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IN THE DISTRICT COURT OF THE FOURTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF ADA

STATE OF IDAHO, **Plaintiff,** **V.** **BRYAN C. KOHBERGER,** **Defendant.**	**CASE NUMBER CR01-24-31665** **DEFENDANT'S RESPONSE TO STATE'S MOTION IN LIMINE** **RE: NEUROPSYCHOLOGICAL AND PSYCHIATRIC EVIDENCE**

COMES NOW, Bryan C. Kohberger, by and through his attorneys of record, and hereby responds to the State's Motion in Limine Re: Neuropsychological and Psychiatric Evidence[1], filed

[1] Mr. Kohberger has filed several related motions that will be argued concurrently with this motion. See Motion to Strike Death Penalty Re: Autism Spectrum Disorder, filed 2/24/25, and Motion in Limine #4 Re: Using the Terms Psychopath or Sociopath, filed 2/24/25. #13 RE: Conditions as an Aggravator

on February 21, 2025. The State objects to the proposed testimony of Rachel L. Orr, PsyD., ABPN-CN (Defendant's Exhibit D7) and Eileen P. Ryan, DO, DFAPA (Defendant's Exhibit D13) arguing that the proposed testimony is outside of the mental condition evidence allowable under Idaho Code §18-207(3). This response is made pursuant to due process, I.R.E. 106 for a complete defense, and a fair trial guaranteed by the Fifth, Sixth and Fourteenth Amendments to the United States Constitution and Article I, Section 13 of the Idaho Constitution.

The minute that jury selection begins, jurors will begin to study and analyze Mr. Kohberger's physical presence. They will watch his every move and pass judgment on him every minute of the jury trial simply based on how he looks and reacts to the presentation of certain evidence and comments about him. Mr. Kohberger must be able to present testimony to the jury that he has certain physical disorders. It will assist the trier of fact to know his physical presentation, including nonverbal reactions in the courtroom, is explained by his physical condition. To exclude this evidence will result in unfair bias that could cause a wrongful conviction. This objection is supported by the Declaration of Dr. Jeffrey Lewine, an expert in neuroscience and neuroimaging. *See* Attached Defense Exhibit D-1.

Mr. Kohberger in no way suggests that expert testimony related to his Autism Spectrum Disorder ("ASD"), Obsessive Compulsive Disorder ("OCD"), and Developmental Coordination Disorder are for the purpose of showing that he does not know right from wrong. He has at all times and continues to assert his actual innocence in this case. The State correctly noted in its' motion, Mr. Kohberger's disclosure states that Dr. Orr's testimony and Dr. Ryan's testimony "is not intended to be a mental element defense pursuant to Idaho Code §18-207; but rather this testimony about state of mind as well as factual defense testimony to anticipated testimony elicited by the State." (Defendant's Exhibit D7-A, p. 3424; Defendant's Exhibit D13-A, p. 3908). Idaho Code §18-207 is "not limited to the admission of either direct or rebuttal expert testimony to elements of the crime." *State v. Samuel*, 165 Idaho 746, 758, 452 P.3d 768, 780 (2019). Because

of the statute's broad application, the Idaho Supreme Court has determined that Idaho Code §18-207 "applies to legal proceedings before trial, including pretrial motions." *Id.*

The threshold test for the admission of expert testimony is whether the scientific, or other specialized knowledge of the expert will assist the trier of fact to understand the evidence or determine a fact in issue. I.R.E. 702. The function of the expert "is to provide testimony that is beyond the common sense, experience, and education of the average juror." *State v. Hester*, 114 Idaho 688, 694, 760 P.2d 27, 33 (1988). Where the normal experience and qualifications of lay jurors permit them to draw proper conclusions from given facts and circumstances, then expert conclusions or opinions are inadmissible. *Id*. at 696, 760 P.2d at 35.

In this case it is not the normal experience and qualifications of lay jurors to understand ASD, OCD or Developmental Coordination Disorder. Expert testimony is necessary.

Autism Spectrum Disorder ("ASD")

The anticipated testimony of Dr. Orr and Dr. Ryan is relevant to explain that Mr. Kohberger's ASD diagnosis is a physical condition and how it presents in his demeanor. Mr. Kohberger "has met the criteria for this diagnosis since childhood and that it is not a 'convenient' diagnosis given his current legal situation and jeopardy." (Defendant Exhibit D13-B, p. 3938). The anticipated testimony of Dr. Orr and Dr. Ryan is relevant to explaining how the behaviors and mannerisms presented by Mr. Kohberger are consistent with an individual having ASD. In addition to the opinions of Dr. Orr and Dr. Ryan, the Declaration of Dr. Lewine explains that neuroimaging of Mr. Kohberger's brain supports the ASD diagnosis.

ASD is neurological disorder that is physical. While most people ordinarily think of ASD as a mental health condition[2], it is "a neurological and developmental disorder[3] that affects how people interact with others, communicate, learn, and behave." (Defendant's Motion to Strike Death Penalty Re: Autism Spectrum Disorder, p. 4). According to the United States Government National Institute of Mental Health, "Autism spectrum disorder (ASD) is a neurological and developmental disorder that affects how people interact with others, communicate, learn, and behave" (Autism Spectrum Disorder - National Institute of Mental Health (NIMH), last retrieved March 16, 2025). As a neurological disorder ASD is associated with structural and functional (i.e., physical) defects in the tissues of the brain that can't be seen when you look at a person, but it can be observed with proper microscopic examination and in some individuals through the use of quantitative analyses of magnetic resonance imaging of the brain, such as the case with Mr. Kohberger (see attached declaration of Dr. Jeffrey Lewine). Research on large groups of persons with ASD has indicated the presence of structural differences in the brains of these groups versus those of individuals with typical neurobiological development, which also supports the conclusion of the NIMH and others that ASD is a neurological disorder, imaging of Mr. Kohberger's brain as reported in Dr. Lewine's attached declaration shows findings of structural differences in the physical make up of his brain in areas commonly associated with the control and expression of behaviors commonly seen in ASD and listed below as taken from the NIMH web site. Symptoms of and actual behaviors commonly associated with obsessive compulsive disorder ("OCD") are common in people with ASD.

[2] Several Idaho statutes list conditions that fall within the meaning of serious mental health illness. See. I.C. §67-5761A(2)(a) (Mental Health Parity in State Group Insurance); I.C. §66-1403(9) (Definitions, Secure Treatment Facility Act). Neither of these statutes specifically list ASD.

[3] In Idaho, developmental disability has been defined as a chronic disability of an individual which appears before the age of twenty-two which is attributable to an impairment such as autism. I.C. §39-4604(4)(a); §39-5102(2)(a); I.C. §66-402(5)(a).

As a physical condition, ASD may not be as noticeable as some physical conditions like a missing arm. If Mr. Kohberger had the physical disability of missing an arm, the jury would not require explanation about how such a physical condition may impact the case. ASD is visible in some ways that will be apparent to a jury but requires explanation. Without explanation, the way that the public perceives the behaviors and mannerisms of someone with ASD is not always favorable and may be prejudicial. While Mr. Kohberger's presentation is highly consistent with ASD (Exhibit D7-B, p. 3440), without explanation others may misinterpret and misidentify Mr. Kohberger's behaviors and cast them in a more sinister light. (Exhibit D13-B, p. 3937). For example, he does not show emotion on his face, he has a flat affect, he sits very still and holds his hands in the same position, he has a piercing stare, he does not show expected reactions, facial expressions do not reflect what he is feeling, he is stiff in body posture, he has prosody in speech, uses repetitive phrases and large words, and has developmental dexterity problems. Many of his behavioral characteristics are known to be commonly associated with the presence of ASD and are clearly relevant to the interpretation of his behavior in the courtroom by the jury and may also be relevant evidence regarding the rebuttal of evidence as to the commission of the crime itself. Further explanation about ASD by the United States Government National Institute of Mental Health ("NIMH") is helpful. The NIMH provides the following on its web site[4]:

> The list below gives some examples of different types of behaviors that are common among people diagnosed with ASD. Not all people with ASD will have all behaviors, but most will have several of the behaviors listed below.
>
> Social communication and social interaction behaviors may include:
>
> - Making little or inconsistent eye contact
> - Appearing not to look at or listen to people who are talking
> - Infrequently sharing interest, emotion, or enjoyment of objects or activities (including infrequently pointing at or showing things to others)
> - Not responding or being slow to respond to one's name or other verbal bids for attention
> - Having difficulties with the back and forth of conversation

[4] https://www.nimh.nih.gov/health/publications/autism-spectrum-disorder

- Often talking at length about a subject of interest without considering social cues or conversational give-and-take
- Displaying facial expressions, movements, and gestures that do not match what is being said
- Having an unusual tone of voice that may sound flat, lacking emotion or tonal variation
- Having trouble understanding another person's point of view or being unable to predict or understand other people's actions
- Difficulties adjusting behavior to different social situations
- Difficulties sharing in imaginative play or in making friends

Restrictive/repetitive behaviors may include:

- Repeating certain behaviors or having unusual behaviors, such as repeating words or phrases (a behavior called echolalia)
- Having a lasting intense interest in specific topics, such as numbers, details, or facts
- Showing overly focused interests, such as with moving objects or with parts of objects
- Becoming upset by slight changes in a routine and having difficulty with transitions

Autistic people often have sensory differences such as:

- Being more sensitive or less sensitive than other people to sensory input, such as light, sound, clothing, or temperature

People with ASD also may experience sleep problems and irritability.

Based upon a reasoned analysis of discovery provided by the State to date, Mr. Kohberger's behaviors that are attributable to his ASD and on this list of common behaviors of persons with ASD as provided by the NIMH, along with other behaviors attributable to his neurological condition must be presented to the jury to confront and rebut certain evidence to be proffered by the State.

Obsessive Compulsive Disorder ("OCD")

OCD can be an independent diagnosis but is also a set of symptomatic behaviors that are often comorbid in ASD as with Mr. Kohberger's ASD. Notable for example on the above NIMH list of behavioral issues commonly associated with ASD, Mr. Kohberger has sleep difficulties and subsequently developed a habit of night driving or running to decompress, such behaviors being present most of his life. He also engages in frequent compulsive hand washing, wears gloves to

avoid germs, has a fear of things getting into his eyes, changes his shower curtain frequently to avoid exposure to mold, and avoids anything he views as contaminating. If the State elicits testimony at trial related to these types of facts that are used to build circumstantially the elements of the crime or show Mr. Kohberger's actions as reflecting his state of mind or other elements of the crime, he will refute that evidence through expert testimony as behaviors related to his OCD and his ASD. By way of specific example, the State has continued to claim that Mr. Kohberger was wearing gloves on the night of his arrest and placing trash in baggies. The State asserts that this demonstrates that he had consciousness of guilt and was trying either to hide his DNA or engage in the cleaning of his car. This is highly prejudicial and misleading. Mr. Kohberger frequently wears gloves to avoid germs on surfaces. He was not cleaning his car on the night of his arrest, he was awake at night, as is typical for him, and he was cleaning his bathroom.

While testimony related to these topics may not be relevant until the State opens the door by eliciting testimony on these issues, once it does, Mr. Kohberger must be allowed to provide expert testimony refuting the State's witnesses. Such relevant evidence can assist the trier of fact in evaluating circumstantial evidence the State may put forward and since all such testimony would be subject to vigorous cross-examination, it would clarify and not confuse jurors.

Developmental Coordination Disorder

Mr. Kohberger suffers from deficits in fine motor dexterity and visual motor function. Clearly these are physical issues. He has experienced these physical impairments all of his life. The State has disclosed evidence that law enforcement will testify that they did test runs at 1122 King Road and that it is possible to commit four homicides in a time frame of only minutes including walking to and from a car and removing clothing that would be covered in blood . Additionally, the State has disclosed a forensic pathologist who will testify regarding manner of death, injuries, and specific wounds on the deceased. Mr. Kohberger has disclosed a forensic pathologist who has some differing opinions including injury and specific wounds on the deceased.

It will be relevant for the jury to know that Mr. Kohberger has a developmental coordination disorder that impacts his fine motor dexterity and visual motor function. Such speed and coordination are not possible for him.

CONCLUSION

Mr. Kohberger has a right to confront the witnesses and evidence presented by the State and due process under the Fifth, Sixth and Fourteenth Amendments to the United States Constitution and the Article I, Section 13 of the Idaho Constitution. This includes presenting evidence to rebut the case against him.

The Court should deny the State's motion to *limine* to exclude Neuropsychological and Psychiatric Evidence. More specifically, the Court should allow Dr. Orr and Dr. Ryan to testify. The physical disorder of ASD should be allowed at the outset of trial. Issues related to his OCD symptoms that are an outgrowth of his neurological disorder, aka ASD (see NIMH quotes above) and Developmental Coordination Disorder may depend on the evidence the State elicits as the trial proceeds.

