When I work with the mass spectrometer in my laboratory at the Clinic, I often pause to look through the window near my desk. Last summer blue birds, gold finches, and a pair of nesting orioles often caught my eye. One evening in the fall after the corn was harvested, I watched six deer, a red fox, and a skunk forage through the field all at one time. On the first warm day of Spring the window was open and I heard the calls of wild geese and stopped to watch their high northward flight. I have also watched the sun rise over the field in all seasons after long worried nights at work because of a sick child. I especially like to watch Jake Stoltzfoos or his son-in-law Sam work in the field with a team of mules. Jake and Sam plow, plant, and harvest with four small red mules. You may think, such a contrast, the work of a doctor, analytical chemistry, biochemistry, efforts to understand how an inherited disorder injures the brain of an infant, all within 100 feet of an Amishman's fieldwork with mules. Such contrast, you say. Yes, I say, but these people and their way of life have much to teach us.

I have come to respect the labor in the field. Jake worked his land for 30 years and last year his young son-in-law took over the farm. The field helped Jake and Naomi feed 12 children and gave them all, taught them all about, *meaningful work.* The work there also fed many generations of livestock and, at the same time, fed many generations of wildlife. The field was cleared more than 100 years ago. The Amish people have worked the fertile land around the Clinic for 300 years with the same simple, low cost, labor intensive, high yield methods of farming. Last Spring as I walked through the freshly plowed field I found a flint arrowhead and was reminded that before Amishmen the woodland was harvested in another way by another people. History and timelessness come through my window like Spring air and sunlight, like the calls of wild geese, to remind me that my work here too takes its place in time.

The First Successfully Treated Amish Girls with GA1 were Jake's Grandchildren – Described in "Through My Window. Barbie is the school-girl On the far-right.

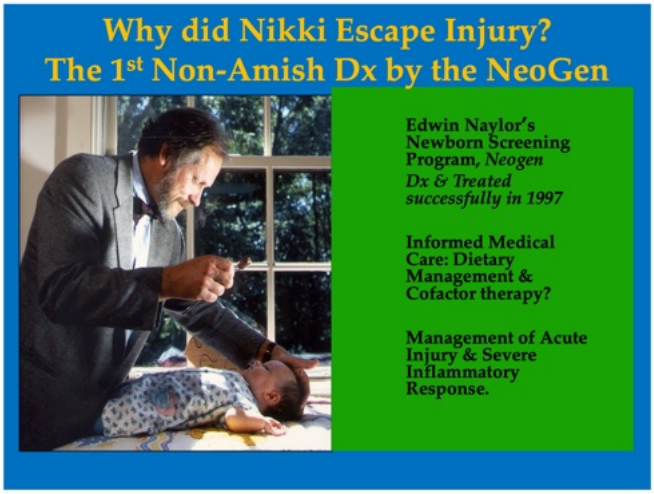
Running School Girls

When Jake's mules turn at the end of a row, he often looks to see if I am at my window and waves. We can each respect the work of the other. He knows I measure the usefulness of my work against the usefulness of his. He knows that I measure the success of my work, not in terms of lectures, publications, grants, or income, but in terms he understands. He has grandchildren with the disease that I study and we hope that they can live to work in the field.

GA1 IS NOT JUST AN AMISH DISORDER ! "CEREBRAL PALSY" IS SELDOM (<10%) TRULY "CEREBRAL PALSY" – WORLD-WIDE…..

IN PART BECAUSE OF SUCCESSFUL TREATMENT OF THE TWO AMISH GIRLS SHOWN ABOUT, 4.2-MILLION NEWBORNS ARE TESTED EACH YEAR IN THE USA BY NEWBORN SCREENING. Millions more world wide in Europe & Asia - >90% of diagnosed cases are successfully treated using the methods developed in the Amish Community. But, in countries like Ecuador & Tanzania and many other low-resource countries, GA1 goes undiagnosed, untreated with a disability rate > 95%. Mr. Himmel intends to change this sad statistic.

