

CURRICULUM VITAE

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e-mail: rgoldstein@bnl.govweb page: <http://www.bnl.gov/medical/Personnel/Goldstein/default.asp>**Education**

- 1992 B.A. (Cum Laude), Tel Aviv Univ., Tel Aviv, Israel. Majors: Psychology and French.
- 1999 Ph.D. (Award of Academic Merit), Dept. of Psychology, Health Clinical track, Univ. of Miami, FL; Barry Hurwitz and Maria L. Llabre, advisors; Year-long Internship in Clinical Neuropsychology, Long Island Jewish Medical Center, New Hyde Park, NY; Robert Bilder and William Barr, advisors.
- 2001 Clinical Psychology License, New York State (#014670).
- 2002 Post-doctorate research associate, training fellowship on Brain Imaging and Alcohol Abuse from the NIH, SUNY SB and BNL, Upton, NY; Nora D. Volkow, advisor.

Faculty Positions

- 2002 – 2004 Assistant Scientist, Medical Research, BNL, Upton, NY
- 2004 – 2006 Associate Scientist, Medical Research, BNL, Upton, NY
- 2006 – present Scientist, Medical Research, BNL, Upton, NY

Honors and Awards

- 2002 – 2007 Mentored Patient-Oriented Research Career Development Award (1K23DA015517), NIDA, “Behavioral correlates of fMRI response in cocaine users”, \$790,909 total costs.
- 2003 – 2005 Young Investigator Award, National Alliance for Research on Schizophrenia And Depression (NARSAD), “Comorbid depression in cocaine-dependent adults: neurocognitive predictors of relapse”, \$60,000 total costs.
- 3/22/2005 Woman of the Year in Science, Brookhaven Town Award.

Current Grant Support

- 1998 – 2008 **co-PI**, NIAAA 2RO1AA09481, “Dopaminergic Brain Functions in Alcoholics”, \$237,000 direct costs (G-J. Wang, PI).
- 2005 – 2008 **PI**, US Dept. of Energy (DOE)/BNL laboratory-directed, research development (LDRD) #07-055, “Neurocomputation at BCTN: developing novel computational techniques to study brain function in health and disease”, \$150,000 total costs.
- 2005 – 2010 **co-PI**, NIDA K05DA020001, “Role of Genotype and maternal smoking on brain MAOA”, \$634,500, direct costs (J. Fowler, PI).
- 2007 – 2008 **co-PI**, NSF 0722874, “MRI: Acquisition of a Research-Dedicated fMRI Scanner at Stony Brook”, \$1,918,878 total costs (T. Canli, PI).
- 2007 – 2010 **PD**, NIDA 1R01DA020949, “CRCNS: Machine Learning Techniques for Analysis of fMRI of Underlying Inhibitory Control”, \$1,162,786 total costs (D. Samaras, PI).
- 2008 – 2010 **PI**, NIDA R21DA02062, “The prefrontal cortex in reward devaluation in human cocaine addiction: an fMRI study”, \$527,858 total costs.
- 2008 – 2013 **PI**, NIDA 1R01DA023579, “The prefrontal cortex in salience and control in cocaine addiction: phfMRI study”, \$2,850,970 total costs.

Completed Grant Support

- 2002 – 2003 **Collaborator**, U.S. DOE KP1401040MO054, “Physiological Imaging”, \$400,000 direct costs (N. Volkow, PI).
- 2002 – 2003 **co-PI**, SB/BNL seed grant 79/1025459, “Optimizing functional neuroimaging techniques to study the psychological mechanisms underlying violence in cocaine addiction”, \$21,500 total costs (N. Squires, PI).
- 2004 – 2006 **PI**, US DOE/BNL LDRD #04-063, “Optimizing functional neuroimaging techniques to study brain function in health and disease states”, \$375,400 total costs.
- 2004 – 2006 **co-PI**, US DOE DEAC0298CH10886 MO66, “Physiological and Functional MRI”, \$555,000 direct costs (D. Tomasi, PI).
- 2005 – 2007 **co-PI**, US DOE/BNL LDRD #06-088, “Neurogenomics: collaboration between the Biology Department and the Brookhaven Center for Translational Neuroimaging to investigate complex disease state”, \$308,000 total costs (N. Alia-Klein, PI).
- 2005 – 2007 **co-PI**, NARSAD Young Investigator Award, “Endophenotypes of Inhibitory Control in a Group of Alcoholic Domestic Abusers”, \$60,000 total costs (N. Alia-Klein, PI).
- 2006 – 2007 **co-PI**, SB/BNL seed grant, “The Neurogenetics of Impulsivity: using fMRI and DAT-PET data to link with DAT polymorphisms in order to explore the role of dopamine transporters in impulsive behavior”, \$20,000 total costs (T. Canli, PI).