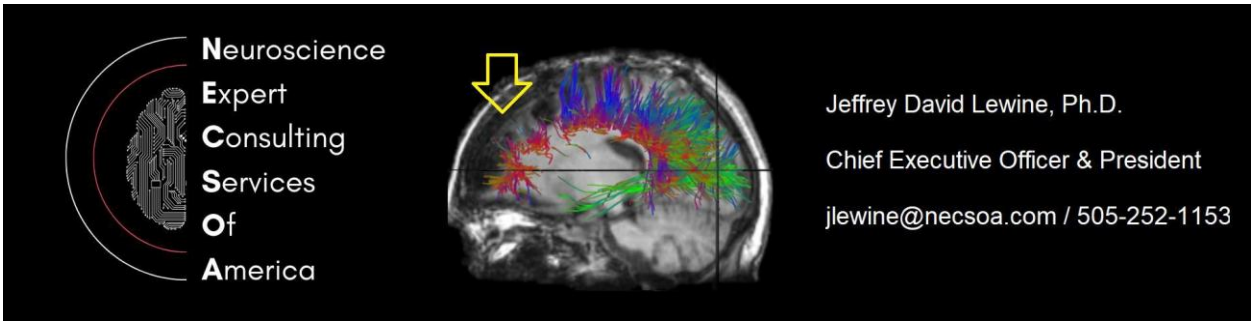
DATED this 17th day of March, 2025.

ELISA G. MASSOTH
ELISA G. MASSOTH, PLLC ATTORNEY

CERTIFICATE OF DELIVERY

I hereby certify that a true and correct copy of the foregoing was personally served as indicated below on the __17____ day of March, 2025, addressed to:

Latah County Prosecuting Attorney –via Email: paservice@latahcountyid.gov
Elisa Massoth – via Email: emassoth@kmrs.net
Jay Logsdon – via Email: Jay.Logsdon@spd.idaho.gov
Bicka Barlow, Attorney at Law – via Email: bickabarlow@sbcglobal.net
Jeffery Nye, Deputy Attorney General – via Email: Jeff.nye@ag.idaho.gov



Declaration of Jeffrey David Lewine, B.S., M.S., Ph.D.

I, Jeffrey David Lewine, swear under penalties of perjury that the information in this declaration is true and correct to the best of my knowledge.

1. My name is Jeffrey David Lewine, Ph.D.

2. I am over the age of eighteen, mentally competent, and make this declaration freely, based on my own personal knowledge.

3. I have BS, MS, and PhD degrees in Neuroscience from the University of Rochester, plus post-doctoral training in Biophysics and Neuroscience as a Director's Fellow at Los Alamos National Laboratory.

4. Over my career, I have had held academic appointments in multiple University departments, including appointments in Neurology (University of Kansas, University of New Mexico); Radiology (University of New Mexico, University of Utah), and Psychiatry and Behavioral Sciences (University of Kansas).

5. I presently hold multiple academic and business related titles and positions, as outlined below.
    a. I am the CEO and President of Neuroscience Expert Consulting Services of America (NECSOA LLC.). NECSOA provides data analysis and consulting services, especially with respect to legal proceedings.
    b. I am the CEO and CSO of the Center for Advanced Diagnostics, Evaluation and Therapeutics (CADET NM Inc). CADET NM Inc is involved in the development and evaluation of novel therapeutics for neurodevelopmental disorders, tinnitus, and TBI.
    c. I am the CEO and CSO of CADET Scientific LLC. CADET Scientific is engaged in basic research on neurodevelopmental disorders, TBI, PTSD, and dementia.
    d. I am an Affiliate Professor of Translational Neuroscience at the Mind Research Network (MRN). MRN is a 501(c)3 organization initially established through a $60M allocation from the Unites States Congress. Activities focus on the evaluation of brain structure and function in health and disease.
    e. I hold faculty appointments in the departments of Neurology and Psychology at the University of New Mexico. Activities include teaching and student and faculty mentoring.

DEFENDANT'S
EXHIBIT NO. D-1
IDENTIFICATION / EVIDENCE
CASE NO. CR01-24-31665
DATE: 3/17/25

f. I am the Director of Research for Beyond Barriers Therapeutics, a virtual pharmaceutical company developing novel treatments for TBI, alphavirus exposure, and organophosphate poisoning.
g. I am the Chief Scientific and Research Officer for the Research and Recognition Project, which has developed a new therapy for PTSD.

6. I have 30+ years of experience in the neuroscientific evaluation of the neurobiological status of clients with a wide range of conditions including neurodevelopmental disorders (autism, ADD/ADHD, and reading disorders), epilepsy, traumatic brain injury, PTSD, and tinnitus. As outlined in my attached CV (Exhibit 1), I have co-authored more than 100 scientific articles and book chapters.

7. In support of my work, I have received more than $10M in funding from federal, state, and philanthropic sources including the National Institutes of Health, the National Science Foundation, and the Department of Defense. This includes almost $4M specifically awarded for my work on neurodevelopmental disorders, including autism.

8. I have been asked by Defense Counsel in the matter of the State of Idaho v Bryan C Kohberger (case no. CR01-24-31665) to perform quantitative volumetric analyses of Mr. Kohberger's brain, and to comment on the neurobiological nature of his various diagnoses. In formulating my opinions in matters like this, I routinely rely upon my training and experience, the scientific literature, and client-related data and reports collected directly by myself, or other professionals, including radiologists, neurologists, psychiatrists, and psychologists.

9. It is my understanding that Mr. Kohberger has received several diagnosis diagnoses from appropriate and qualified doctors. For purposes of this declaration, for this motion I am addressing only three:
    a. Autism Spectrum Disorder, level 1, without accompanying intellectual or language impairment
    b. Developmental Coordination Disorder (DCD)
    c. Obsessive-Compulsive Disorder (OCD), with absent insight

10. It is also my understanding that the State of Idaho has requested that the Court issue an order in limine prohibiting Defendant from offering testimony regarding neuropsychological evaluation and psychiatric evaluation of the Defendant in the guilt/innocence phase of the trial. The stated argument relates to Idaho Code §18-207 (1) which provides that "mental condition shall not be a defense to any charge of criminal conduct" except "expert evidence on the issues of any state of mind which is an element of the offense. . ." Idaho Code 18-207(1) and (3).

11. In considering this, it therefore becomes relevant to distinguish diagnoses and evaluations related to mental v physical conditions. I have therefore been asked to discuss the relevant scientific evidence with respect to ASD, DCD, and OCD.

12. As an expert neuroscientist, I recognize three general categories of conditions that can impact a person's functional abilities and state of mind. Almost all conditions associated with psychological dysfunction have some neurobiological correlates that impart vulnerabilities, but in most instances,

these are not immediate causative factors. For example, consider a person who experiences substantive depressive symptoms following a divorce. Unlike major depressive disorder which has strong neurobiological underpinning, the most likely appropriate diagnosis in this situation would be an adjustment disorder. Adjustment disorders can be associated with some biological dysregulation, but few would argue that adjustment disorder is not a "mental condition." In contrast, some state-of-mind changes clearly reflect physical/biological factors. For example, amyotrophic lateral sclerosis (ALS) sometimes leads to mental health impairments such as violence and disinhibition. These are most commonly a direct consequence of structural and functional disruption of frontal lobe brain circuits as induced by the ALS. Here the psychological disturbance should not be considered a "mental condition" as it has a clear neurobiological basis separate from external psychological factors. Finally, there are some conditions in the 'grey' area with strong neurobiological and psychological underpinning. For example, arachnophobia (fear of spiders) has both biological and psychological underpinnings. It is clearly triggered in relationship to external factors, but it reflects an abnormal biological response in the amygdala of the brain.

13. As outlined by Dr. Orr in exhibit D7-B, Mr. Kohberger has multiple diagnostic conditions, identified by qualified doctors. In my opinion, these conditions span the range from neurodevelopmental to mental conditions. Herein, I will discuss the subset of three conditions (autism spectrum disorder, developmental coordination disorder, and obsessive-compulsive disorder) which are predominantly neurobiological (rather than mental) in etiology and relevant to the guilt/innocence phase of the trial, as argued by counsel. References are provided in Exhibit 2. The other conditions may be relevant to a sentencing-phase of a trial, if this case proceeds that far, and therefore will be discussed in a separate report.

14. <u>Autism Spectrum Disorder, level 1, without accompanying intellectual or language impairment.</u>

    a. Mr. Kohberger has a current diagnosis of an autism spectrum disorder. On the one hand, his overall level of intellectual function, and his general language skills have been adequate to allow him to complete a master's degree, but neuropsychological evaluation reveals deficits in several sub-domains including motor skills, processing speed, and executive function. Perhaps most importantly he demonstrates substantive impairments in social cognition that date back to early childhood. As noted by Dr. Orr, he demonstrates anomalies in nonverbal communication (e.g., poor integration of verbalizations and eye contact; limited use of descriptive gestures; restricted range of affect; atypical tone), poor social-emotional reciprocity (e.g., self-focused conversation, awkward interaction, limited perspective-taking, limited sharing of affect/emotions of others), and impaired relationships (e.g., superficial and "logical" descriptions of relationships, poor insight into his role in relationships), all consistent with autistic patterns.

    b. Whereas most patients with an autism spectrum disorder (ASD) demonstrate intellectual and language impairments, it is well established that there is a significant minority of patients (like Bryan) where the dominant dysfunction is selectively seen with respect to social cognition. In part, this likely reflects the neurobiological reality of relatively distinct brain networks for language v social skills [1, 2].

c. Whereas there was a brief period of history where autism was thought to be a psychological response to environmental factors (e.g., refrigerator parents), for more than half of a century it has been almost universally recognized to have a strong biological basis. Indeed, although ASD Diagnostic criteria are most formally described within the DSM-V (Diagnostic and Statistical Manual of Mental Disorders), the DSM clearly indicates the ASD to be a Neurodevelopmental Disorder.

d. Evidence that the ASDs are of a neurodevelopmental and physical biological origin (and not a 'mental condition' caused by external psychological factors or events) comes from several sources, including:
    i. Time-line of development, with typical onset prior to three years of age, with many parents recognizing signs as early as six months of age [3, 4].
    ii. Very strong heritability (estimated concordance in identical twins >60% (refs), with some chromosomal abnormalities leading to a very high incidence of co-morbid autism (e.g., Fragile X, Tuberous Sclerosis Complex, [5, 6]).
    iii. High co-morbidity with other clearly neurobiological conditions including epilepsy (more than 30% of persons with an ASD experience seizures by adolescences, and upwards of 60% show epileptiform activity on EEG, [7]).
    iv. Strong evidence of brain abnormalities (through autopsy, imaging, electrophysiology, and neurochemical assessments, [7-9].

For Bryan specifically, there is objective evidence of disrupted brain structure in several nodes of the social network. As outlined in detail in Exhibit 3, volumetric analyses of magnetic resonance imaging data for Bryan's brain reveal several brain areas to demonstrate volume within the lowest 10th percentile, as compared to all sex and age-range (+/- 5 years) matched neurotypical control subjects drawn from a normative data base of over 10,000 subjects). Of particular relevance is evidence of reduced volume for the left and right fusiform gyri, the left and right orbital frontal area, the left temporal pole, and the right anterior cingulate area, all regions within the brain's social network. The fusiform (especially of the right) is especially important for the recognition and evaluation of the emotional characteristics of faces. The orbital frontal cortex plays a key role in the emotional regulation of behavior. The temporal pole plays a crucial role in social and emotional processing, especially with respect to the integration of complex perceptual inputs with visceral emotional responses. The anterior cingulate is critical for social decision making and supporting empathy, prosocial behavior, and processing information about others' motivations.

15. <u>Developmental Coordination Disorder (DCD)</u>

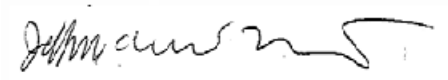
a. DCD is a neurodevelopmental condition that can co-occur with, but which is distinct from the ASDs. Also known as Dyspraxia, DCD is characterized by impairments in the development of motor coordination, including dexterity, limb speed, and gross and fine motor skills. Like the ASDs, dyspraxia has high heritability, on the order of 70%, a strong indication of a biological etiology. DCD is associated with structural and functional disruption of motor control and coordination networks, with minimal modulation by psychological factors [12, 13].

b. It is noteworthy that Bryan continues to show evidence of significant motor and coordination issues as revealed through formal testing with Dr. Orr.

16. Obsessive-Compulsive Disorder (OCD), with absent insight.
    a. Bryan reportedly developed compulsive hand washing behaviors as a young child, a fear of getting things in his eyes, and avoidance of germs.
    b. There is substantial evidence that OCD is primarily a neurobiological disorder, although it is not necessarily a neurodevelopmental disorder. Evidence in support for its biological basis include a large study of over 15,000 twin pairs indicates the hereditability of OCD to by about 47%, OCD can actually be caused by certain viral infections, including streptococcal infection which can lead to the autoimmune condition PANDAS
    c. Imaging studies also demonstrate a clear neurobiology for OCD. With disruption of the cortico-striato-thalamo-cortical loop. Importantly, this loop includes the anterior cingulate and orbital frontal cortices, regions that overlap with the neurobiology of ASDs, and which were found to be disrupted on Bryan's MRI (see Appendix II).
    d. The severity and timing of OCD behaviors is admittedly partly influenced by psychological factors, including stress. Also, the specific nature of each person's obsessions and compulsions probably relate to learned factors rather than core neurobiology.
    e. In general OCD is not considered to be a neurodevelopmental condition per se, but it is biological in nature, and in Bryan's case, manifested early in development.

In summary, based on my training, experience, review of the scientific literature, and the available data and reports on Mr. Kohberger, I believe that the conditions discussed above are of a clear neurobiological and physical etiology. Bryan's developmental coordination disorder and Autism Spectrum Disorder are specifically neuro-developmental conditions with physical origins in his brain's structure and function. His OCD also has a predominantly neurobiological basis, although it is modulated by psychological factors.

