Dean Goldschmidt’s Interview with Eduardo Alfonso, M.D.

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PJG: Eddie, thank you very much for taking the time to meet with me. Instead of talking about personal viewpoints about the Miller School of Medicine, I’ve decided to interview leaders of our organization in such a way that people can have a better understanding of why this organization is so efficient and successful. I wanted to interview you and help people know who you are and all the things that you do, and better understand the Bascom Palmer Eye Institute through you because everyone knows it’s the number one eye institute in the country; few people know why it is the number one eye institute in the country, so I’m hoping that with this interview we will be able to provide a better understanding. Let’s start with a general question, which is, how did you decide to become an eye doctor?

EA: It was through my undergraduate interest in how the brain worked. I was a psychology/biology major and I became intrigued with trying to figure out how the brain worked. In one of the undergraduate neurobiology courses at Yale, the visual pathway was the only accurate way we knew how a brain processed information, so I became quite cognizant of how the visual pathway worked and it started to spark my interest in vision. My interest only grew through medical school as I learned more about brain anatomy, physiology, and the workings of the brain. During that period, I became exposed to ophthalmology, which, combined with my intellectual interest in the brain, and the ability that ophthalmology had to provide patients with an incredible success in the care of difficult problems, provided a thrilling combination. As an ophthalmologist, the gratification I receive from my ability to appease the fears that patients have of losing their vision is unique. It’s very exciting. Looking back, the
serendipitous exposure to the visual pathway I had during my college years is how I got into ophthalmology.

PJG: Fascinating. Was there some particular mentor in the process that you would like to talk about?

EA: I don’t recall during college and medical school if there was one particular mentor in ophthalmology, but I had a number of mentors who made it very clear to me that to be able to make a significant contribution to mankind through medicine, I had to really focus myself in an area. It was evident that I had to develop the rigors of focusing in an area, and I chose ophthalmology. One of my mentors at that time was Elisha Atkins, a great physician who was an infectious disease specialist at Yale Medical School who discovered the reason why we all get fevers. He described endogenous pyrogens; at that time, I didn’t feel it made much sense to think of endogenous pyrogens as something important, but what was remarkable was his ability to focus on a question and to seek the answer.

PJG: Quite remarkable. Medical school at Yale -- how did you carry on with your training in ophthalmology?

EA: During medical school, I tried to focus on a particular problem. I wanted to know how the retina would repair itself after an injury. At that time, certain instruments were being developed mostly here in Miami but I was up north at Yale. To be able to do surgery at the retina level, vitrectomy had just been started in Miami, so I started focusing on using a growth-factor, which was also something novel in medicine; it was a growth factor developed from an eye tumor called retinoblastoma. I wanted to know if we injected the growth factor into the retina, could it help speed the repair of the retinal pigment epithelium. Ideas as this were one theory about using growth factors. I worked on this research project during my junior and senior
year at Yale and it became my thesis. In the process, I got a tremendous amount of exposure to ophthalmological literature and quickly learned who were the key scientists and clinicians in ophthalmology. That led me to the next step, which was to choose the University of Miami and Bascom Palmer for my residency training.

**PJG:** Phenomenal. When you came to the University of Miami, who was your key mentor?

**EA:** One of the interesting things about this department was that there was a wealth of mentoring in the form of role models. There were many faculty members who had real expertise in their area. There’s no question that the chairman at that time, Dr. Ed Norton, was a key role model and mentor especially to the residents and the fellows. It was fertile ground for any resident or fellow to continue to develop their academic interest. I would say Ed Norton was a key person, but there were many others at Bascom Palmer who also played a key role.

**PJG:** He was an icon, not only at Bascom Palmer Eye Institute, but also at the Miller School of Medicine, the University of Miami, and in the world of ophthalmology. What do you think was the greatest impact that Ed Norton had on you?

**EA:** I think what I probably learned the most from him was his ability to never be the center of interest of what was happening. He was able to take a “back seat” so that others who he felt were probably more talented than him were able to take on that question or project and move it forward without his interruption of the progress of ophthalmology. I think he had a real talent for knowing when to step back and allow those around him to be very successful.

**PJG:** That’s truly an extraordinary ability. What an amazing vision for someone to realize that even at the tip of a state like Florida, you can develop the best institute in the world if you focus on one specific area and you’re really good at it. Speaking of South Florida, was it a challenge
for you to come from an Ivy League school to a university that was definitely less mature at the time than Yale?