I STARTED DOING NEWBORN SCREENING IN AMISH FAMILIES FOR GA1 IN DECEMBER OF 1989, USING A GC/MS DONATED BY DAVID PACKARD IN RESPONSE TO FRANK ALLEN'S ARTICLE ON THE FRONT PAGE OF WALL STREET JOUNRNAL ON 20 SEPTMEBER 1989. HIS ARTICLE DESCRIBED EFFORTS TO FIND THE CAUSE OF "AMISH CEREBRAL PASLY" AS GA1 WAS CALLED THEN, AND THE INTENTION OF CAROLINE AND ME TO START THE *FIRST CLINIC FOR SPECIAL CHILDREN* – MY EARLY STUDIES OF GA1 CONVINCED ME THAT THE DISORDER *COULD NOT* BE TREATED UNLESS ASYMPTOMATIC INFANTS WERE FOUND BY SCREENING AT RISK FAMILIES. By 1995 I was testing about 1200-urine samples/year by GA1 using GC/MS and I had found Amish GA1 cases in Amish sub-populations across Pennsylvania. I also knew of an increasing number of Non-Amish children with GA1 in Pennsylvania, across the United States and Canada. Physicians in Ireland, Germany, Sweden had diagnosed GA1 and some of these GA1-cases were successfully treated – many had the same gene mutation as the Amish, which is a common European variant – GCDH c.1262C>T;p.Ala421Val.Edwin Naylor's **Expanded Newborn Screening using Tanden-Mass-Spectrometry** had proven that GA1 could readily be detected in a healthy appearing newborn using dried blood spots – the sample of the standard PKU-TEST. Based upon my successful treatment of a few cases at the Clinic in Lancaster, Dr. Naylor agreed to add GA1 to the tests that *Neo-Gen* did. By 1996 Dr. Naylor's lab was getting blood spots for Newborn Screening from the most of Amish & Mennonite midwives and from an increasing number of hospitals across Pennsylvania. By the time Nikki was born in the summer of 1997, more than 150,000-newborns/year were screened by **NeoGen** in Pennsylvania.



Nikki as a 16 yo Summer 2014

ECUADOR – TREATMENT FAILURES ARE ALMOST UNIVERSAL, VIOLETA

A Disabled Infant with Undiagnosed GA1 in Ecuador. There is no MS/MS-Screening, an In-Vitae 458-Gene Panel Found two GCDH-Variants)

GCDH	c.1063C>T (p.Arg355Cys)	heterozygous
GCDH	c.877C>A (p.Ala293Thr)	heterozygous

The successful treatment of GA1 requires recognition of the disorder in an asymptomatic newborn. When diagnosed by signs of the disease and late testing, as in this case, treatment will be ineffective. Acute Striatal Necrosis can be caused by infection triggered crisis or by intoxication by the dietary protein provided by cow's or goat's milk – both have 3-times as much protein/oz as human milk.

A high protein diet causes worsening dystonia & irritability in previously injured infants & children.

Violeta lives in Ecuador. She has GCDH-variants of Jewish & unknown origins.

She was born in Maimi Florida & was diagnosed biochemically in by MS/MS based *Expanded Newborn Screening - Glutaryl-carnitine was increased.*

GCDH c.914C>T, p.Ser305Leu (p.S305L) reported as pathogenic in a paper from Israel in 1996.

GCDH c.896G>A, p.Trp299(W299*),*

She was successfully managed with a Lys-restricted diet & *Glutarade Junior & Essential Formula.*

She is at risk for Dengue Fever – Can she be protected against infection induced Cytokine-Storm?

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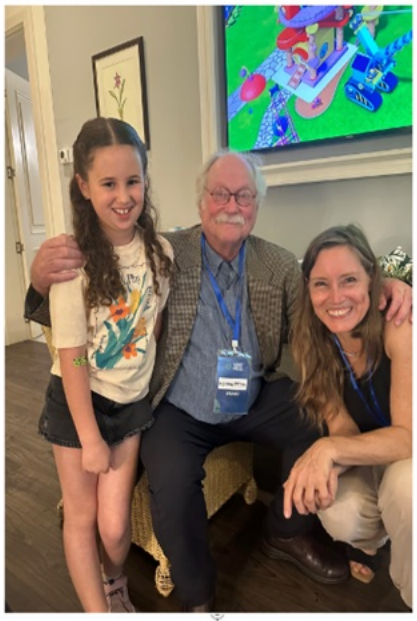
6 Dec 2024



***FROM "LETTER TO A STUDENT" No doubt what I know, what I learn helps these children - interesting life, interesting work too. Exile too? Yes. Child by child, hour by hour as I am needed, my future is taken, decided, shaped. Yours too? Unaware, have these children already begun to take your time, your life? Was that part of the cost of coming here, searching for, seeing, meaningful work? Was that the ultimate cost of looking into the eyes of such children? Will you give them that much?* (dhm, 1997, 2007 Letter to a Medical Student)**

The Student to Whom this letter was written is the only Pediatric Neurologist & Geneticist in Tanzania. Dr. Marieke Dekker, her husband and 6 children live and work in the shadow of Kilimanjaro ……."The eyes" she looked into as a young medical student were Ruthie's.. Below is likely the only photo of Ruthie in existence.