DATED this 16th day of March, 2025.



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CURRICULUM VITAE

Chief Executive Officer and Chief Scientific Officer, The Center for Advanced Diagnostics, Evaluation, and Therapeutics, CADEDT NM Inc.
Chief Executive Officer and President, Neuroscience Expert Consulting Services of America, NECSOA LLC.
Chief Executive Officer and Chief Scientific Officer, CADET Scientific LLC
Adjunct Professor of Translational Neuroscience, Mind Research Network
Adjunct Professor, Departments of Neurology and Psychology, University of New Mexico
Chief Scientific and Research Officer, Research and Recognition Project
Director of Research, Beyond Barriers Therapeutics

EDUCATION

B.S.	**Neuroscience**	**University of Rochester**	**1982**
M.S.	**Neuroscience**	**University of Rochester**	**1986**
Ph.D.	**Neuroscience**	**University of Rochester**	**1988**
Director's Fellow	**Biophysics**	**Los Alamos National Laboratory**	**1988-90**

EMPLOYMENT

10/90-5/92	Scientific Staff Member, Biophysics Group, Los Alamos National Laboratory, Los Alamos, NM.
5/92-12/96	Scientific Director, Magnetic Source Imaging Facility, VA Medical Center, Alb, NM.
8/92-12/96	Research Assistant Professor of Psychology, University of New Mexico, Alb, NM.
8/92-12/96	Clinical Research Assistant Professor of Radiology, University of New Mexico, Alb, NM.
1/93-12/96	Research Health Scientist, Joint Imaging Service, VA Medical Center, Alb, NM
1/95-12/96	Director, Magnetic Source Imaging and Neuroscience Divisions, The New Mexico Institute of Neuroimaging, The New Mexico Regional Federal Medical Center, Alb, NM
1/97-7/00	Associate Professor of Radiology, University of Utah Medical School, SLC, UT.
1/97-7/00	Director, Functional Brain Imaging Program, University of Utah Medical School, SLC, UT
9/97-7/00	Scientific Director, Center for Advanced Medical Technologies (CAMT), SLC, UT
7/99-7/00	Scientific Director, Learning Abilities and Resource Program, CAMT, SLC, UT
7/00-9/02	Director, Center for Innovative Technologies, Corrales, NM.
9/00-9/03	Adjunct Professor of Electrical Engineering and Computer Science, Univ. of Illinois, Chicago, IL.
1/01-9/02	Visiting Associate Professor of Psychology, University of New Mexico, Alb. NM.
9/02-10/06	Director, MEG Program, Hoglund Brain Imaging Center, University of Kansas Medical Center, Kansas City, KS
9/02-10/06	Associate Professor of Neurology, University of Kansas Medical Center, Kansas City, KS
12/02-10/06	Associate Professor of Psychiatry and Behavioral Sciences, University of Kansas Medical Center, Kansas City, KS
8/06-4/10	Director, Illinois Magnetoencephalography Center, Alexian Brothers Medical Center, Elk Grove Village, IL
2/07-4/10	Director, Alexian Brothers Center for Brain Research, Alexian Brothers Hospital Network, Elk Grove Village, IL
4/10-4/12	Associate Professor of Translational Neuroscience, MIND Research Network, Albuquerque, NM
4/11-present	Adjunct Associate Professor of Neurology, University of New Mexico Health Sciences Center
4/11-present	Adjunct Research Professor of Psychology, University of New Mexico
11/11-10/18	Director of Business Development, Mind Research Network
3/12-10/18	Director of Neuroscience, Lovelace Scientific Resources
4/12-10/18	Professor of Translational Neuroscience, Mind Research Network
9/12-9/16	Director of Clinical Research, Cognionics, Inc
10/12-present	Chief Executive Officer, Center for Advanced Diagnostics, Evaluation, and Therapeutics, Inc.
10/13-10/19	Principal Neuroscientist, Mindset Consulting Group
10/18-present	Adjunct Professor of Translational Neuroscience, Mind Research Network
10/2019-present	Principal Neuroscientific Consultant, Mindset Integrated Co.
11/2020-present	Director of Research, Beyond Barriers Therapeutics
1/2024-present	CEO, Neuroscience Expert consulting Services of America

7/2024-present CEO, CADET Scientific LLC
7/2024-present CSO and CRO, the Research and Recognition Project

GRANT SUPPORT HISTORY:

Current Funding:

"UNM MEG Clinical Services Contract", University of New Mexico, J Lewine, PI, $150,000/year, 2016-2024

"BBT-101: An Intranasal Treatment for Mild Traumatic Brain Injury", US Department of Defense, Special Operations Command (SOCOM). J Lewine, PI, $1,900,000, 7/2023-7/2025

"Development of Intranasal N-Acetyl Cysteine as a Neuroprotectant in Cases of EEEV and VEEV", US Defense Threat Reduction Agency and Battelle Inc., J Lewine and C Burke, co-PI, $1,150,000, 12/24-8/26

Pending Funding:

"Sound Sensitivities in Autism Spectrum Disorders: Neurobiology and Treatment", National Institutes of Health, NICHD, J Lewine, PI, $2,900,000, 10/24-9/29

Prior Funding:

'Integrative Systems in Biology', NIH Pre-Doctoral Fellowship, USPHS National Research Service Award 5-T32-GM07136-10, 7/83-12/84, direct costs - $10,000/year.

'Hemispheric Asymmetries and Mnemonic Processing', USPHS Individual National Research Service Award 5-F31-MH09117, NIH Pre-Doctoral Fellowship, JD Lewine, PI, 1/85-6/88, direct costs - $10,000/year.

'Hemispheric Specialization in Man and Chimpanzee', USPHS Individual National Research Service Award 1-F32-NS08458-01, NIH Post-Doctoral Fellowship, JD Lewine, PI, 5/88 (not used).

'Physiological Basis of MEG', Los Alamos National Laboratory Institutional Support For Research And Development Award, JD Lewine and CC Wood, Co-PIs, 7/90-7/92, direct costs - $250,000/year.

'Magnetic Stimulation Techniques For The Analysis Of Neural Function', Los Alamos National Laboratory Institutional Support For Research And Development Award, DB Van Hulsteyn and JD Lewine, Co-PIs, 7/91-7/93, direct costs - $250,000/year.

'The Neural Dynamics of Event- Memory', McDonnell-Pew Program in Cognitive Neuroscience, Individual Research Grant, JD Lewine, PI, 4/93-4/95, direct costs - $30,000/year.

'Preoperative Localization of Functional Regions via MEG, EEG, MRI and TMS', Research Allocation Committee Award, University of New Mexico School of Medicine, JD Lewine, PI, 3/94-3/95, direct costs – $25,000/year.

'Integration of MEG and MRS', NINDS CAP Award, J. Shih, PI, (JD Lewine collaborator), 1/95-1/00, direct costs – $125,000/year.

'Anatomical and Functional MRI constraints on MEG', NIH RO1 Award, J George, PI, (JD Lewine collaborator), 6/95-6/98, direct costs - $160,000/year.

'Clinical Evaluation of MSI', Picker Int, WW Orrison and JD Lewine, co-PIs, 1/95-1/97, $150,000/year.

'Neuroimaging in Schizophrenia', Young Investigator Award, National Alliance for Research in Schizophrenia and Affective Disorders, JD Lewine, PI, 4/95-4/97, direct costs - $30,000/year.

'Epileptic Patterns in LKS, PDD, and EIA', Primary Children's Medical Foundation, JD Lewine, PI, 6/97- 6/98, direct costs - $24,000/year.

'Clinical MSI', Picker International, JD Lewine and WW Orrison, co-PIs, 7/98-7/00, direct costs - $250,000/year, MSI portion of larger Picker award.

'Magnetoencephalographic Evaluation of Epileptiform Activity in LKS, PDD-NOS and EIA', March of Dimes Birth Defects Foundation, JD Lewine, PI. 9/98-9/00, direct costs - $48,000/year.

'Patterns of Epileptiform Activity in Autism', Established Investigator Award, National Alliance for Research in Schizophrenia and Affective Disorders, JD Lewine, PI, 6/98-6/00, direct costs -$40,000/year.

'Fetal Magnetocardiology and Magnetoencephalography Equipment Grant', Mariner-Eccles Foundation, WW Orrison and JD Lewine, co-PIs, 1998-1999, one time equipment grant, direct costs - $75,000.

'Magnetocardiology', University of Utah Seed Grant, JD Lewine, PI, 9/99-9/00, direct costs - $35,000.

'Magnetocardiology', Dumke Foundation, JD Lewine, PI, 1999, one time supplement, direct costs - $5000

'Magnetic Source Imaging in the Evaluation of Epileptiform Activity in the Autism Spectrum Disorders', Private grant from D&S Spafford & S Kirk, JD Lewine and WW Orrison, Jr., co-PIs, 8/99-8/00,$500,000.

'Efficacy of Drug Treatment Programs', State of Utah Department of Youth Corrections, JD Lewine, PI, 10/99-10/00, direct costs - $50,000.

'Auditory processing in Autism', Cure Autism Now Foundation, JD Lewine, PI, 10/99 - 4/01, direct costs - $30,000/year.

'Electro/Magnetoencephalography Signal Processing', National Science Foundation, JD Lewine, PI, 8/1/01-7/30/04, direct costs - $45,000/year.

'Development of Clinical MEG', VSM-MedTech, J Lewine and W Brooks, co-PIs, 12/03-12/06, direct costs, $150,000/year

'Visual Information Processing in Reading Disorders', Kansas Lions Sight Foundation, JD Lewine, PI, 7/1/03-present, direct costs - $19,000.

'Functional MRI and MEG Investigation of Neural Reorganization in Primary Visual Cortex Following Central Visual Loss Due to Macular Disease', Kansas Lions Sight Foundation, G Timberlake, PI (JD Lewine co-investigator), 7/1/03-6/31/04, direct costs - $18,000.

'Auditory Processing in Autism Spectrum Disorders', Leid Award, KU Research Institute, JD Lewine, PI, 7/1/04-6/31/06, direct costs - $35,000.

'MEG and MRS in Mild Head Trauma', Clinical Pilot Grant, KU Research Institute, JD Lewine, PI, 7/1/04-6/31/06, direct costs - $25,000.

'Effects of Maternal Smoking of Fetal MCG and Fetal MEG', KBRIN Award, KUMC, K Gustafson PI, (JD Lewine co-investigator), 2/04-2/06, direct costs - $25,000.

'Effects of Fast ForWord on Language Processing', 5R21DC007214, National Institute of Deafness and Other Communication Disorders, M Fey and J Lewine, co-PI, 6/06-6/08, direct costs, $125,000/year.

'Neurobiology of Sensory Processing Disorder', Wallace Foundation, J Lewine and W Dunn, co-PIs, 4/05-4/06, direct costs - $35,000.

'Advanced Differential Diagnosis and Treatment of Veterans with Post-Traumatic Stress Disorder and Traumatic Brain Injury', Illinois Department of Veterans Affairs, J Lewine, PI, 10/08-10/10, direct costs: $97,500.

'Neurobiology of Language Dysfunction in Autism Spectrum Disorders', 7R01HD051747, NICHD, J Lewine, PI, 7/08-7/13, total direct costs $2,079,650

'Auditory Processing Training for Sound Sensitivities in Autism', 1 R41 DC013197, NICHD, J Lewine and N Bangera, co-PI, 9/12-9/13, total costs, $170,000

Vagal nerve stimulation for combat related tinnitus, W81XWH-12-0258, USAMRMC/Geneva Foundation, total costs: $324,500, J Lewine, PI

DALFAMEG, Acorda, $100,000, C Ford and J Lewine, co-PI Neurophysiology and VNS, ElectroCore, $56,000, J Lewine, PI

Secondary data analysis of trials using PR-6412562, Pfizer, J Lewine and V Calhoun, co-PIs, $96,000, 2016-2017.

Testing the neuroprotective efficacy of ketamine in rats surviving a sub- or near lethal dose of organophosphate nerve agent, BARDA task order RTOR-Chem-0002, J McDonald and J Lewine, co-PI, $1,620,000, 2015- 2017.

Cerebral perfusion changes after mild traumatic brain injury and treatment with hyperbaric oxygen, LBERI/USAMRMC: BIMA, W81XWH-15-D-0039-0003, sub-award PI, J Lewine., $350,000, 2016-2017.

Secondary data analysis of USAMRMC HBOT EEG and MRI data, sub-award PI, J Lewine, $50,000/year, 2017- 2019.

Beyond Barriers Therapeutics: Impact of intranasal NAC on brain glutathione as assessed by magnetic resonance spectroscopy. J Lewine, PI, $30,000, 2020-2021.

Cures Within Reach Repurposing Award: Reducing Oxidative Stress – A major contributor to traumatic brain injury, J Lewine, PI, $40,000, 2021-2023.

CLINICAL TRIAL EXPERIENCE

Topamax Treatment of Autism Spectrum Disorders, Johnson and Johnson/Robert Wood Johnson Foundation, JD Lewine and William W. Orrison, co-PIs, 7/99-7/00, direct costs - $150,000

Acute Effect of Three Neuroactive Drugs on Brain Activity Measured by MEG, EEG, and the Synchronous Neural Interaction Test, Orasi Medical Inc., C Forcetti and JD Lewine, Co-PIs, 9/09-12/09, direct costs - $190,000.