**EA:** I jokingly say that when my mentors in the northeast learned that I was talking about a program called “Bascom Palmer” that was in Miami, the euphemism of an “academic wasteland” would always come up. Yet the more I looked at the academic environment at the University of Miami, the more I realized that there was incredible talent here which provided some of the ingredients that were lacking in the northeast. It didn’t have the rigidity of some of the older institutions that did not allow a lot of creative minds to flourish, and it had an incredible patient population that provided a wealth of clinical information. It was the door to Latin America, where many of the diseases whose natural history is no longer seen in the U.S. because they have been eradicated. Latin America, through Miami, gave us access to these diseases, allowing us to examine their natural history and learn more about them using modern techniques and instrumentation. That combination really attracted me to South Florida.

**PJG:** Give us an example of a patient that you encountered early or even late in your career, who came from Latin America with, clearly, a diagnosis that people in Boston or Baltimore or San Francisco would not see.

**EA:** Sure. Well we had, for example, an incredible exposure here to the natural history of untreated syphilis and the effects of syphilis in the eye – something not seen at that stage in my training. One of the things that we became interested in, for example, is that in syphilis, you develop a condition of the cornea called interstitial keratitis where blood vessels grow into the clear cornea and therefore reduce the vision in a patient. I became interested in trying to see how we could restrict the growth of these blood vessels into the cornea. Early on, I started working with the neurology department here looking at ways that we could photosensitize the blood
vessels so that we could treat them with a laser that was attracted to the wavelength of these photosensitizing dyes. But again, without seeing patients with corneal neovascularization from syphilis, I would have never thought of doing a project like this.

**PJG:** You were always very interested in research. You are the perfect paradigm for the physician-scientist – someone who is not only a wonderful clinician, but also someone who has conducted a research program that has been highly successful. The eye is really a receptor for information that comes from the outside in terms of variation in light reflection that gives us images, but it’s also an organ that interacts with the outside world. You have been very interested in that interaction, the interface between the eyeball and the world -- the things that can happen to that interface either as a consequence of what’s outside or as a consequence of susceptibility for a variety of illnesses from autoimmune to neoplastic disorders. Can you tell us about that particular interest? I also know that it had impact on a major breakthrough at Bascom Palmer where treatment for patients has resulted from the work that you have done.

**EA:** The eye is a highly protected organ and yet it has to be exposed to the environment. If you examine how the skull has evolved, you see that while the orbit protects the eye from any external trauma, a part of the eye must remain exposed to the environment to detect the images that are in front of you. The interaction of the part of the eye that is exposed to the environment is intriguing because the immune system is highly developed to resist almost any potential damage to that part of the eye. Yet we have been able to do things to the eye such as, and of particular interest to me, with infections of the cornea, to weaken this immune surveillance system that the eye has to microorganisms. A key element of vision today is the use of devices to correct the optical properties of the eye, including contact lenses. When you put a contact lens in the eye, you are disturbing the homeostasis of that immunological environment on the surface
of the eye. This has opened a huge avenue of research for me – looking, in particular, at how microorganisms survive on the surface of the eye while you are using a contact lens and how microorganisms that are really non-pathogenic become very destructive to the surface of the eye due to the wearing of a device like a contact lens. We still have an enormous amount of work and many questions to answer as we discover better ways of understanding how an organ like the eye is exposed to that external environment. I am eager to recruit all the young minds who will continue to focus on these new problems and find solutions to some of the questions which may be used to explain some of the other mechanisms of disease that happen elsewhere in the body.

PJG: My recollection is that you made an important discovery that saved a lot of eyes across the world when you realized that contact lenses could be contaminated at the time they are placed on the eyes of an individual.

EA: Yes, this was more of a clinical observation than a scientific discovery, but I think that it points to the fact that we have to teach our young medical students that you always have to ask the question, “Why is this happening?” You can’t simply be satisfied with describing that it is happening, you have to ask the question, “Why is this happening?” We detected an increase in a type of infection that was usual for South Florida, but in unusually high numbers. The question “why” was raised, and it had to do with a fungus called Fusarium, an organism infecting patients who wore contact lenses. It led to the removal of a particular contact lens disinfecting and storage solution from the market that was implicated in creating “the perfect storm,” again on the surface of the eye, and this immunologic surveillance system that led an organism to become more of a pathogen than it should have been. Fortunately, because this was detected, we were able to alert users of contact lenses to the problem and thus able to save patients from losing their vision worldwide. There are approximately 40 million users of contact lenses in the U.S., and
we were able to restrict this infection to only about 600 patients in the U.S. Had this continued to occur, who knows how many people would have had significant vision loss from it.

**PJG:** Patients lost their vision because of this infection?

**EA:** Yes, the infection causes a scar in the cornea and even though we can replace the cornea with a corneal transplant, the functional vision that you get even after a corneal transplant is never the same as your own vision.

