

Because of Alex...Build It and They Will Come

by Clarence E. Schutt, Ph.D.

I suppose fathers everywhere try to pass on whatever sports skills they have to their sons and daughters. My father suffered from polio as a boy and I doubt whether he ever played baseball, yet he tried to teach me how to field grounders and popups, but could never convey to me how to hit the ball with a bat.

He attended all but one of my Little League games. The only game he missed was one where I blasted a triple off the wall for my only hit ever, in defiance of the Coach, who told me not to swing because at least I might get a walk by just standing there. It never seemed like my dad believed in my triple. I bet he just thought that I was trying to make him feel better.

The great American film "Field of Dreams" explores the subconscious terrain of baseball and the unresolved emotions of fathers and sons who play there, even long after one of them has passed on. We remember what our dads did to help us and we shudder at the thought of how we let them down. The character played by Kevin Costner builds a baseball field in the middle of a cornfield that is revisited by the ghosts of former baseball greats and his own father who plays a redemptive game of catch with him.

Most difficult for the Costner character was gaining the courage to invest all that he had in something so hopelessly difficult and seemingly against all the odds. The final scene of hundreds of car headlights winding their way towards the "field of dreams" symbolized the shared need felt by strangers near and far to bridge the impossible gulf.

A few weeks ago, the American League Championship Series went into extra innings and the much-anticipated broadcast of the "Dateline" story about secretin and autism was nearly postponed. During its airing I was brought to tears by the dramatic return to speech from the muzzled world of autism simply by the injection of a common intestinal hormone. My hopes soared! I couldn't sleep, turning over and over in my



inflamed imagination the possible molecular explanations for such a miraculous recovery.

The next day, I raced to the library and began assembling a set of papers on secretin and its possible connection to the brain. I found all that one could reasonably hope for — receptors for secretin-like molecules were indeed to be found in the brain, in the hippocampus and other areas implicated in autism. Secretin-like molecules also bound to B-cells, regulating the output of interleukins and other signals controlling the immune system!

My phone began ringing with offers from friends in the pharmaceutical industry to help me follow up on this lead. I learned that every autism organization in the country was besieged with requests for information. Doctors were scrambling to learn more.

It was at some point in this flurry of activity that it dawned on me how lucky we all are that the autism research community, represented by scientists funded by the NIH, NAAR, CAN, ASAF and other parent groups, is strong enough to launch a thorough investigation of this phenomenon. Controlled studies will be carried out under conditions guaranteeing the safety and health of our children. Research will be peer-reviewed and carried out in our nation's best clinics and laboratories. Guidelines will be established if the treatment is validated to prevent overdoses and extreme over-corrections by the homeostatic mechanisms of the body. Research into novel therapeutics will surely follow.

Anything less would be unthinkable. You don't build a field of dreams with second-rate materials.

Alex plays catch with me sometimes. He doesn't like it very much, preferring to avoid looking at the ball. I bet he does it just to make me feel better. One day, I'll teach him how to wield a bat, but in the meantime I'll be patrolling our own field of dreams making sure that only the best seeds get planted. ♦

Horvath, Karoly et al. (1998). Improved Social and Language Skills after Secretin Administration in Patients with Autistic Spectrum Disorders. *J. Assoc. Acad. Minority Physicians*, 9:1-15.

Kramer, Mark S. et al. (1998). Distinct Mechanism for Antidepressant Activity by Blockade of Central Substance P Receptors. *Science* 281:1640-1645.

de Bono, Mario & Bargmann, Cornelia I. (1998). Natural Variation in a Neuropeptide Y Receptor Homolog Modifies Social Behavior and Food Response in *C. elegans*. *Cell* 94:679-689.

Clarence E. Schutt, Ph.D. is Executive Vice President and Secretary of NAAR. Dr. Schutt is Professor of Chemistry at Princeton University, where he is also Associated Faculty of the Molecular Biology Department, Director of the Graduate Programs in Molecular Biophysics and a Member of the Program in Neuroscience. Prof. Schutt is co-founder and co-chair of The Eden Institute Princeton Lecture Series on Autism, now celebrating its fifth anniversary. He is the parent of a 12-year-old son with autism.

Special thanks to Greg Bowman, a Ph.D. candidate in the Department of Molecular Biology at Princeton University, who created the graphic on page two and provided ideas and technical support.