Improved Diagnosis of Alzheimer's Disease Using Magnetoencephalography (MEG) and the Synchronous Neural Interaction Test: A One-month Study, Orasi Medical Inc, C Forcetti and JD Lewine, Co-PIs, 9/09- 3/10 direct costs - $160,000.

Effects of Memantine on Social Skills in the Autism Spectrum Disorders, protocols mem-091, mem-067, mem-068, Forrest Research Institute, J Lewine, site PI

Abilify for treatment of tics in Tourette's Syndrome, Archer Protocol 293/294, Otsuka, J Lewine site PI Lurasidone for Irritability in Autism, D1050325, Sunovion, J Lewine, site PI.

CM-AT for Treatment of Autism, P103, CureMark, J Lewine, site PI

HONORS

Scientific, Research and Teaching Awards & Honors

Finalist: Otto P. Burgdorff Science Competition, 'Primitive notions of plane Euclidean geometry', New York Academy of Science, 1978.
Honors Group: 37th Science Talent Search for the Westinghouse Science Scholarships, 'Primitive notions of plane Euclidean geometry', 1978.
B.S. in Neuroscience with Distinction in Research, Cum Laude, 'Tachistoscopic investigations of reading strategies,' University of Rochester, 1982-88.
Edward Peck Curtis Award for Excellence in Teaching, University of Rochester, 1986.
Nominated for 1989 Donald Lindsley Prize in Behavioral Neuroscience, 'Two Brains, One Mind', Society for Neuroscience, 1989.
Young Investigator Award, McDonnell-Pew Program in Cognitive Neuroscience, 'Neural dynamics of event memory', 1993-1996.
Summa Cum Laude Award for poster presentation, 'Electromagnetic evaluation of motor function by MEG, EEG, FMRI and TMS', American Society of Neuroradiology, 1994.
Second Place Prize For Research Poster 'Neuromagnetic Correlates of Post-Concussive Syndromes', 14th Annual meeting of the Brain Injury Association, 1995.
Young Investigator Award, National Alliance for Research in Schizophrenia and Depression, 'Neuroimaging in schizophrenia', 1995.
Cum Laude Award for Poster Presentation: 'Presurgical Planning Via MSI', American Society for Neuroradiology, 1996.
Established Investigator Award, National Alliance for Research in Schizophrenia and Depression, 'Patterns of epileptiform activity in autism', 1998.
Finalist, DANA Foundation Clinical Hypothesis in Neuroscience Program, 'Presurgical mapping of brain function', 1995.
Finalist, DANA Foundation Clinical Hypothesis in Neuroscience Program, 'Brain imaging in head trauma', 1996.
Finalist, DANA Foundation Clinical Hypothesis in Neuroscience Program, 'Brain imaging in scotopic sensitivity syndrome and dyslexia, 1997.
Finalist, DANA Foundation Clinical Hypothesis in Neuroscience Program, 'Epileptiform activity in the autism spectrum disorders', 1998.
Scientific Advisory Board, National Institute for Play, 2004-
Irlen International Scientific Advisory Board, 2006-
Executive Committee Member, International Society for the Advancement of Clinical Magnetoencephalography, 2009-2013
Board of Directors, American Clinical MEG Society, 2010-2013
Board of Directors, Lovelace Biomedical and Environmental Research Institute, 2012-2014

Scholarships and Fellowships

New York State Regents Scholarships, 1978-82.
Rochester Prize Scholarship, University of Rochester, 1978-82.
Director's Fellowship, Los Alamos National Laboratory, 1988-90.

Editorial Board

Frontiers in Public Policy
Madridge Neuroscience Applied Science
CPQ Neurology and Psychology

Ad Hoc Reviewer for:

Journal of Cognitive Neuroscience, 1989-91
Cerebral Cortex, 1994-1996
Journal of Neuroscience, 1994-
Journal of Clinical Neurophysiology, 1996-
Electroencephalography and Clinical Neurophysiology, 1996-
Journal of the International Neuropsychological Society, 1998-
Biological Psychiatry, 1998-
NeuroImage, 1998-
Brain Topography, 1998-
Human Brain Mapping, 2000-
Frontiers in Neuroscience 2010-

Scientific Review Boards

IRD/LDRD Reviewer, Los Alamos National Laboratory, 1991.
NIH Diagnostic Radiology Study Section, temporary member, 1997-1998.
NIDA Special Study Section, Human Brain Map Project, 1999.
NINDS Small Business Electromagnetic Study Section, 2003, 2004
NIH BMIT Study Section, 2004, 2005
NIH LCOM Study Section, 2007, 2008, 2009, 2013
NIH ANIE Study Section, 2008-2018
NIH ZRG-1 Study Section, 2008-2017
NIH Autism ARA Study Section, 2009
NIH/CSR College of Scientific Reviewers, 2010-2012
NIH ZNS1 (BRAIN Initiative) Study Section, 2014, 2015
NIH ZRG1/PSE/HBCD Study Section, 2021
NIH AUD/IFCN Study Section, 2022

Organizer, Scientific Meetings

Member, Local Organizing Committee, 1996 International Biomagnetism Conference, Santa Fe, New Mexico.
Member, Scientific Organizing Committee, 1998 International Biomagnetism Conference, Sendai, Japan.
Member, Scientific Organizing Committee, 1999 Hans Berger International Workshop, Jena, FDRG.
Member, Scientific Organizing Committee, 2007, 6th International Meeting on Noninvasive Functional Source Imaging of the Human Brain and Heart and the International Conference on Functional Biomedical Imaging, Hangzhou, China.
Chair, Organizing Committee, ACMEGS 2010, New Orleans
Member of Scientific Organizing Committee, ISACM 2011, Las Vegas
Member of Organizing Committee, 5th International Conference on Brain Disorders and Therapeutics, 2017, Madrid
Member of Scientific Organizing Committee for Biomag 2018, Philadelphia.

Invited Participant, Special Scientific Workshops

Selected Participant, 1989 James S. McDonnell Summer Institute in Cognitive Neuroscience, Dartmouth.
Selected Participant 1990 Workshop on the Neurobiology of Disease - Neurosciences Institute, Rockefeller University.
Invited participant, 1992 Carmel Workshops in Cognitive Psychophysiology.
Invited participant, BrainMap '93 University of Texas Health Science Center, 1993.
Invited participant, 1994 Carmel Workshops in Cognitive Psychophysiology.
Special Presentation to the Scientific Advisory Board of the National Alliance for Autism Research, 1997.
Invited Participant, Cure Autism Now, Think Tank Meeting, 1997.
Invited Participant, NIH Conference on State-of-the-Science in Autism, Diagnosis and Screening, 1998.
Autism One, Seizure Think-Tank, 2009, 2010, 2011

PUBLICATIONS

Books

1. Orrison WW., Jr., **Lewine JD**, Sanders JA, Hartshorne MF, (1995), Functional Brain Imaging, Mosby Yearbook, Inc., St. Louis, 1995.

Peer-Reviewed

1. Ringo JL, **Lewine JD**, Doty RW, (1986), Comparable performance by man and macaque on memory for pictures. Neuropsychologia, 24(5): 711-717.

2. Brumaghim JT, Klorman R, Strauss J, **Lewine JD**, Goldstein MG, (1987), Does methylphenidate affect information processing? Findings from two studies on performance and P3b latency. Psychophysiology, 24(3); 361-373.

3. Doty RW, Ringo JL, **Lewine JD**, (1988), Forebrain commissures and visual memory: A new approach. Behavioral Brain Research, 29: 267-280.

4. Bub D, **Lewine JD**, (1988), Different modes of word recognition in left and right visual fields. Brain and Language, 33(1): 161-188.

5. **Lewine JD**, (1989), The temporal dynamics of event memory: A stage analysis of mnemonic processing by man and macaque. Journal of Cognitive Neuroscience, 4: 356-371.

6. **Lewine JD**, (1990), Evaluation of single- and multi-source models for neuromagnetic data: Empirical and simulation studies. Brain Topography, 3(1): 298-299.

7. Orrison WW, **Lewine JD**, (1993) Magnetic source imaging in neurosurgical practice. Perspectives in Neurological Surgery, 4(2): 141-147.

8. Gallen CC, Sobel DF, **Lewine JD**, Sanders JA, Hart BL, Davis LE, Orrison WW, (1993), Neuromagnetic mapping of brain function, Radiology, 187:863-867.

9. Benzel EC, **Lewine JD**, Bucholz R, Orrison WW, (1993), Magnetic Source Imaging: A review of the Magnes system by Biomagnetic Technologies Incorporated. Neurosurgery, 33:252-259.

10. Spar JA, **Lewine JD**, Orrison WW, (1994), Neonatal hypoglycemia: CT and MR findings, AJNR, 15:1477-1478.

11. Doty RW, Ringo JL, **Lewine JD**, (1994), Interhemispheric sharing of visual memory in macaques, Behavioural Brain Research, 64: 79-84

12. **Lewine JD**, Doty RW, Astur RS, Provencal SL, (1994) Role of the forebrain commissures in bihemispheric mnemonic integration in macaques. J. Neuroscience, 14:2515-2530.

13. **Lewine JD**, Astur RS, Davis LE, Knight JE, Maclin EL, Orrison WW, (1994), Cortical organization in adulthood is modified by neonatal infarct: A case study. Radiology, 190: 93-96.

14. Smith JR, Gallen C, Orrison W, **Lewine JD**, Murro AM, King DW, Gallagher BB, Role of multichannel magnetoencephalography in the evaluation of ablative seizure surgery candidates, Sterotactic Functional Neurosurgery, 62: 238-244.

15. Smith JR, Schwartz BJ, Gallen CC, Orrison WW, **Lewine JD**, Murro AM, King DW, Park YD (1995), Utilization of multichannel magnetoencephalography in the guidance of ablative seizure surgery, J Epilepsy, 8(2): 119-130.

16. Smith JR, Schwartz BJ, Gallen CC, Orrison WW, **Lewine JD**, Murro AM, King DW, Park YD (1995), Multichannel magnetoencephalography in ablative seizure surgery outside the anteromesial temporal lobe, Stereotactic Functional Neurosurgery, 65: 81-85.

17. **Lewine JD**, Morrell F, Orrison WW, (1995), Neuromagnetic evaluation of normal and abnormal brain function in epilepsy, International Journal of Neuroradiology, 1(2): 182-198.

18. George JS, Aine CJ, Mosher JC, Schmidt DM, Ranken DM, Schlitt HA, Wood CC, **Lewine JD**, Sanders JA, Belliveau JW, (1995), Mapping function in the human brain with magnetoencephalography, anatomical magnetic resonance imaging, and functional magnetic resonance imaging, J. Clin. Neurophysiol, 12(5): 406-431.

19. Baumann SB, Noll DC, Kondziolka DS, Schneider W, Nichols TE, Mintun MA, **Lewine JD**, Yonas H, Orrison WW, and Sclabassi RJ, (1995), Comparison of functional magnetic resonance imaging with positron emission tomography and magnetoencephalography to identify motor cortex in a patient with an arteriovenous malformation, J. Image Guided Surgery, 1:191-197

20. Sanders JA, **Lewine JD**, Orrison WW, (1996), Comparison of primary motor cortex localization using functional magnetic resonance imaging and magnetoencephalography. Human Brain Mapping, 4: 47-57.

21. Canive J, **Lewine JD**, Edgar JC, Davis JT, Torres F, Roberts B, Graeber D, Orrison WW, Tuason VT, (1996), Magnetoencephalographic assessment of spontaneous brain activity in schizophrenia. Psychopharmacology Bulletin, 32(4):104-110.

22. Aine CJ, Supek S, George JS, Ranken D, **Lewine JD**, Sanders J, Best E, Tiee W, Flynn ER, Wood CC, (1996), Retinotopic organization of human visual cortex: Departures from the classical model, Cerebral Cortex, 6(3): 354-361.

23. **Lewine JD**, Canive JM, Orrison WW Jr, Edgar JC, Provencal SL, Davis JT, Paulson K, Graeber D, Roberts B, Escalona PR, Gledhill K, Calais L, (1997), Electrophysiological abnormalities in PTSD, Annals, New York Acad Sci, 821: 508-511.

24. Canive JM, **Lewine JD**, Orrison WW Jr, Edgar JC, Provencal SL, Davis JT, Paulson K, Graeber D, Roberts B, Escalona PR, Gledhill K, Calais L, (1997), MRI abnormalities in PTSD, Annals, New York Acad Sci, 821: 512-515.

25. Canive JM, **Lewine JD**, Edgar JC Davis JT, Miller GA, Torres F, Tuason VB, (1998), Spontaneous brain magnetic activity in schizophrenia patients treated with Aripiprazole, Psychopharmacology, 34(1): 101-105.

26. Leahy RM, Mosher JC, Spencer ME, Huang MX, **Lewine JD**, (1998), A study of dipole localization accuracy for MEG and EEG using a human skull phantom, Electroenceph. Clin. Neurophysiol., 107: 159-173.

27. McDonald JD, Chong BW, **Lewine JD**, Jones G, Burr RB, McDonald PR, Koehler SB, Tsuruda J, Orrison WW, Heilbrun MP, (1999), Integration of preoperative and intraoperative functional brain mapping in a frameless stereotactic environment for lesions near eloquent cortex. Technical Note, J Neurosurgery, 90:591-598.

28. **Lewine JD**, Orrison WW, Sloan JH, Kodituwakku PW, Davis JT (1999), Neuromagnetic Assessment of pathophysiological brain activity induced by minor head trauma, AJNR, 20: 857-866.