**PJG:** Amazing. You were mentioning your hope that young people would focus on these issues in a way to advance the field. Let’s go back to when you were a young boy. I think that your upbringing was unusual for the United States, maybe not so unusual in Miami, but can you tell us a little bit about you as a young boy and how your life evolved?

**EA:** I was born in Cuba. My family left Cuba in 1960 right after the revolution. My father left shortly before us. He had been incarcerated by the new revolutionary regime in Cuba. My mother, brother and I moved to Puerto Rico where we had family. Eventually, my father returned to join us but unfortunately he was afflicted with lung cancer and died at the age of 43. I had a very supportive mother and older brother. I went to a Jesuit school in Puerto Rico that nurtured intellectual curiosity. They encouraged me to attend college in the northeast.

**PJG:** Who do you think when you were growing up affected your leadership sense the most? Was it your mom?

**EA:** I don’t know. My mom was very interesting. She wanted to make sure that we were not getting in trouble, but she didn’t get in the way of anything that my brother and I ever did -- in fact, she almost sounded uninformed; I think that was part of her role playing. But she seemed to always be questioning: “Oh, so you’re going to college? Oh, you’re ready to go to college?
What college are you going to?” She didn’t ever really show a real interest in decisions she was letting my brother and I make for ourselves.

**PJG:** Very interesting.

**EA:** She was a very unique person in that sense, but I would think that spending many of my formative years under the tutelage of the Jesuits also played a major role in establishing leadership characteristics in me. My high school was a very small high school -- we only had 70 in our class. The Jesuits always showed us role models – those people who made an impact in others by being leaders in their field. You can be a leader without necessarily having to have the title of a leader – those probably are the most effective leaders. I think that that was what my mother did, too; looking back, she never called herself a leader but she was probably influencing my brother and I to be leaders.

**PJG:** It’s a great way to make sure that you take charge of yourself and take responsibility for the choices that you make, which is a great quality for a leader, of course, in terms of never trying to put the responsibility of things that happen on others. That’s one thing that has always been so wonderful with you – you are always someone who is willing to step up and take charge of what is going on and what are the challenges of the organizations. Reward – you are always happy to give them to others, but when there are issues, you are always there to take responsibility for them and that’s a characteristic of a great leader. How about your own family?

**EA:** I met my wife Molly in high school – we were high school sweethearts. We were married the summer following graduation from college. She began law school at Columbia University and me medical school at Yale. Due to an illness, she had to postpone her career studies and started our family with two daughters, Angelica and Patricia, born 15 months apart. We had our hands full!
PJG: Amazing!

EA: As you know, when a door opens, you have to quickly make a decision if you’re going to go through it or not. We were very happy to have the opportunity to start a family early on. Eleven years later; just when we thought a medical condition was not going to allow her to have any more children, we were blessed with a son, Eduardo, who is now nineteen years old. We both feel very proud of our 3 children. Even though I love the profession of medicine, I never tried to influence my children to go into medicine. My only suggestion to my children has always been to do what they think they can do best. All three children are doing different things: Angelica is director of the strategic communications office for the United States Citizenship and Immigration Service in Washington, D.C., Patricia is senior beauty editor for InStyle Magazine in New York, and Eduardo is in his second year of architecture at the Cooper Union in New York.

PJG: Eddie, in a couple of weeks I will announce to your department and institute that you are the new leader of the institute, hopefully for a long period of time; chairman of the Department of Ophthalmology, director of the Bascom Palmer Eye Institute, and medical director of the Anne Bates Leach Eye Hospital – three huge responsibilities. People, in the process of recruiting you, have referred to you as the “new” Ed Norton, and I know that that’s the highest compliment that anyone at Bascom Palmer can give to one of their colleagues. After a national search looking at some of the top leaders of ophthalmology across the United States, there was no question in the minds of the members of your department, nor in my mind, that you are the best. How does it feel and what does it say to you when people compare you to Dr. Ed Norton, because I must say that this comparison from what I hear had never been made before. Some aspects of individuals who have been in leadership positions at the Bascom Palmer Eye Institute
reminded them of Ed, but never was someone defined as the “new” Ed Norton. I just wondered what it means to you.

