INDIANA UNIVERSITY

DEPARTMENT OF PSYCHIATRY

School of Medicine

January 10, 2011

To the Irwin Award Selection Committee:

It is my pleasure to nominate Christopher McDougle MD for the 2011 Glenn W. Irwin, Jr., MD Research Scholar Award. Dr. McDougle is presently Chairman of the Department of Psychiatry and Albert E. Sterne Professor of Psychiatry. He is a renowned scholar in the neurobiology of developmental disorders, especially autism and related disorders. He is a pioneer in the development of pharmacologic treatments for pervasive developmental disorders.

Dr. McDougle trained at IU, graduating from the School of Medicine in 1986 with highest distinction. He then moved to Yale, which has been an international center for studies of neurobiology and psychiatry for many years. There was a special emphasis on clinical psychiatric studies at Yale at that time, under the leadership of Dennis Charney and George Heninger. Their basic science effort was driven by world famous investigators such as G. Aghajanian, P. Rakic, P. Goldman-Rakic, and B. Bunney. And the Yale Child Study Center was directed by Donald Cohen, who was an expert in Tourette's Syndrome and developmental disorders.

Chris began as an adult psychiatrist and gradually became interested in obsessive compulsive disorder and adult autistic disorder. He decided that to understand these disorders properly, he would need to see them develop in children. In 1992, he went back to residency in child psychiatry, emerging three years later as an Assistant Professor (1995) and then Associate Professor (1996) and then head of the Clinical Neuroscience Research Unit at the Connecticut Mental Health Center in 1996-7.

He began with treatment studies of obsessive-compulsive disorder (OCD), especially with patients refractory to standard treatments. He demonstrated that the most successful pharmacologic strategy for these patients was the addition of haloperidol or risperidone to an ongoing serotonin reuptake inhibitor. This is now standard treatment for refractory OCD.

As his interest turned toward pervasive developmental disorders, he began a series of controlled trials on patients with autistic disorders, first at Yale, and then at Indiana, where he returned in 1997 to head the Section on Child Psychiatry. Coincident with his return to Indiana, he applied for, and received, a Research Unit on Pediatric Psychopharmacology (RUPP) grant from the NIMH, which has provided ongoing support for pharmacologic trials from 1997-2003 and targeted support for specific trials since that time.

His group at Indiana has become one of the most active in the world for controlled pharmacologic treatment studies of autism and related disorders. They have had substantial success with some of the second generation antipsychotics, especially for target symptoms such

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as irritability. They wisely differentiate between associated symptoms and core symptoms of autism, such as difficulties with social interaction, an area which has proven extremely difficult to treat. In recent years they have pioneered the use of novel treatment agents such as cycloserine (affecting the glutamate system) and guanfacine (an alpha2 adrenergic agonist) in autism. Indiana is now one of the top centers anywhere in the world for well-controlled experimental studies of pharmacologic treatments for autism and related disorders.

I'd like to call particular attention to two aspects of Dr. McDougle's work. The first is that he studies developmental disabilities, which has been a neglected field among psychiatric investigators. In recent years there has been an increased interest in autism because of genetic findings such as the increased number of copy number variants in genes related to neuronal structure. Dr. McDougle has devoted his energies to this area for the past two decades. This was not previously an area of high interest at NIMH. But the subject population is voluminous and the medical need is substantial. A reasonable estimate for intellectual disability in the population is about 1.5%. About 60% of the variation in prevalence is accounted for by genetic factors. Some very distinctive genetic/neurobiologic mechanisms have been identified in specific syndromes in this category (e.g. Fragile X syndrome, Down syndrome, Lesch-Nyhan Syndrome); autistic disorders are more complex, but are now beginning to be unraveled. It is to the credit of IU School of Medicine and the IUPUI campus that we have invested in this area of research and treatment (through the Christian Sarkine Autism Treatment Center at Riley) and that Dr. McDougle is in the forefront of this effort nationally and internationally.

The second aspect that's worth noting is that Dr. McDougle is an extraordinary research mentor. He has shown great talent in identifying residents, junior faculty, and other scientists who are capable of developing independent research careers, and he has nurtured them with unusual care and skill. I say this with a touch of envy because I have been trying since I came to Indiana in 1986 to find young scientists and provide the support and encouragement they need to develop independently funded research programs. It is not an easy task, and I have to admit that I am in awe of his success in this regard. I will just mention a few of his trainees: Craig Erickson - received a K award, has an R01 and Defense Department grant pending review, runs a clinic he designed for patients with Fragile X Syndrome; David Posey – received a K award, was co-investigator on several other awards, elected Associate Member of the American College of Neuropychopharmacology (ACNP) (a highly competitive honor); Kimberly Stigler – received a K, elected Associate Member of ACNP; Leslie Hulvershorn – received a K, has a Klingenstein Fellowship, now heads a clinic for adolescents with substance abuse. This is all really within the last 5-6 years and it is extremely impressive to me. I think it underlines the value that Dr. McDougle places on scholarship and the ripple effect this has had on the residency and within the Department in general. All of these investigators emerged from a residency program that fills seven slots per year and which historically has placed an emphasis on clinical treatment and private practice rather than research.

I think it's also worth noting that the Sarkine Center, and Dr. McDougle in particular, perform a needed public service for families with autism and for the community in general, by promoting the importance of scientific evidence in the evaluation and treatment of these conditions. There is an understandable tendency for advocates to become enamored of new theories for the causes of devastating conditions such as autism. Chris has spoken out consistently regarding the lack of

evidence for immunization-related autism and the lack of evidence for many popular behavioral treatment methods.

Five letters of support are included in this dossier. Dr. Joseph Coyle is the editor of the *Archives of General Psychiatry* and is one of the most highly decorated scientists in our field. He is a member of the National Academy of Sciences Institute of Medicine. He has known Dr. McDougle for 20 years and has been particularly impressed by the originality of his treatment studies in autism. He notes that Dr. McDougle's *h index* is 50 (at least 50 of his published articles have been cited at least 50 times). Dr. Fred Volkmar is the current head of the Yale Child Study Center. He has been impressed with Chris's ability to revitalize the Child Psychiatry Section at Indiana and with the fact that he has brought the "highest quality research methods" to the study of autism and related conditions. Dr. Gerry Oxford is head of the Stark Neurosciences Research Institute. Dr. Oxford has had extensive experience working on administrative projects with Dr. McDougle and he is impressed with Chris's ability to prioritize the needs of scientists and faculty generally rather than just those of his own group or Department. Dr. Hugh Hendrie (former Chair of Psychiatry) mentions Dr. McDougle's success in bringing the Department to a new level in research since he (Chris) became Chair. He says "The Department of Psychiatry is now recognized as one of the leading research departments in the country both for funding and for research productivity and creativity." Dr. Andrew Saykin, Director of the Indiana Clinical Neuroimaging Center and an international expert on markers for risk in Alzheimer's Disease, notes Dr. McDougle's contributions to the Neuroscience Center of Excellence at IU, and mentions his "tireless mentoring and recruitment of new clinician scientists and researchers."

We are fortunate to have Dr. Chris McDougle as Chair of Psychiatry and as a consistent advocate for scholarship in the study of Developmental Disorders and other devastating disorders of the nervous system. Despite his many administrative duties, he has maintained and extended his own federally funded research programs and established Indiana University as a world center for studies of autism.

He is a deserving candidate for the 2011 Irwin Award.

Sincerely yours,

John I. Nurnberger Jr. MD PhD
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