29. **Lewine JD**, Andrews R, Chez M, Devinski O, Morrell F, Smith M, Patil A, Davis J, Provencal S, Weisend M, Kanner A, Lee R, Orrison WW, (1999), Magnetoencephalographic patterns of epileptiform activity in children with regressive autism spectrum disorders, Pediatrics, 104 (3): 405-418.

30. Hurley RA, **Lewine JD**, Jones GM, Orrison WW, Taber KH, (2000,) Application of magneto- encephalography to the study of autism, J Neuropsychiatry Clin Neurosci., 12:1-3.

31. Dale AM, Liu AK, Fischl BR, Buckner RL, Belliveau JW, **Lewine JD**, Halgren E, (2000), Dynamic statistical parametric mapping combining fMRI and MEG for high-resolution imaging of cortical activity, Neuron, 26:55-67.

32. Gross RE, Dean A, **Lewine JD**, Chong B, Funke M, MacDonald P, (2000), The relationship of magnetic source imaging to ictal electroencephalography in a neuronavigational workspace, Sterotact Funct Neurosurg, 73:109-114.

33. Thoma R, Yeo RA, Gangestad SW, Davis JT, **Lewine JD**, (2002), Fluctuating asymmetry and the human brain, Laterality, 7:45-58.

34. Hughes SK, Nilsson DE, Boyer RS, Bolte RG, Hoffman RO, **Lewine JD**, Bigler ED. (2002) Neurodevelopmental outcome for extended cold water drowning: a longitudinal case study. J Int Neuropsych Soc. 8:588-595.

35. **Lewine JD**, Thoma RJ, Provencal SL, Edgar CJ, Miller GA, Canive JM. (2002) Abnormal stimulus- response intensity function in post-traumatic stress disorder, Am J Psychiatry, 159:1689-1695.

36. Halgren E, Dhond RP, Christensen N, Van Petten C, Marinkovic K, **Lewine JD**, Dale AM. (2002) N400- like magnetoencephalography responses modulated by semantic context, word frequency, and lexical class in sentences, Neuroimage, 17:1101-1116.

37. Moore KR, Funke ME, Constantino T, Katzman GL, **Lewine JD**. (2002) Magnetoencephalographically directed review of high-spatial-resolution surface-coil images improves lesion detection in patients with epilepsy, Radiology, 225:880-887.

38. Shih J, Weisend MP, **Lewine JD**, Sanders JA, Dermon J, Lee R, (2004) Areas of interictal spiking are associated with metabolic dysfunction in MRI-negative temporal lobe epilepsy, Epilepsia, 45: 223-229.

39. Yetik S, Nehorai A, **Lewine JD**, Muravchick CH: (2005) Distinguishing between moving and stationary sources using EEG/MEG with an application to epilepsy, IEEE Transactions in Biomedical Engineering, 52: 471-479, 2005.

40. Edgar JC, Yeo RA, Gangestad SW, Blake MB, Davis JT, **Lewine JD**, Canive JM: Reduced auditory M100 asymmetry in schizophrenia and dyslexia: Applying a developmental instability approach to assess atypical brain asymmetry, Neuropsychologia., 44: 289-2999, 2006.

41 Bartlett JR, DeYoe EA, Doty RW, Lee BB, **Lewine JD**, Negrao N, Overman WH: Psychophysics of electrical stimulation of striate cortex in macaques. J Neurophysiology, 94: 3430-3442, 2005

42. DeYoe EA, **Lewine JD**, Doty RW: Laminar variations in threshold for detection of electrical excitation of striate cortex in macaques, J Neurophysiology, 94: 3443-3450, 2005

43. Thoma RJ, Yeo RA, Gangestad SW, Halgren E, Sanchez NM, **Lewine JD:** Cortical volume and developmental instability are independent predictors of general intellectual ability, Intelligence, 2005.

44. Thoma R, Yeo R, Gangestad S, Davis J, Paulson K, Halgren E, **Lewine JD**: Neural dynamics of the speed-intelligence relationship and the effect of developmental instability, Neuroimage, 33: 1456-1464, 2006.

45. Popescu M, Popescu EA, Gustafson K, Drake W, **Lewine JD**: Reconstruction of fetal cardiac vectors from multichannel fMCG data using recursively applied and projected multiple signal classification, IEEE- TBME, 53: 2564-2576, 2006.

46. **Lewine JD**, Davis JT, Bigler E, Hartshorne M, Thoma R, Hill D, Funke M, Sloan JH, Orrison WW Jr., Multimodal brain imaging in mild head trauma: integration of MEG, SPECT, and MRI. J Head Trauma Rehab, 23:141-155, 2007.

47. Popescu EA, Popescu M, Bennett TL, **Lewine JD**, Drake WB, Gustafson KM: Magnetographic assessment of fetal hiccups and their effect on fetal heart rhythm, Physiol Meas, 28: 665-676, 2007.

48. Popescu M, Popescu EA, Cahn T, Blunt SD, **Lewine JD**, Spatio-temporal reconstruction of bilateral auditory steady-state responses using MEG beamformers, IEEE Trans Biomed Eng, 1092-1102, 2008.

49. **Lewine JD**: Commentary of Lau et al., Systematic Review of MEG is Presurgical Planning for Epilepsy, Epilepsy Research 82(2-3): 235-6, 2008.

50. Parks LK, Hill DE, Thoma RJ, Euler MJ, **Lewine JD**, Yeo RA. Neural correlates of communication skill and symptom severity in autism: a voxel-based morphometry study, Research in Autism Spectrum Disorders, 3(2): 444-454, 2009.

51. Popescu M, Fey ME, Finestack L, Popescu EA, **Lewine JD**. N400 responses in children with primary language disorder: intervention effects. NeuroReport, 20(12): 1104-1108, 2009.

52. Fey ME, Finestack LH, Gajewski BJ, Popescu M, **Lewine JD**. Does Fast-ForWord Language enhance children's response to language intervention? Journal of Speech, Language, and Hearing, 53(2): 430-439, 2010.

53. Thoma RJ, Hill DE, Tonigan S, Kuny AV, Vermont LN, **Lewine JD**. Adolescent self-reported alcohol/other Drug use consequences: moderators of self- and parent agreement, Alcohol Treatment Quarterly, 28(2): 101-110, 2010.

56. Funke ME, **Lewine JD**, Moore K, Tsuruda J, Matsuo F, Constantino T, Orrison WW., MEG-guided identification of structural brain lesions in patients with neocortical epilepsy. Epilepsia, 52s4: 10-14, 2011.

57. Burgess RC, Funke ME, Bowyer SM, **Lewine JD**, Kirsch HE, Bagic AI, ACMEGS Clinical Practice Guideline 2: Presurgical Functional Mapping Using Evoked Fields, J Clin Neurophysiol, 28(4): 355-361, 2011.

58. Frye RE, Rossignol D, Cassanova MF, Martin V, Brown G, Edelson S, Coben R, **Lewine JD**, Slattery JC, Lau C, Hardy P, Fatemi H, Folsom T, MacFabe D, Adams J, A review of traditional and novel treatments for seizures in autism spectrum disorders: Findings from a systematic review and expert panel, Frontiers in Public Health, 1: 31, 2013

59. Thoma RJ, Cook JA, McGrew C, King JH, Mauer AR, **Lewine JD**, Yeo RA, Campbell R, The effect of days since last concussion and number of concussions on cognitive functioning in Division I athletes, Brain Inj, 29: 633-8, 2015.

60. Demopoulos C, Hopkins H, Kopald B, Paulson K, Doyle L, Andrews W, **Lewine JD**, Deficits in auditory processing contribute to impairments in vocal affect recognition in autism: A MEG study, Neuropsychology, 29: 895-908, 2015.

61: Demopoulos C, **Lewine JD**, Audiometric profiles in the autism spectrum disorders: does subclinical hearing loss impact communication? Autism Research, 9:107-120, 2016.

62. Demopoulos C, Hopkins J, **Lewine JD**., Relationships between nonverbal and verbal social cognitive skills and complex social behavior in children and adolescents with autism, J Abnormal Child Psychol, 44: 913- 21, 2016.

63. Thoma RJ, Chaze C, **Lewine JD**, Calhoun VD, Clark VP, Bustillo J, Houck J, Ford J, Bigelow R, Wihelmi C, Stephen JM, Turner JA. Functional MRI evaluation of multiple neuronal networks underlying auditory verbal hallucinations in schizophrenia spectrum disorders, Front Psychiatry, 7: 39, 2016.

64. Thoma RJ, Meier A, Houck J, Clark VP, **Lewine JD**, Turner J, Stephen J. Diminished auditory sensory gating during active auditory verbal hallucinations. Schizophrenia Research, 2017, epub.

65. **Lewine JD**, Weber W, Doyle-Eisle M, McDonald JD, Garcia E, Raulli R, Laney J. Addition of ketamine to the current standard-of-care for treatment of sarin exposure improves neurobiological and behavioral outcomes in a rodent model. Neurotoxicology, 69:37-46, 2018.

66. **Lewine JD**, Paulson K, Bangera N, Gill D, Simon BJ. Exploration of the impact of brief non-invasive vagal nerve stimulation on electrophysiological biomarkers of brain neurochemistry, Neuromodulation, 22(5): 564-572. 2019.

67. **Lewine JD**, Plis S, Ulloa A, Williams C, Spitz M, Foley J, Paulson K, Davis JT, Bangera N, Weaver L. Quantitative EEG biomarkers for mild traumatic brain injury. J Clin Neurophysiol., 36(4): 298-305, 2019.

68. Huang MX, **Lewine JD**, Lee RR. Magnetoencephalography for mild traumatic brain injury and post- traumatic stress disorder. Neuroimage Clin N Amer, 30(2): 175-192, 2020.

69. Demopoulos C, Kopald BE, Bangera N, Paulson K, **Lewine JD**, Rapid auditory processing of pure tones is associated with basic components of language in individuals with autism spectrum disorders, Brain and Language, 238, 2023.

70. Frye RE, Nanda H, Pleasure SJ, Casanova MF, Boles RG, **Lewine JD**, Gaitanis J, Adams JB. Synchrony 2022: Epilepsy and Seizures in Autism Spectrum Disorder Roundtable. J Pers Med. 2023 Mar 20;13(3):557, 2023.

71. Tosta S, Ferreira M, **Lewine JD**, Anderson A, Individualized spectral filters alleviate persistent photophobia, headaches, and migraines in active duty military and veterans following brain trauma. Brain Inj, 28(3): 177-185.

72. Faerman A, Sakallah A, Skiba S, Kansara S, Kopald BE, **Lewine JD**, Demopoulos C. Language Abilities are Associated with Both Verbal and Nonverbal Intelligence in Children on the Autism Spectrum. Dev Neuropsychol. 2023.

73. Dib M, **Lewine JD**, Abbott CC, and Deng ZD. Electroconvulsive Therapy Modulates Loudness Dependence of Auditory Evoked Potentials: A Pilot MEG Study. medRxiv, 2024.

74. **Lewine JD**, Gray R, Paulson K, Budden-Potts D, Murray W, Goodreau N, Davis JT, Bangera N, Bourke F: Quantitative EEG markers of post-traumatic stress disorder: baseline observations and impact of the reconsolidation of traumatic memories (RTM) treatment protocol. Frontiers in Psychiatry, submitted.

75. **Lewine JD**, Provencal S, Hill D, Davis J, Funke M, Thoma R, Orrison WW, Johnson M, Paulson K, Kopald B, Bangera N, Demopoulos C: Magnetic source imaging of epileptiform activity in autism: developmental delay versus regressive profiles, Autism Research, in preparation.

76. Kim Y, Diggins MC, Davis JT, Paulson K, Demopoulos C, Kopald B, DePlonty K, **Lewine, JD**. Amygdala volume and social impairment in youth with autism spectrum disorders. In preparation.

77. **Lewine JD**, Bangera N, Paulson K. Auditory Processing Training (APT) for alleviating sound sensitivity in autism spectrum disorders. In preparation.

78. **Lewine JD**, Chez M, Andrews R, Mott S, Riviello J, Funke M, Davis JT, Provencal S, Hill D, Paulson K.

Patterns of epileptiform activity and the quality of response to high-dose steroid therapy in the treatment of regressive autism spectrum disorders: A magnetoencephalography investigation. In preparation.

Book Chapters

1. Doty RW, **Lewine JD**, Ringo JL, (1985), Mnemonic interactions between and within cerebral hemispheres in macaques. In: Neural Mechanisms of Conditioning (DL Alkon and CD Woody, eds.) Plenum Publishing Co., New York.

2. Doty RW, Ringo JL, **Lewine JD**, (1986), Interhemispheric mnemonic transfer in macaques. In: Two Hemispheres, One Brain (F Lepore, M Ptito, and HH Jasper, eds.) Alan R. Liss, Inc., New York.

3. Klorman R, Brumaghim JT, Coons HW, Peloquin LJ, Strauss J, **Lewine JD**, Borgstedt A, Goldstein MG, (1988), The contribution of event related potentials to understanding effects of stimulants on information processing in Attention Deficit Disorder. In: Attention Deficit Disorder V, Pergamon Press, 200-218.

4. Doty RW, Ringo JL, **Lewine JD**, (1988), Human-like characteristics of visual mnemonic system in macaques. In: Cellular Mechanisms of Conditioning and Behavioral Plasticity (CD Woody, DL Alkon, and JL McGaugh, eds.) Plenum Publishing Co., New York.