OUR MEETING IN ECUADOR WAS INSPIRED BY VIOLETA, JEFF & PATRICIA'S HIMMEL'S GRANDDAUGHTER WHO HAS GA1 AND WAS SUCCESSFULLY TREATED.

Violeta lives in Ecuador. She has GCDH-variants of Jewish & unknown origins.

She was born in Maimi Florida & was diagnosed biochemically in by MS/MS based *Expanded Newborn Screening - Glutaryl-carnitine was increased.*

She was successfully managed with a Lys-restricted diet & *Glutarade Junior & Essential Formula.*

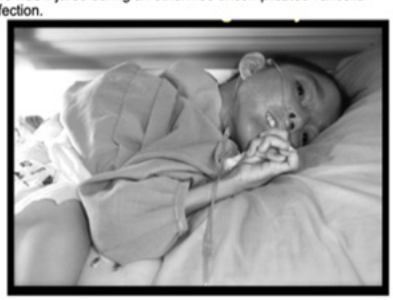
Violeta has GCDH-variants of Jewish & unknown origins.

GCDH c.914C>T, p.Ser305Leu (p.S305L) reported as pathogenic in a paper from Israel in 1996.

GCDH c.896G>A, p.Trp299(W299*), which was said to be found in Muslim populations of the Middle East.*

How common are these GCDH-variants? How common is this disease in Ecuador? Molecular Screening would have found her first mutation but would not have included second. Why is biochemical screening important?

Ruthie, Amish GA1, age 39 years,
She was injured during an otherwise uncomplicated varicella infection.



SUCCESSFUL TREATMENT OF AMISH GA1- YES, BUT EVEN WITH NEWBORN SCFREENS AND EARLY TREATMENT 10% OF CASES HAVE DISABILITY CAUSE BY DEGENERATION OF THE BASAL GANGLIA – ACUTE OR CHRONIC STRIATAL NECROSIS.

WHY? INFLAMMATION & GA1 CRISIS WHY DOES TREATMENT FAIL? BACK TO BIOCHEMISTRY LCMS & THE LCMS STUDIES OF DRIED BLOOD SPOTS IN THE LAB OF ANGELO D'ALESSANDOR PhD AURORA CO.

GA1 Outcomes CSC: 2013 – 2024. What caused treatment failures? How many hospitalizations were there for infectious illnesses?

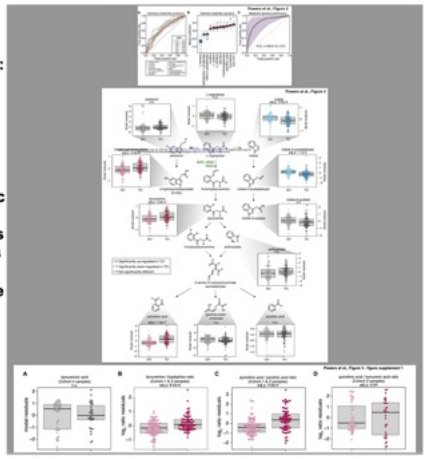
Birth year	Total	Dystonia, Injured	Percent injured	Percent Well
2013	5	2	40%	60%
2014	6	0	0%	100%
2015	5	0	0%	100%
2016	3	0	0%	100%
2017	8	1	13%	88%
2018	7	1	14%	86%
2019	5	0	0%	100%
2020	6	0	0%	100%
2021	4	1	25%	75%
2022	4	0	0%	100%
TOTAL 2013-202	53	5	9%	91%

Over a 10-year-period, 5 of 53 (6%) of GA1 Infants developed dystonia. Over the recent ~ 5-year period 2020 – 2025 6-of-9 (67%) infants failed therapy - developed dystonia. What has changed? Most GA1 treatment failures are associated with infection & inflammation. However, a few injuries may result from excessive dietary whole protein or from intoxication by Lysine & Tryptophan found in Amino Acid Mixtures that are sold ***over-the-counter*** as nutritional-supplements.