**EA:** It’s certainly a huge compliment to receive from my colleagues, but I think they’re wrong. I don’t particularly agree with the comparison because we know very well that there are different times and different sets of circumstances that we each have to live in. Ed Norton was an extremely unique leader who was able to see opportunities that existed capitalized on those opportunities, and allowed others to succeed around him. We can only hope to be able do the same. Quoting something that I remember Dr. Norton saying many times, “The only constant thing in life is change,” and we certainly live in a changing world, which was very different from the one that was present at Bascom Palmer in 1957 when the department was taking shape. In 2009 Bascom Palmer, South Florida and the world are different. Today, Bascom Palmer is a very robust institution with a wealth of individuals that have a direct effect on its future. There are approximately 75 full-time faculty members, 150 voluntary faculty and 1,200 staff, working in our four locations in Florida ---- and this is Bascom Palmer today. All these individuals make Bascom Palmer a great place. My particular vision is to continue to create a nurturing environment where all these people can do what they think they can do best, and if I’m at least successful in doing that, I’m sure that Bascom Palmer is going to continue to be a great place for generations to come. We are also blessed in attracting young minds that want to be exposed to the wealth of information that exists at Bascom Palmer and nurturing those minds to continue to be the scientists, clinicians, teachers of the future, which is an important mission that the Bascom Palmer Eye Institute has at this point. I can only hope that I am not compared to Dr. Norton in the way that Dr. Norton did things, but that I am compared to him as someone who has the passion to continue to carry this institution to greater heights.
PJG: Wonderful. Let me ask you, why is vision so important to humans? Why is it perceived as such an incredible and extraordinary part of who we are and what we do? More so, as you said, it is probably by far the most important sense that humans have because people will do anything to keep their eyes or restore vision if they’ve lost it. It’s sometimes to the point that if you lose your vision, so many people think about terrible outcomes like suicide because they think that without their vision, their happiness in life is gone too. What do you think, as an expert and someone who fights every day to give that opportunity to so many of our fellow humans, why is it such an important thing?

EA: Vision is so important because it carries so much information to the brain. There is a wonderful biography of a gentleman (A Sense of the World: How a Blind Man Became History’s Greatest Traveler by Jason Roberts) who agonized with the idea that, as a young man in his 20s, he was going to lose his vision. There are many diseases which humans are able to cope with knowing that they will impair their ability to function in this world. But nothing that would have the impact that vision has because our world is so visual; it is even difficult to imagine how other senses can take the place of vision. The visual information that comes into our brains is used for learning activities of daily living. Therefore, the concept of not being able to have vision is very disturbing to all of us. Every time I see a patient who I have to speak with about the possibility that I may not be able to restore their vision or that they will continue to lose vision, I put myself in their shoes; I think of the agony that they are going through, and seeing how their life is going to have to develop in the future without this incredible sense – it’s very disheartening. One of the things that we need to do is figure out how to prevent someone from having to go through this agony.
PJG: So true. Your patients love you, Eddie. Can you tell me about one patient that you’ll never forget because she or he had such an impact on you and your career?

EA: The patients that have the most impact on me are children who have vision problems. I have to deal with children who are born with congenital anomalies of their corneas and cannot see, so I have to make decisions on how to try to restore some functional vision to them – whether it is by a corneal transplant or some other surgical or medical means. Because of my many years in ophthalmology, I see some of these children who are now adults, the greatest reward being and there is no greater reward than to see they have become very productive members of society and how appreciative they are.

PJG: Can you tell us about one of them?

EA: One particular young woman who, today, is a gifted scientist. She was born with a congenital condition, Peter’s Anomaly, where both corneas are opaque at birth, basically leaving her without vision. Today she works at the United States Space Center as a physicist, developing all sorts of formulas that have to do with astronomy -- imagine being able to put a man in space!

PJG: So she can see to the end of the universe?

EA: She’s able to see well enough to function as a very productive member of society, so patients like her are always very rewarding. It’s also important to be able to deal with those we can’t help. You always learn from the patients that you cannot help they teach you how to cope with very difficult circumstances in life. Certainly, as physicians, we face this and we share their frustrations, but at the same time, we learn from them how to deal with difficult situations.

PJG: How old is she and how old was she when you first met her?

EA: When I first met her she was about five or six years old and was reaching the window of time to rehabilitate some vision. If we were going to do it, it had to be then. After age seven, the
plasticity of the brain to see images the way we do as adults is fairly established. We had to make some difficult decisions, not only with her but also with her parents, because the surgery could potentially rob her of the vision she had at that moment if any complications arose. It was an extremely difficult decision, but one that, in her case, turned out to be the right decision.

PJG: How old is she now?

EA: She must be in her early 20s.

PJG: Amazing. Eddie, on behalf of the Miller School of Medicine and the University of Miami, we thank you for what you do. You’re a wonderful man, a wonderful leader, and an amazing physician-scientist. We are so proud of having you as a colleague.

EA: Thank you.

PJG: Keep up the great work!

EA: I personally thank you for providing the leadership and the environment for all of us to be able to do what we think we can do best.

PJG: It’s the least I can do. Thank you very much.