5. **Lewine JD**, (1990), Neuromagnetic techniques for the noninvasive analysis of brain function. In: Noninvasive Techniques In Biology and Medicine (SE Freeman, E Fukishima, and ER Greene, eds.) San Francisco Press, 33-79.

6. George JS, **Lewine JD**, Flynn ER, Goggin A, Ranken D, Nix D, Dyer RB, (1993), IR thermal imaging of a monkey's head: Local temperature changes in response to somatosensory stimulation. In: Optical Imaging of Brain Function and Metabolism, Advances in Experimental Biology and Medicine, volume 333, (U Dirnagl, A Villringer and KM Einhaupl, eds), Plenum Press, New York, 125-136.

7. Orrison WW, **Lewine JD**, (1995), Neuroimaging in closed head injury, In: Head Injury And Post- concussive Syndrome, (Rizzo M, and Tranel D, eds), Churchill Livingsone, Inc., New York, 71-88.

8. **Lewine JD,** Orrison WW (1995), Magnetoencephalography and Magnetic Source Imaging. In: Functional Brain Imaging (WW Orrison, JD Lewine, JA Sanders, MF Hartshorne), Mosby Yearbook, Inc., St. Louis, 369-418.

9. **Lewine JD**, Orrison WW, (1995), Clinical Electroencephalography and Evoked Responses. In: Functional Brain Imaging (WW Orrison, JD Lewine, JA Sanders, MF Hartshorne), Mosby Yearbook, Inc., St. Louis, 327-368.

10. **Lewine JD**, (1995), Introduction to functional neuroimaging: Functional neuroanatomy. In: Functional Brain Imaging (WW Orrison, JD Lewine, JA Sanders, MF Hartshorne), Mosby Yearbook, Inc., St. Louis, 13-96.

11. **Lewine JD**, Sloan JH, Orrison WW, Kodituwakku PW, Davis JT, Hart BL, Spar JA, Hill D, Thoma R, Chang S, Waldorf VA, Shaw P, Edgar JC, (1996), Neuromagnetic evaluation of brain dysfunction in post-concussive syndromes associated with mild head trauma, In: Recovery After Traumatic Brain Injury, (B Uzzell,H Stonnington, J Doronzo, eds.), Lawrence Erlbaum Associates, Inc., Publishers.

12. **Lewine JD**, Orrison WW, Halliday A, Morrel F, Chang S, Hwang P, Sanders JA, (1996), MEG functional mapping in epilepsy surgery. In: Neuroimaging in Epilepsy: Principles and Practice , (GD Cascino and CR Jack, eds.), Butterworh and Heinemann, Elsevier, 193-208.

13. **Lewine JD**, Benzel EC, Orrison WW, Jr., (1996), Magnetoencephalography. In: Neurosurgery, 2nd Edition, (R. Wilkins and S. Rengachary, eds.), McGraw-Hill, New York, 253-258.

14. **Lewine JD**, Orrison WW, (1997), Magnetoencephalography, In: Advanced Imaging Techniques In MR, (W Bradley and G Bydder, eds), Martin Dunitz Publishers, London, 333-354.

15. **Lewine JD**, Benzel EC, Baldwin NG, Orrison WW, Jr., (1998), Magnetoencephalography. In: Advanced Neurosurgical Navigation, E Alexander and RJ Maciunas, eds.), Thieme Medical Publishers, 1998.

16. **Lewine JD**, Orrison WW, (1998) Functional Brain Imaging. In: Clinical MR Spectroscopy, (R Mukherji, ed.), Wiley Press, New York, 1998.

17. **Lewine JD**, Orrison WW, Jr. (1999) Magnetic Source Imaging: Integration of magnetoencephalography and magnetic resonance imaging, In: Magnetic Resonance Imaging, 3rd Edition, (DD Stark and WG Bradley, Jr., eds.), Mosby, St Louis, 1999, 1575-1593.

18. Chong BW, **Lewine JD**. (2000) The normal brain, In: Neuroimaging, (WW Orrison Jr., ed), WB Saunders, New York, 2000.

19. Orrison WW Jr., **Lewine JD**. (2000) Magnetic source imaging, In: Neuroimaging, (WW Orrison Jr., ed), WB Saunders, New York, 2000.

20. **Lewine JD**. (2011) Brain imaging of injury caused by mild head trauma, in Management of Traumatic Brain Injury, F Zollman, ed.

21 **Lewine JD**, Fisch BJ, Bangera N. Magnetoencephalography, to appear in Neuroimaging of Sleep and Sleep Disorders, E Nofzinger, P Maquet and M Thorpy, eds., Cambridge University Press, 2013.

22. **Lewine JD**., Brain imaging in mild traumatic brain injury, In: Manual of Traumatic Brain Injury Management, 2nd edition, FS Zollman ed. Demos Medical, 2016.

22. **Lewine JD**., Structural and Functional Brain Imaging in Mild Traumatic Brain Injury, In: Manual of Traumatic Brain Injury Assessment and Management, 3rd edition, FS Zollman ed. Demos Medical, 2021, 97-107.

Conference Proceedings and Other Publications

1. DeYoe EA, **Lewine JD**, Doty RW, (1989), Optimal stimuli for detection of intracortical currents applied to striate cortex of awake macaque monkeys. Proceedings of the IEEE Engineering in Medicine & Biology Society 11th Annual International Conference, 934-936.

2. **Lewine JD**, Roeder S, Oakley M, Arthur D, Aine C, George JS, Flynn E, (1990), A modality- specific neuromagnetic P3. In: Advances in Biomagnetism, proceedings of the 7th International Conference on Biomagnetism, Plenum Press, 229-232.

3. Mosher J, Lewis P, **Lewine JD**, George JS, Leahy R, Singh M, (1991), Electromagnetic imaging of dynamic brain activity. Proceedings, IEEE 1991 Medical Imaging Conference.

4. Orrison WW, **Lewine JD**, Sanders JA, (1993), Technological advances breathe new life into clinical magnetoencephalography. MR, March/April 1993, 41-44.

5. Orrison WW, **Lewine JD**, Espinosa MC, (1993), Magnetic Source Imaging: A new method of brain analysis. Administrative Radiology, March 1993, 44-47.

6. **Lewine JD**, Orrison WW (1995), Magnetic Source Imaging: Basic principles and applications in neuroradiology, Academic Radiology, 2:436-440.

7. **Lewine JD**, Orrison WW, Astur RS, Davis LE, Knight JD, Maclin EL, Reeve A, (1995), Explorations of pathophysiological spontaneous activity by magnetic source imaging, in: Biomagnetism: Fundamental Research and Clinical Applications (C Baumgartner, L Deecke, G Stroink, J Williamson, eds.), IOS Press, Netherlands, 55-59.

8. **Lewine JD**, George JS, Flynn ER, Sanders JA, Astur RS, Wood CC, (1995), Comparison of MEG, EEG and TEG responses to somatosensory stimulation in the monkey, in: Biomagnetism: Fundamental Research and Clinical Applications (C Baumgartner, L Deecke, G Stroink, SJ Williamson, eds.), IOS Press, Netherlands, 103-106.

9. Chuang SH, Otsubo H, Hwang P, Orrison WW, **Lewine JD**, (1995), Pediatric magnetic source imaging, Neuroimaging Clinics of North America, Functional Neuroimaging, 5:2, 289-304.

10. **Lewine JD**, Orrison WW, (1995), Spike and slow wave localization by magnetoencephalography. Neuroimaging Clinics of North America, Epilepsy, 5:4, 575-596.

11. **Lewine JD**, Edgar JC, Repa K, Paulson K, Astur RS, Orrison WW, (1995), A physical phantom for simulating the impact of pathology on magnetic source imaging, in: Biomagnetism: Fundamental Research and Clinical

Applications (C Baumgartner, L Deecke, G Stroink, SJ Williamson, eds.), IOS Press, Netherlands, 368-372.

12. **Lewine JD**, Bucholz RD, Baldwin NG, Orrison WW, Maclin EL, Sander JA, Astur RS, (1995) Event-related magnetic fields and neurosurgical practice, in: Biomagnetism: Fundamental Research and Clinical Applications (C Baumgartner, L Deecke, G Stroink, SJ Williamson, eds.), IOS Press, Netherlands, 120-124.

13. George JS, Sanders JA, **Lewine JD**, Caprihan A, Aine CJ, (1995) Comparative studies of brain activation with MEG and functional MRI, in: Biomagnetism: Fundamental Research and Clinical Applications (C Baumgartner, L Deecke, G Stroink, SJ Williamson, eds.), IOS Press, Netherlands, 60-65.

14. Ebersole J, Squires K, Gamelin J, **Lewine JD**, Scherg M, (1995), Dipole models of temporal lobe spikes from simultaneous MEG and EEG, in Biomagnetism: Fundamental Research and Clinical Applications (C Baumgartner, L Deecke, G Stroink, SJ Williamson, eds.), IOS Press, Netherlands, 20-22.

15. **Lewine JD**, Davis JT, Orrison WW Jr., (1998) Clinical Magnetic Source Imaging: Integration of MEG, EEG and MRI in a hospital setting, in: Quantitative and Topological EEG and MEG Analysis, 3rd International Hans Berger Congress (H Witte and U Zweiner, eds.), Springer.

16. Davis JT, Jones GM, Thoma RJ, Parker NL, **Lewine JD**, (1999), MEG assessment of auditory working memory, in: Recent Advances in Biomagnetism, (T Yoshimoto, M Kotani, S Kuriki, H Karibe, and N Nakasato, eds.), Tohuku University Press, Sendai, 1999, 640-643.

17. Chong BW, MacDonald JD, **Lewine JD**, Davis JT, Jones GM, Funke M, Burr R, McDonld P, Tsuruda J, Heilbrun MP, Orrison WW, Jr., (1999), in: Recent Advances in Biomagnetism, (T Yoshimoto, M Kotani, S Kuriki, H Karibe, and N Nakasato, eds.), Tohuku University Press, Sendai, 1999, 837-840.

18. Jones GM, Tsuruda JS, Alexander AL, Chong BW, Burr RB, MacDonald JD, Davis JT, Paulson KM, Jones JE, Andelin CO, Buswell HR, Funke ME, **Lewine JD**, (1999), Multimodal localization of sensorimotor cortex, in Recent Advances in Biomagnetism, (T Yoshimoto, M Kotani, S Kuriki, H Karibe, and N Nakasato, eds.), Tohuku University Press, Sendai, 1999, 857-860.

19. Thoma RJ, **Lewine JD**, Davis JT, Orrison WW Jr., (2000), A cortical substrate for hand skill: An MEG evaluation, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

20. Sannita WG, **Lewine JD**, Maclin EL, Orrison WW Jr, Robinson S, (2000) Effects of acute, oral administration of phenobarbital (1.6 mg/kg) to healthy subjects, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

21. **Lewine JD**, Davis JT, Orrison WW Jr., (2000) Evaluation of abnormal low frequency magnetic activity in epilepsy, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

22. **Lewine JD**, Davis JT, Davis LE, Canive J, Roberts B, Graeber D, Edgar JC, Provencal SL, Paulson K, Meyers J, Christner R, Silveri J, Rawcliffe N, Espinosa M, Depper M, Sanders JA, Orrison WW Jr., (2000), Clinical MEG I: Towards a standardized examination, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

23. **Lewine JD**, Baldwin NG, Bucholz RD, Sanders JA, Halliday AL, Anson JA, Shih J, Stearley J, Davis JT, Astur RS, Paulson K, Orrison WW Jr., (2000), Preoperative localization of sensorimotor cortex: MRI versus MEG, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

24. Hill D, Waldorf VA, **Lewine JD**, Provencal SL, Moyers T, Yeo R, (2000) Magnetic source imaging in the evaluation of chronic alcohol abuse, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

25. Davis JT, **Lewine JD**, Orrison WW Jr., (2000), Clinical MEG II: Development of a Normative Database, in: Biomag96: Advances in Biomagnetism Research, (CJ Aine, ER Flynn, Y Okada, G Stroink, SJ Swithenby and CC Wood, eds.), Springer-Verlag, New York, 2000.