TRYPTOPHAN – KYNURENINE ARE THE NEGLECTED BIOCHEMISTRIES OF GA1:

Common Infection & Inflammation cause the generation of neurotoxic tryptophan catabolites through the kynurenine pathway to form quinolinic acid – an excitatory toxin that binds NMDA-receptors in the basal ganglia, opens CACCNA1C-calcium channels and causes acute striatal necrosis.

METABOLOMIC STUDIES BY THE D'ALESSANDRO LAB - University of Colorado Anschutz Medical Campus, Aurora, CO.

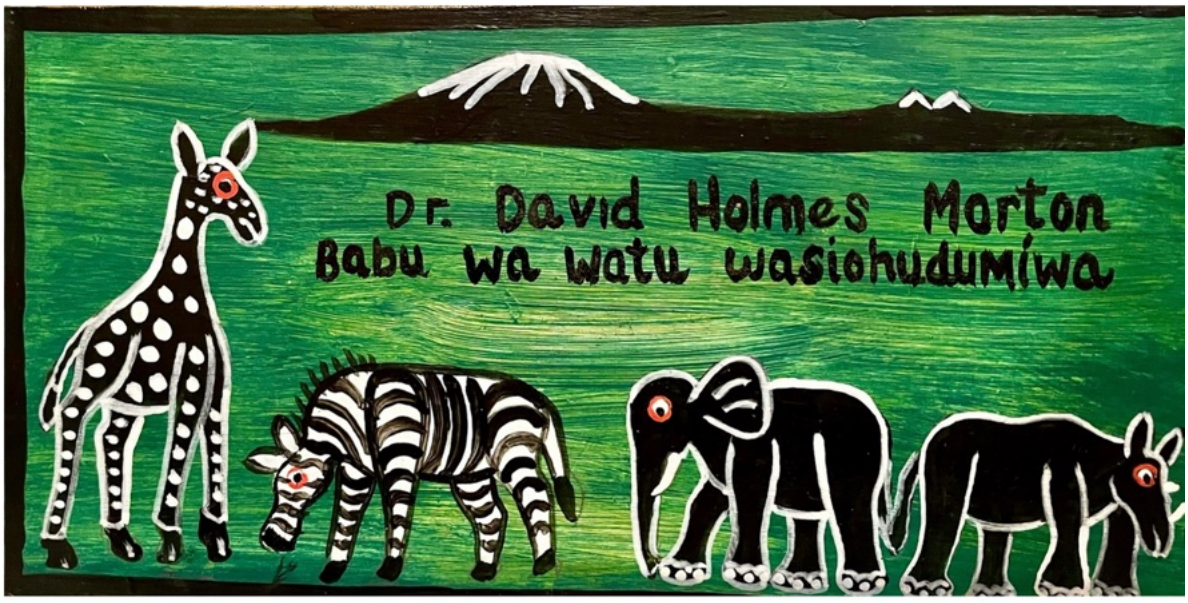


The Central PA Clinic on Kish Road will be a Place to care for Children & Adults who live-with Inherited Diseases, & have had limited access to informed, local Health Care –

This Clinic will be a Place with the mission to translate the knowledge of genetics into better medical care - To strive to *Practice Genomic Medicine.*

THIS IS MY NEW SHINGLE - IN SWAHILI –
A LANGUAGE THAT MARCO, MARIEKE & THEIR 6-CHILDREN SPEAK DAILY

Dr. David Holmes Morton - THE GRANDFATHER TO THE UNDERSERVED



Remarks in the Trinity Chapel before the Concert.

D. HOLMES MORTON MD

This Chapel is an extraordinary Place to play the Cello. When I come here I start by playing single notes. Sound fills the Place, as light from a candle does. Sustained sound of strings and wood is echoed, shadowed, and shaped by these walls of old stone. This Place gives any Cello a Voice unique, heard only here. As a player I become immersed in the sound. I enjoy that thought….

Two years ago I played a Cello made in 1697 by the great Antonio Stradivarius. The Voice of the old cellos made by this master is each unique, is each different from one another. To some extent the differences can be explained by variations in size, shape and materials. The Castelbarco Cello I played has a back and sides made of Italian Willow, rather than maple, and it is one of the largest cellos that Stradivarius made.

