

An Interview with Lynn E. DeLisi, MD



Lynn E. DeLisi, MD, is currently Professor of Psychiatry, New York University, and Associate Director of the Center for Advanced Brain Imaging, The Nathan S. Kline Institute for Psychiatric Research, Orangeburg, New York. In addition, she is the co-editor-in-chief and co-founder of the Elsevier journal, *Schizophrenia Research*, and secretary of two professional organizations: the International Society of Psychiatric Genetics (ISPG) and the Schizophrenia International Research Society (SIRS).

Her undergraduate degree is in zoology from the University of Wisconsin; Madison, Wisconsin. She obtained her MD degree from the Medical College of Pennsylvania in 1972 and went on from there to do three years of general practice work with migrant Chile farmers in northern New Mexico. From 1975–1978, she completed a residency in psychiatry at Saint Elizabeth’s Hospital, Washington, DC. From 1978–1987, she was a post-doctoral fellow and then a full-time staff research psychiatrist in the NIMH intramural research program, St. Elizabeth’s Hospital in Bethesda, Maryland. From there, in 1987, she moved to the State University of New York at Stony Brook, where she set up several research programs on the longitudinal biological outcome of schizophrenia, emphasizing both brain imaging and genetic studies. From 2001 to present, she assumed her current post at New York University. She is a fellow of the American College of Neuropsychopharmacology, has edited and authored over three hundred books and manuscripts, and serves on the editorial board of several other journals. Outside her professional life, Dr. DeLisi is an avid photographer, mother of two successful adult children and grandmother to four.

CS: What were key decision points in your career, and how have these ultimately led you to your present position?

LD: Life seems to be a series of one-way paths with forks along the way. Which one you take determines the next. The “forks” I came to were: 1) deciding to do a residency in psychiatry and at a public hospital (St. Elizabeth’s in Washington, DC); 2) deciding to join Richard Wyatt’s research division of NIMH in 1978, at a time when psychoanalysis

was at its peak and the alternative would have been to join Chestnut Lodge Hospital, known at that time for psychoanalysis of people with schizophrenia. I also had a clinical offer to make considerably more money at a community mental health center. But I chose the challenge of a highly competitive and time-consuming research path. Next, 3) I chose to leave NIMH in 1987 having been lured to the State University of New York at Stony Brook—a place where I could have my own program and have the “opportunity” to apply for research grants. Finally, 4) in 2001, the promise of an exciting new life in “the city” led me to disrupt my research at Stony Brook, and restart along different lines at New York University, when at the same time I was offered a lucrative pharmaceutical industry job. Thus, the decision to be a psychiatrist, to go into research, and then to go into and stay in academia all had alternatives that would have led elsewhere. In the process, I became diverted to several disaster response missions and to conduct some population research with victims of international disasters. Currently, I run a brain imaging and genetics research program focused on early schizophrenia before and after the first episode. I am about to move on from this to focus more on patient care in a hospital setting, and, hopefully, provide help to the many veterans of the current wars who will be returning to the United States with mental scars.

CS: Who have been your mentors, and what “gems of wisdom” have you learned from them?

LD: Richard Wyatt was the first, then Monte Buchsbaum, Elliot Gershon, Fritz Henn, Tim Crow, and Ted Reich. Richard particularly taught me the excitement of research, about working hard, intense dedication and how to survive among the “boys.” He also really laid my future foundation in research by guiding me very painfully through many paper drafts of manuscripts, and taught me how to write scientifically and the necessity of doing so. Monte and Fritz taught me optimism, about building a program and a lot about how anything is possible. Ted Reich taught me the value of education and mentoring. Elliot taught me rigor and to be very, very careful in my work and comprehensive in a systematic way. These skills were to pay off considerably in the years to come. And lastly, Tim Crow specifically taught me how to think “out of the box,” to question established

views and to put ideas together into novel hypotheses. I don't know if I've acquired all of this collective wisdom, but I certainly tried and will instill these values in younger generations of researchers.

CS: You are co-editor of another schizophrenia journal—*Schizophrenia Research*—and it has been a great success for our field. What is it like to run a journal?

LD: Occasionally, one has an idea that influences the rest of one's life. With me, it was recognizing that there was a gap in the field, with no real research journal on schizophrenia, and that establishing one would be good for the field. This is one area where I was "in the right place at the right time." After discussing the desire to do this with Henry Nasrallah, one fateful day in the early 1980s, we both decided to join together, develop and co-edit what we called *Schizophrenia Research*, and, finally, contracted with Elsevier in Amsterdam to publish it. Anything seems possible when you are young and ambitious.

I think the main thing is that if you are to have a successful research career, you must be persistent, focus on a problem with great intensity, and keep at it despite all odds and discouragement and repetitive failures—i.e., never give up until you accomplish your goals.

CS: Why did you choose a career in psychiatry?