INVITED SCIENTIFIC PRESENTATIONS:

Scientific papers presented at national and international meetings:

National Meetings

1. Lovelace Medical Foundation Conference on Imaging, September 1989, Neuromagnetic techniques for the noninvasive analysis of brain function.
2 Optical Society of America, January 1990, Non-invasive assessment of the visual system by magnetic stimulation. Invited discussant, Noninvasive assessment of the visual system - Transcranial Magnetic Stimulation.
3. Society of Nuclear Medicine, Southwest Chapter, April 1994, Fundamentals of Magnetoencephalography and Magnetic Source Imaging.
4. Cleveland Clinic Symposium on Surgical Approaches to Epilepsy, May 1994, Magnetic Source Imaging of Brain Function in Epilepsy.
5. American Electroencephalographic Society, September 1994: MEG Mapping of Brain Function.
6. American Epilepsy Society, MEG Workshop, December 1994: MSI in Epilepsy.
7. VA Workshop in Radiological Imaging, June 1995: MSI.
8. American Electroencephalographic Society, September 1995: Multimodal Imaging.
9. Food and Drug Administration, November 1995: Functional Brain Imaging.
10. Functional Imaging Workshop, University of Pennsylvania, December 1995: Biomagnetic Imaging.
11. Picker MR Workshop, Williamsburg, VA, June 1996, Magnetic Source Imaging
12. American Association of Physicists in Medicine, July 1996: Introduction to clinical magnetic source imaging.
13. Cure Autism Now, Think Tank Meeting, March 1997, California, MEG evaluation of epileptic activity in LKS, PDD and autism.
14. American College of Forensic Psychiatry, 1997 Annual Meeting, April 1997, Applications of Brain Imaging in Forensic Psychiatry.
15. American Society of Neuroradiology, May 1997, Workshop on Image Fusion, Advances in Clinical MSI.
16. Autism Society of America, National Meeting, July 1997, Epileptiform Activity in Pervasive Developmental Disorders.
17. Society for Cardiovascular and Interventional Radiology, Symposium on Brain Imaging, September 1997, Functional Brain Mapping by MEG.
18. National Alliance for Autism Research, Sept 1997, Epileptiform Activity in PDD and Autism.
19. John French Alzheimer's Association and Cure Autism Now joint meeting on the Social Brain, Oct 1997, Epileptiform Activity in LKS, PDD-NOS, and Autism.
20. American Epilepsy Society, December 1997, Clinical MEG.
21. American Clinical Neurophysiology Society, October 1998: Source Modeling in a Clinical Setting.
22. American Neuropsychological Association, October 1998: Epileptiform Activity in Autism Spectrum Disorder.
23. American Epilepsy Society, December 1998: MEG evaluation of LKS.
24. Autism Society of America, National Meeting, July 1999, Epileptiform activity in the autism spectrum disorders.
25. National Foundation for Functional Brain Imaging, Dec 1999, Clinical MEG, Where's the beef.
26. IEEE SAM Workshop: August 2002, Magnetoencephalography
27. ACMEGS Workshop, Oct 2007 -- Insurance Issues for MEG
28. ACMEGS Workshop, Nov 2008 -- Clinical MEG
29. ACMEGS Workshop, May 2009 -- Future Applications of MEG
30. Autism One, May 2009 -- Epileptiform Activity in the Autistic Brain: Cause, Effect, or Co-Morbidity
31. Autism One, May 2010 – Epileptic activity, seizures, and autism.
32. ACMEGS 2011, Feb 2011, New Orleans, Slow waves in TBI
33. Autism One Conference, May 2011, Chicago, Auditory Processing in Autism, Autism and Epilepsy
34. Autism One Conference, May 2011, Chicago, Auditory Integration Training, the MRN Project
35. IDGA Military Health Care Symposium, San Diego, Visualizing the invisible wounds of war, 11/2012
36. Audiology Research Organization Symposium 2013, Animal models of hearing loss
37. CNS Translational Summit, Boston, On the hunt for biomarkers: Imaging and electrophysiological approaches, 5/2013
38. MHSRS/AAATAC, Florida, Neurophysiology for differential diagnosis of mTBI and PTSD, 8/2013
39. MHSRS/AAATAC, Florida, tVNS as a force multiplier for treatment of the invisible wounds of war, 8/2013
40. American Clinical Neurophysiology Society/Houston, "MEG Research", 2/7/2015
41. American College of Forensic Psychology/San Diego, "The Role of Neuroscience in Clinical and Civil Cases", 3/28/2015
42. American Psychology in Law Society/San Diego, "Using Advanced Methods to Evaluate Brain Abnormalities", 3/20/2015.
43. American Headache Society Annual Meeting, 11/9/2015, Impact of VNS on brain physiology and chemistry.
44. American Academy of Pediatric Neuropsychology, 4/13/2019, Advances in Behavioral Neuroimaging.
45. American Academy of Pediatric Neuropsychology, 4/25/2020, Advances Neuroimaging.

46. TBI Med-Legal, Sept 25, 2021, Multimodal assessment of traumatic brain injury.

International Meetings

1. International Association of Traumatic Brain Injury, 4th Annual Meeting, June 1994: Neuromagnetic evaluation of mild traumatic brain injury in post-concussive syndromes.
2. European workshop on multimodal imaging and registration, Schiedam, The Netherlands, August 1994: Clinical magnetic source imaging and multimodal imaging.
3. South American workshop on multimodal integration, Mexico City, Mexico, March 1995: Multimodal brain imaging and clinical magnetoencephalography.
4. XII meeting of the Japanese Society of EMG and Clinical Neurophysiology, Kyoto, Japan, October 1995 Recent advances in clinical magnetoencephalography.
5. 1996 International Conference on Biomagnetism, Workshop on Clinical MEG, February 1996: MEG in Head Trauma and Stroke.
6. WHO International Congress on Epilepsy in a Developing World, Beijing China, April 1996: MEG in Epilepsy.
7. 3rd International Hans Berger Congress, Oct. 1996: Clinical Magnetic Source Imaging in a Hospital Setting.
8. 8th European Congress of Clinical Neurophysiology, Oct 1996: Clinical Magnetic Source Imaging.
9. Workshop on Magnetic Source Imaging Clinical Applications, University of Heidelberg, Oct 1996: Experience with the Neuromag-122 MEG system in Albuquerque.
10. 1st Heidelberg Conference on Dynamic and Functional Radiological Imaging of the Brain, Oct 1996: New Perspectives on Clinical MEG.
11. 14th Meeting of the Japanese EEG Society, November 1997, Clinical Advances in MSI
12. International Biomagnetism Conference, Sendai, Japan, September 1998: Clinical MSI.
13. Finnish Japanese Joint Symposium on Information Processing, Helsinki, Finland, November 1998: Magnetic Source Imaging in a Clinical Setting.
14. Asian-Oceanic Epilepsy Organization, Taipei, China, November 1998: Clinical MEG.
15. Asian-Oceanic Epilepsy Organization, Taipei China, November 1998: Basic Principles and Applications of MSI.
16. 9th Annual Meeting of the Leksell Gamma Knife Society, China, November 1998: MEG.
17. Annual Meeting of the Australian Institute of Learning Disorders, Perth, Australia, May 1999: Functional Brain Imaging.
18. Irlen Institute Director's Meeting - 1999, Sydney, Australia, May 1999, Neurobiological findings in scotopic sensitivity syndrome.
19. Lady Ann McClaran Lecture, London, England, July 2001, Patterns of epileptiform activity in LKS and autism spectrum disorders.
20. MEG Symposium, Centrum VUMC, Amsterdam, June 2004, Clinical Applications of MEG.
21. Biomag 2004, Memory Symposium, August 2004, Boston, Neuromagnetic Correlates of Memory Dysfunction: Lessons From the Clinic.
22. Third MEG Clinical Applications Conference, Xylocastro, Greece, Formation of a Clinical MEG Society, Sept 2005
23. Third MEG Clinical Applications Conference, Xylocastro, Greece, Strategies for MEG reimbursement, Sept 2005
24. Third MEG Clinical Applications Conference, Xylocastro, Greece, Developing new clinical applications for MEG, Sept 2005
25. Biomag 2006, Vancouver, On the development of new clinical applications for MEG: Mild head trauma, Aug 2006
26. Biomag 2006, Vancouver, Multimodal brain imaging for surgical planning, Aug 2006.
27. International Meeting for Autism Research, May 2009, Chicago, IL, Sound sensitivities in autism: Evaluation by MEG, treatment by AIT.
28. International Meeting for Autism Research, May 2009, Chicago, IL, Patterns of epileptiform activity in autism as revealed by MEG.
29. 6th Annual World Congress for Brain Mapping and Image Guided Therapy, Aug 2009, Boston, MA, Making the invisible wounds of war visible: Functional brain imaging of PTSD, mild TBI, and depression using magnetoencephalography.
30. International Meeting for Autism Research, May 2010, Philadelphia, Epilepsy in Autism Workshop.
31. ISACM 2011, Nov 2011, Las Vegas, Slow Waves
32: ISACM 2011, Nov 2011, Las Vegas, Sedation for MEG
33: ISACM 2011, Nov 2011, Las Vegas, Future Directions for MEG
34. Irlen International Meeting, July 2015, Houston, Reading, the Brain and Irlen Syndrome
35. International Brain Injury Research Network, Oct 2015, Raleigh-Durham, VNS for mTBI.
36. Synchrony International Autism Meeting, Dec 2022, Pleasanton CA, Magnetoencephalography, Epilepsy and Autism

Local and Regional Meetings:

1. Sigma Chi Society, Loma Linda, March 1993, Looking for dipoles in neural haystacks.
2. New Mexico Meeting of the Congressional Joint Economic Council, June 1994, Clinical MEG.
3. New Mexico Update in Internal Medicine, University of New Mexico, Albuquerque, NM, April 1995: Magnetic Source Imaging
4. New Mexico Autism Society, January 1996, Albuquerque, NM, Brain Imaging.
5. New Mexico Epilepsy Support Group, July 1996, Albuquerque, NM, MSI evaluation of epilepsy.
6. Cure Autism Now, Chicago Meeting, Oct 1997, Epileptiform Activity in LKS, PDD-NOS, and Autism.
7. Annual meeting of the Autism Society of America, Dallas Chapter, May 1998, Epileptiform activity in Autism
8. Annual meeting of the Autism Society of America, St. Paul Chapter, May 1998, Brain Imaging in Autism.
9. Utah Autism Society, October 1998, Salt Lake City, UT, What every parent should know about epileptiform activity in autism.
10. Utah Autism Society, October 1998, Salt Lake City, UT, Brain imaging in Autism.
11. Intermountain Neuropsychology Group, Salt Lake City, UT, October 1998, MSI.
12. Primary Children's Medical Center Symposium on Medical, Neurodevelopmental and Educational Intervention for Medically Challenged Children, February 1999, Salt Lake City, UT, MEG, fMRI, SPECT: Diagnostic and treatment applications of functional scanning strategies.
13. Utah Trial Lawyers Association, February 1999, Salt Lake City, UT, Brain Imaging in Head Trauma.
14. Utah State Board of Education, March 1999 Spring Meeting of Speech and Language Coordinators, Salt Lake City, UT, Functional Brain Imaging.
15. Jordan School District Meeting of Speech and Language Teachers, April 1999, Salt Lake City, UT, Functional Brain Imaging.
16. Parents Helping Parents, Autism Support Group, San Jose, April 1999, Functional brain imaging in autism.
17. Innovations in Education Conference, May 1999, Salt Lake City, UT, Brain Imaging in Education.
18. Families Together Inc, 2003 Annual Conference: Teaching the Brain New Tricks. Brain Imaging in Developmental and Learning Disabilities, Feb 2003.
19. Workshop on Play and Human Development, Institute for Play, Irvine, CA, Brain Imaging, Brain Plasticity, and the Environment, July 2003.
20. KUMC Autism and Asperger Syndrome Resource Center Support Group, Brain Imaging in Autism Spectrum Disorders, August 2003.
21. Kansas Technical Schools, Annual Education Conference, August 2004. Brain imaging in special needs clients.
22. Alliance for Epilepsy Research, November 2004, Brain Imaging in Epilepsy.
23. New Generation Society of Lawrence, December 2004, Translational Research at the Hoglund Brain Imaging Center.
24. US School District 204 District Meeting, August 2005, Brain Imaging and Learning Disabilities
25. Epilepsy Foundation of America, Chicago Chapter, Epilepsy Update, March 2009, Brain Imaging in Epilepsy.
26. Beyond the Yellow Ribbon: Diagnosing and treating anxiety, depression, and PTSD in returning veterans., June 2009, Chicago, IL, Invisible wounds of war: depression, PTSD, and traumatic brain injury.
27. Albuquerque VAMC, Oct 2012, Albuquerque, Imaging TBI and PTSD.
28. Albuquerque Lawyers Club, March 2016, Albuquerque, Brain imaging for TBI.
29. 24th Combat Stress Conference, May 2017, San Diego, The neurobiology of TBI and PTSD: From the laboratory bench to the clinical bedside and beyond.
30. Utah Association for Justice, February 2020, Salt Lake City, Utah, Brain imaging in mild TBI.
31. TCDLA, October 28, 2022, Brain Imaging in Capital Murder Cases and ASPD

Universities and Medical Centers

1. Georgia State University, Language Research Center, June 1987: Perspectives on mnemonic processing and hemispheric specialization in man, macaque, and chimpanzee.
2. Los Alamos National Laboratory, Life Sciences Division, November 1987: Mnemonic processing by man and macaque.
3. New York University, Experimental Psychology Seminar Series, November 1988: A stage analysis of mnemonic processing within and between the cerebral hemispheres of the macaque brain.
4. University of Rochester, Department of Physiology, May 1989: Magnetoencephalography and the non- invasive analysis of brain function.
5. New York University, Department of Physics and Psychology, November 1990: Multiple Dipole Modeling Techniques For Neuromagnetic Data.
6. Carnegie Mellon University, Department of Psychology, March 1992: Interhemispheric Mnemonic Processing in Monkeys.
7. Carnegie Mellon University, Department of Psychology, March 1992: Neuromagnetic Techniques for Analysis of Brain Function.
8. Montreal Neurological Institute, January 1993: Magnetoencephalographic Evaluation of Cortical Plasticity.
9. Loma Linda University, March 1993: Things your mother never told you about neuroimaging.