I was inspired by the experience of playing that Cello to ask a young French instrument maker, named Pierre Moisy, who now works in Philadelphia, to make a cello patterned after the Castelbarco. This new cello and its maker Pierre Moisy are here today. The "Morton Cello" was carved by Pierre using the same type of simple hand-tools that were used by Stradivarius, and the same woods. My Cello was made like a fine sculpture being carved from a block of marble. The scroll of the head is pear wood; the tuning pegs are of box-wood, and the neck is maple with a finger board of black teak. The back was carved from a single piece of thick, old Italian Willow. The sides are thin strips of the same Willow-wood curved into ribs and reinforced, inside, with pieces of linen - the same technique that Stradivarius used to help assure the ribs of the Castelbarco would last, and, they have lasted for more than 300 years. The top of the cello is wide-grained European white-spruce. Each small region of the top and back were slowly shaved to measured thicknesses, again, similar those of the old cello.

We are going to study the Voice of this new cello, and learn how its acoustics are similar to, and different from, the old Castelbarco. But, Pierre and I know the Voice of a Cello is an elusive thing. That Voice changes in time. A new cello is changed by being played; within the fine deep structure of joined woods the structure of resonance is slowly shaped by sound itself. In a sense, over time, a fine cello remembers the music played on it, and the people who have played it. The 8 months of work by Pierre Moisy is embodied in the substance of a fine Cello that will last and be played long after my lifetime. The Voice of the Cello is also defined by the Places it is played, by perception of the player, and by the listeners, which brings me back to this Chapel, and the Concert we are about to hear.

In recent years a few Students have happen by this Chapel, by chance, and found me here, alone, playing a cello. Playing the cello is for me largely a solitary activity. I am not a performer; the only listeners to my concerts are evesdroppers. I was aware that each student paused, listened, and then went on their way. One girl from a distance said That was really beautiful. I had played the Sarabande of the 5th Cello Suite as she listened, which by the end of the day you will all know and remember. I have always imagined that she might have been Inspired by that chance encounter to learn to play the cello.

We have experiences and make choices every day that determine the course of our lives. The significance of many small, but important, events and choices becomes apparent over time - remembered from a distant place and time. So the poet Robert Frost writes:

Two roads diverged in a wood, and I.
I took the one less traveled by,

And that has made all the difference.

Today, and tomorrow, I will talk about, remember, some of the choices I have made and some of the extraordinary people who have influenced my life and work. Many of those people are here. For many of you the Concert & the Lecture is my acknowledgement; is my expression of appreciation for your friendship and help.

For the students who listen to this Concert and my Lectures - the music, the stories, and the gathering of people is intended to make you think about the experiences you will have, here at Trinity College and else-where, and the choices you will make as a result of those experiences, that will take your lives in new directions, often unexpected. How you think about, make and learn from these Choices is finally, I think, the essence of an Education, and becomes the substance of Living too.

We catch a glimpse of something, from time to time, which shows us that a presence has just brushed past us, some rare thing .... For a moment we are dazzled. (William Carlos Williams from The Autobiography)

Conclusion:

My Challenge to Students: You will in your lives need to learn to give money to help others. Seems strange to hear that doesn't it. This Event is to Benefit the *Research and Education Endowment Fund of A Clinic for Special Children*. I am asking each student here to make a donation to the *Clinic for Special Children.* And, I want you to make that donation with a sense that you are giving up something to help others - I don't even know what a six-pack of good beer costs, but, give it up for a month and send the money you save to the *Research and Education Endowment Fund at the Clinic.* Do without a pair of expensive tennis shoes, or that ski-trip to Colorado - realize that something significant can be done because of your Giving to help others. Learn what that means.

I also challenge the Students to learn about the medical care, research and education that goes on at the *Clinic for Special Children*. Read our publications, read our Newsletters, visit our Web-Site, or visit the Clinic itself.

Finally, as you listen to my lecture, and read my essay, *Letter to a Student*, I challenge you to understand a new Concept: The care we learn to provide in Lancaster County, the help we provide to others around the world, the Knowledge and Education, and your Gift itself, is, at last, A Gift to Us from the Children for Whom we Care. These children *Inspire.* They can, if we allow them to, make us into better people. Think about that.

Before my talk in Goodwin Auditorium there will be a reception - a Time to talk. Students don't stand in the corner and talk to each other about yesterday's football game. That, you can do later. Talk to the people who are around you in this Chapel. Ask them why they are here. Ask how they came to be involved with the *Clinic for Special Children*. You will find this is an interesting collection of people, which is exactly why we are all here.

Please join me in thanking Matt Haimovitz and Paul Morton for their fine music. dhm November 2007