LD: I chose a residency in psychiatry back in the days when I had two small children, with the thought that I would never be able to handle the physical rigor of an internal medicine residency. However, this was combined with my fascination with the symptoms of schizophrenia and how the brain works, and that little understanding existed for the underlying cerebral basis for serious mental illness. I challenged the Freudian and psychoanalytic dogma, and was determined to understand what scientific evidence existed for the kinds of treatments that were available for any psychiatric disturbance. I was a product of the 1960s, and influenced and absorbed by the many books on hallucinogenic experiences and drugs.

CS: What did you learn early on in your career that has turned out to be important or helpful to you?

LD: I think the main thing is that if you are to have a successful research career, you must be persistent, focus on

a problem with great intensity, and keep at it despite all odds and discouragement and repetitive failures—i.e., never give up until you accomplish your goals. In addition, pick a novel problem of importance to work on, search for gaps in our knowledge, and don't follow the herd to replicate something that many people will do without bringing the field further forward. Thus, picking the problem to focus on is extremely important.

CS: What advice would you give to residents who are considering a career in academic psychiatry today?

LD: 1) to do post-doctoral training at a well recognized institution; 2) never give up clinical contact; and, 3) take a course early on in public speaking.

CS: What has been the greatest disappointment in your career?

LD: Not being chosen for positions of leadership, not being recognized for any advances I have made in the field, not being included in multicenter collaborative efforts, and most importantly, not to have mentored many junior people to go further on.

CS: What has been the greatest joy in your career?

LD: Actual scientific discovery—and seeing results that show progress. For example, the day a research assistant brought me the result of a longitudinal study showing progressive brain change over time in our patients or the time genome-wide genetic linkage was found in my large set of schizophrenia families.

CS: If you knew earlier in your career the information that we now know about the biology of schizophrenia, what kind of research would you have pursued—and why?

LD: I spent the very early years of my career pursuing findings on factors present in the blood of patients with chronic schizophrenia. I later found out that all our discoveries, or many of them, were artifacts of chronic neuroleptic medication or the long-term hospital environment. None were clearly markers for the pathophysiology of illness. I eventually went into genetics—a direct window to the biology through DNA. In the mid 1980s, I began collecting evaluations and blood samples for DNA from multiplex families with schizophrenia. These studies were based on the assumption that we were looking for a major gene effect on the development of schizophrenia. Over a decade later, it was clear that this was the wrong strategy. While evaluating and visiting many of these families was interesting and rewarding in itself, this work led to little progress. If I knew

then what I know today, I would have stuck to hypotheses and pursuing them more diligently in a translational way.

CS: What do you think are the major opportunities for schizophrenia research over, say, the next ten years?

LD: I think we should focus on improving the outcome of people who are at high risk for developing schizophrenia by treating early, and focus on improving the outcome of people who already have developed schizophrenia by developing new drugs that actually target the underlying mechanism of disease. We are gaining new knowledge about the basis for illness through both genetic and brain imaging studies, and could apply these to the development of new treatments. The “opportunities” are that the methodology has advanced to a point where they are applicable to the problems we face.

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CS: What work are you currently focusing on and what do you feel will be most important for you to do over the next decade?

LD: I have been focusing on many different things. First, my research includes a large population-based family/genetic study of cannabis users, particularly those who use during adolescence, who then develop psychotic episodes, to determine the relationship of cannabis to the development of schizophrenia. I also have a huge international database of DNA samples from families with schizophrenia that is currently being used to investigate candidate genetic mechanisms and risk genes. Finally, I have been pursuing biologic markers for development of schizophrenia in young people

within the age of risk for schizophrenia, who have a strong family history for the disorder. I am pursuing, with the use of MRI, the hypothesis that brain pathways for language processing are developing atypically, and thus, producing vulnerability for experiencing auditory hallucinations and delusions. These atypical patterns of functioning could be markers for genetically vulnerable people who may develop schizophrenia.

I have also been intensely involved in the development of the new Schizophrenia International Research Society and its biennial international conferences, continuing my efforts as an officer of the International Society of Psychiatric Genetics, and corresponding mentoring and award programs for students to attend these congresses. I continue as international editor-in-chief of *Schizophrenia Research*. With these latter endeavors, I hope to have at least an indirect influence on considerable progress in the field. Over the next decade, my long-term goals are to: 1) influence many more students in the way they think and focus on research; 2) work more toward translating and applying, as appropriate, new research findings to the clinic and toward public understanding of schizophrenia; 3) to work toward changing government policy toward people with serious mental illnesses; 4) to understand the ethical challenges of our research, particularly genetic findings; and, 5) to refocus my research toward understanding when and how to treat this disorder, so that chronic hospitalized cases become a rarity, not only in the United States, but worldwide and in impoverished nations with reduced access to good care, as well. Finally, I will be flexible in the changing environment around me to provide aid where it is needed, whether with individuals who have suffered the horrors of foreign wars, or those who have survived natural or man-made disasters. Perhaps this is an ambitious plan, but I will do everything I can to try and complete it before my time is up.

Dr. DeLisi can be reached at DeLisi76@aol.com.