10. Helsinki Central Hospital, February 1995: MEG.
11. Duke University, Department of Psychology, September 1995: Magnetic Source Imaging.
12. Duke Medical School, March 1996: Clinical MEG.
13. Duke University, Department of Psychology, March 1996: Biomagnetic Assessment of Cognition.
14. Duke University, Department of Psychology, March 1996: Interhemispheric Relationships in Man and Macaque.
15. University of Texas, El Paso, Department of Psychology, May 1996, MEG and multimodal imaging.
16. Hershey Medical Center, July 1996, MEG Up-date.
17. University of Utah, Department of Psychology, August 1996: Biomagnetic Evaluation of Brain Function.
18. University Clinic of Neurology, Vienna, Austria, Oct 1996: Clinical Magnetoencephalography
19. Helsinki Central Hospital, Oct 1996: Progress in Clinical Magnetic Source Imaging.
20. Katayama University, February 1997, Clinical MSI
21. Nagoya University, February 1997, Pediatric Applications of MEG
22. The Neurological Institute, Veteran's General Hospital, Taipei, February 1997, Magnetic Source Imaging: Clinical Applications.
23. Hong Kong University Hospital, Hong Kong, February 1997, Applications of MSI in Neurology and Psychiatry.
24. Draper Royal Air Force Hospital, London, February 1997, New Advances in MEG.
25. Tokkuku University, Japan, November 1997, Clinical Advances in MSI
26. Nagoya University, Japan, November 1997, Pediatric Brain Imaging with MSI
27. National Rehabilitation Center, Tokyo, Japan, November 1997, Functional Brain Imaging
28. Beijing Neurosurgical Institute, China, November 1997, Functional Brain Imaging.
29. University of Utah, Psychiatry Grand Rounds, November 1998, Applications of MSI in Psychiatry.
30. University of Nebraska, Neurology / Neurosurgery Grand Rounds, Omaha, February 1999: Magnetic Source Imaging.
31. University of Illinois Biomedical Engineering Seminar, Chicago, March 1999: Functional Brain Imaging.
32. Tokkuku University, Japan, April 1999, MSI in Epilepsy
33. Rush Presbyterian Hospital, July 2000, Magnetic Source Imaging.
34. University of Kansas Medical Center, July 2002, Functional Brain Imaging
35. University of Kansas Medical Center, Psychiatry Grand Rounds, Oct 2002, Functional Brain Imaging in Psychiatry.
36. KUMC Neurology Grand Rounds, Jan 2003, Functional Brain Imaging in Neurology and Neurosurgery, New Opportunities at the Hoglund Brain Imaging Center
37. KUMC CDU Seminar, Jan 2003, Brain Imaging in Developmental Disabilities
38. KU Department of Psychology Cognitive Science Seminar: Functional Brain Imaging in Psychology, March 2003
39. KUMC, Presentation to Emeritus Faculty, Magnetoencephalography, April 2003
40. KU, Edwards, Special Education Seminar, Brain Imaging in Learning Disabilities, April 2003.
41. KUMC Brain Imaging Class, Principles of MEG, April 2003.
42. Cotton-O'Neil Clinics, Grand Rounds, Magnetoencephalography, May 2003
43. KUMC Department of Physiology Seminar Series, Functional Brain Imaging, Sept 2003.
44. Overland Park Regional Medical Center, Perinatology Seminar Series, Fetal Brain and Cardiac Imaging, Oct 2003.
45. Cotton-O'Neil Clinics, Grand Rounds, Functional Brain Imaging in Psychiatry, Oct 2003
46. KUMC Neurology Grand Rounds, Magnetoencephalography, beyond epilepsy and surgical mapping, March 2004.
47 KU-Lawrence, Biophysics Seminar Series, Magnetoencephalography, August 2004
47. Simon Fraser University, Dept of Psychology, Functional Brain Imaging, February 2005
48: Simon Fraser University, Dept of Psychology, Childhood learning and developmental disabilities, February 2005
49. Alexian Brothers Health Care System, Magnetoencephalography: From the lab to the clinic, October 2005.
50. University of California, Berkeley. Functional Brain Imaging of Normal and Impaired Language, Feb 2007.
51. Medical college of Wisconsin, Clinical Advances in MEG, Oct 2007.
52. Beaumont Hospital, MEG, July 2008
53. Harper College, Brain Imaging, October 2008, March 2009
54. Dominican University, Functional Brain Imaging, January 2009
55. University of Iowa, MEG, July 2009.
56. MIND Research Network, Translational Brain Imaging, January 2010.
57. University of South Carolina, Traumatic Brain Injury, Oct 2013.
58. National Intrepid Center of Excellence, Visualizing and Treating the Invisible Wounds of War, March 2014.
59. University of New Mexico, Neuroradiology seminar series: Feb 2016, The Mind Research Network
60. Morehouse School of Medicine, Oct 2016, Translational Neuroscience.

VIII. TEACHING and MENTORING ACTIVITIES:

Courses

Introductory Neurobiology, NS201, University of Rochester, 1985, 1986, 1987.
Laboratory in Neuroscience, NS203, University of Rochester, 1985, 1986.
Independent Research in Psychology, PSY395, 1986, 1987.
Left Brain-Right Brain, PSY395, University of Rochester, 1987.
Introduction to Neuroimaging, PSY505, University of New Mexico, 1993.
Laboratory in Neuroimaging, PSY506, University of New Mexico, 1993.
Functional Neuroimaging, PSY507, University of New Mexico, 1994.
Dissertation Research in Psychology, PSY595, University of New Mexico, 1994, 1995, 1996.
Physiology of Mind, PSY596, University of New Mexico, 1995.
Introduction to Functional Neuroanatomy, PSY560, University of Utah, 1997.
Introduction to Functional Neuroimaging, PSY561, University of Utah, 1998.
Additional lectures in Introduction to Biomedical Engineering, University of Utah, 1998, 1999.
Introductory Neuroscience, PSY 591, University of New Mexico, 2001
Imaging in Autism and Schizophrenia, PSY 396/596, University of New Mexico, 2001
Miscellaneous lectures at;

University of Kansas Medical Center, University of Kansas Lawrence, Harper College, Dominican University, Elmhurst College, University of Illinois at Chicago, University of New México, 2002-

Supervised Direct Training in Brain Imaging - Fellows

Kent Gledhill, M.D., Radiology Fellow, University of New Mexico, 1995-1997.
Mark Depper, M.D., Radiology Fellow, University of New Mexico, 1994-1995.
John T. Davis, Ph.D., Post-Doctoral Fellow, New Mexico Institute of Neuroimaging, 1993-1995.
Greg Jones, Ph.D., Post-Doctoral Fellow, Center for Advanced Medical Technologies, 1998-1999
Michael Funke, M.D., Ph.D., Post-Doctoral Fellow, Center for Advanced Medical Technologies, 1998-2000
Mingquin Huang, M.D., Post-Doctoral Fellow, Center for Advanced Medical Technologies, 1998-2000
Robert Thoma, Ph.D., Post-Doctoral Fellow, Center for Advanced Medical Technologies, 1999-2000
Dina Hill, Ph.D., Post-Doctoral Fellow, Center for Advanced Medical Technologies, 1999-2000
Mihai Popescu, Ph.D., Post-Doctoral Fellow, Hoglund Brain Imaging Center, 2005-2008
Nitin Bangera, Ph.D., Post-Doctoral Fellow, Alexian Brothers Medical Center, 2008-2015
Mona Stepansky, Ph.D., Post-Doctoral Fellow, Alexian Brothers Medical Center, 2008-2010
Lindsey Felix, Ph.D., Post-Doctoral Fellow, Alexian Brothers Medical Center, 2009-2010
Karen Cooper, Ph.D., Post-Doctoral Fellow, MRN, 2010-2012
Brandon Kopald, Ph.D., Post-Doctoral Fellow, MRN, 2011-2014
Brock Frost, Ph.D., Post-doctoral Fellow, UNM/MRN, 2014-2016

Supervised Direct Training in Brain Imaging - Medical and Graduate Students

Masood Prakash, Medical Student, University of New Mexico, 1993.
Jeff Salaand, Medical Student, University of New Mexico, 1994.
Janic Hosing, Ph.D., Experimental Psychology Program, University of New Mexico, 1994-1997
Chris Edgar, Ph.D.., Clinical Psychology Graduate Student, University of New Mexico, 1994-2000.
Robert Thoma, Ph.D.., Clinical Psychology Graduate Student, University of New Mexico, 1994-1999
Robert Astur, Ph.D., Experimental Psychology Graduate Student, University of New Mexico, 1992-1994
Mike Weisend, Ph.D., Experimental Psychology Graduate Student, University of New Mexico, 1996-1998.
Sherri Provencal, M.A., Clinical Psychology Graduate Student, University of New Mexico and University of Utah, 1994-2000.
Mary Anderson, Ph.D., Clinical Psychology Graduate Student, University of Kansas Medical Center. 2004-2006.
Carly Demopolous, M.A., Clinical Psychology Graduate Student, Illinois Institute of Technology, 2008-2014
Per Lynse, M.S., Quantitative Psychology Graduate Student, University of New Mexico, 2011-2014
Danielle Rudder, M.A., Cognitive Psychology Graduate Student, University of New Mexico, 2011
Patricia Hitz, M.A., Psychology, Graduate Student, University of Heidelberg, 2018.

Supervised Direct Training in Brain Imaging – Undergraduate Students

Chris Amick, Neuroscience major, Dominican University, Chicago, IL, 2008-2010
Tim Lazicki, Neuroscience major, Dominican University, Chicago, IL, 2008-2010
Brittany Agee, Psychology major, University of New Mexico, Albuquerque, NM, 2010
Kyle Nees, Psychology major, University of New Mexico, Albuquerque, NM, 2010
Jordan Riley, Psychology major, University of New Mexico, Albuquerque, NM, 2011
Sherri Miller, Psychology major, University of New Mexico, Albuquerque, NM, 2011
Tyler Mound, Psychology major, University of New Mexico, Albuquerque, NM, 2012
Andrea Brusich, Psychology major, University of New Mexico, Albuquerque, NM, 2012
Whitney Andrews, Psychology major, University of New Mexico, Albuquerque, NM, 2012
Lauren Doyle, Psychology major, University of New Mexico, Albuquerque, NM, 2012-2014
Joshua De Los Antos, Psychology major, University of New Mexico, Albuquerque, NM, 2013
Kelvin Kemper, Psychology major, University of New Mexico, Albuquerque, NM, 2014
Laura Vetsh, Psychology major, University of New Mexico, Albuquerque, NM, 2014
Arturo Carrilo, Psychology major, University of New Mexico, Albuquerque, NM, 2015
Doug Feierman, Psychology major, University of New Mexico, Albuquerque, NM, 2015
Ruth Brciaga, Psychology major, University of New Mexico, Albuquerque, NM, 2016
Ashlee Montoya, Psychology major, University of New Mexico, Albuquerque, NM, 2016
Samantha Montoya, Psychology major, Kenyan University, Ohio, 2017
Michelle Duggins, Psychology major, University of New Mexico, Albuquerque, NM, 2018-2019
Yesol Kim, Psychology major, University of New Mexico, Albuquerque, NM, 2018-2020
Erika Dunson, Psychology major, University of New Mexico, Albuquerque, NM, 2020-2022

EXHIBIT 2

References

1. Frye RE. 2018, Social Skills Deficits in Autism Spectrum Disorder: Potential Biological Origins and Progress in Developing Therapeutic Agents. CNS Drugs. 2(8):713-734.

2. Saalasti S, Lepistö T, Toppila E, et al., 2008, Language abilities of children with Asperger syndrome. J Autism Dev Disord. 38(8):1574-80.

3. Parellada M, Penzol MJ, Pina L, et al., 204, The neurobiology of autism spectrum disorders, European Psychiatry, 29(1): 11-19.

4. Martins GJ, 2017, Neurobiology of autism spectrum disorders. In B. Barahona Corrêa & R.-J. van der Gaag (Eds.), Autism spectrum disorders in adults (pp. 29–93). Springer International Publishing/Springer Nature.

5. Benovese A, Butler MG, 2023, The autism spectrum: Behavioral, psychiatric, and genomic associations. Genes (Basel), 14(3): 677

6. Hadahl A, Niarchou M, Starnawska A, et al., 2021, Genetic contributions to autism spectrum disorder. Psychol Med.;51(13):2260–2273.

7. Milovanovic M and Grujicic R, 2021, Electroencephalography in Assessment of Autism Spectrum Disorders: A Review, Front. Psychiatry , 12.

8. Ecker C, Bookheimer S, Murphy G, 2015, Neuroimaging in autism spectrum disorder: brain structure and function across the lifespan. The Lancet Neurology, 14(11): 1121-1134.

9. Marotta R, Risoleo MC, Messina G, et al., 2020, The Neurochemistry of Autism. Brain Sci. 10(3):163.

10. You H, Shi J, Huang F, Wei Z, et al., 2023, Epigenetics of Developmental Coordination Disorder in Children. Brain Sci. 13(6):940.

11. Gomez A, Singu A, 2015, Developmental coordination disorder: core sensori-motor deficits, neurobiology and etiology. Neuropsychologia, 79:272-287.

12. Nestadt G, Grados M, Samuels JF, 2010, Genetics of obsessive-compulsive disorder. Psychiatr Clin North Am. 33(1):141-58.

13. Pauls D, Abramovitch A, Rauch S, et a., 2014, Obsessive–compulsive disorder: an integrative genetic and neurobiological perspective. Nat Rev Neurosci 15, 410–424.