Professional Activities: Editorial Board Membership

- 2007 – present Editorial Board Member, The Open Neuroimaging Journal.
- 2007 – present Editorial Board Member, The Open Addiction Journal.
- 2007 – present International Editorial Board Member, Current Drug Abuse Reviews, Bentham Science Publishers.

Professional Activities: Reviewer in Peer-Reviewed Journals

- 2002 – present Psychiatry Research: Neuroimaging; Journal of Psychopharmacology; NeuroImage.
- 2003 – present Archives of General Psychiatry; American Journal of Psychiatry; Neuropsychologia.
- 2004 – present Biological Psychiatry; The Journal of Neuropsychiatry and Clinical Neurosciences; European Journal of Neuroscience; Neuropsychopharmacology; IJ Neuropsychopharmacology.
- 2005 – present Nature Neuroscience; Psychopharmacology.
- 2006 – present Drug and Alcohol Dependence; Neuroscience & Biobehavioral Reviews.
- 2008 – present Proceedings of National Academy of Sciences.

Professional Activities: NIH Ad-Hoc Reviewer

- July, 2005 NIH/CSR, Special Emphasis Panel (ZRG1 BBP-C), Cognition and Perception Study Section.
- 2005 – present NIDA initiative in brain imaging/clinical neurobiology research, Imaging - Science Track Award for Research Transition Program (I/START).

Professional Activities: Reviewer/Other

- 1999 Annual Society of Behavioral Medicine meeting.
- 2002 "Brain function in substance dependent abused women", Minority Biomed. Research Support program, Meharry Med. College, Nashville, TN.
- 2005 – present Consultant, contract project for NIDA's international program to develop training modules on drug addiction (<http://nida.lecturehall.com/>); Medical Directions, Inc. (www.vlh.com), AZ.
- 2008 – present Health Research Board, Ireland.
- 2008 – present Research Career Awards, Medical Research Council, London, UK.

Workshops

- October, 2003 “Optimizing Functional Neuroimaging to Study the Psychology of Drug Addiction and Other Problem Behaviors”, Dept. of Energy Workshop on Frontiers in Neuroimaging at DOE Laboratories (Cambridge, MA).
- February, 2007 “The Neuropsychology of Human Cocaine Addiction: A Synergy Between Non-Invasive Imaging Techniques and Computational Neuroscience to Develop New Biobehavioral Diagnostic Assays”, DOE Workshop of Science in In Vivo Imaging at DOE National Laboratories (Cambridge, MA).
- October, 2007 “The Science of our Work”, hosted by the Committee on Criminal Justice and Addiction and the Quality Consortium of Suffolk County, NY.
- July, 2007 Participant, a NIDA sponsored workshop on developing a standardized battery of tasks used as probes for cognitive function in drug abusers or persons who might be vulnerable for the development of drug abuse, Washington, DC.

Keynote Lectures

- 04/21/08 Summer School “From mouse to man”, Rudolf Magnus Institute of Neuroscience, Netherlands.

Invited Lectures: National/International Meetings

- 12/03/04 “Imaging the Addicted Human Brain”, Conference on Counseling People of Color, Bermuda.
- 05/16/05 “Functional Neuroimaging of Human Cocaine Addiction”, the 5th Italian Society on Addiction conference, on "Addiction in Medicine and Society", Bari, Italy.
- 01/09/06 Center for Studies of Addiction, Treatment Research Center, Department of Psychiatry, University of Pennsylvania Health System.
- 05/11/07 “The PFC in reward processing and response inhibition in cocaine addiction: evidence for compromised function from functional neuroimaging studies in humans”, symposium on “drug induced plasticity of the CNS as it relates to addiction” sponsored by the Univ. of Tennessee Neuroscience Institute, Memphis, TN.
- 07/12/07 NIDA/NIH sponsored meeting on “Developing a Testing Battery for Cognitive Dysfunction in Substance Abuse”, Washington, DC.
- 09/14/07 “Neuroimaging of reward”, Molecular Imaging for Diagnosis and Prediction of Treatment Outcome, an international symposium on 30 yrs. of PET in Groningen, Netherlands.
- 11/30/07 “Neuropsychology of reward and inhibitory control in cocaine addiction”, 4th National Addictiveness Congress, Ege Univ, Dept. of Psychiatry, Addiction Therapy Unit, Turkey.
- 03/18/08 “Neuropsychology of addiction”, meeting on Neuroscience of Addiction, Dipartimento delle Dipendenze, Addiction Neuroscience Group, Verona, Italy.
- 04/07/08 Neuroscience Seminar Series, McLean Hospital, Harvard Medical School, Belmont MA.
- 07/14/08 “Dysfunction of Affective, Learning and Decision-making Circuitry”, International Symposium on Attention and Performance XXII; organized by E.A. Phelps (Robbins TW and Delgado M, co-organizers); Stow, VT.

Lectures: Other (Educational)

- 03/05/02 PSYCH 642, Neuropsychological Case Analysis and Integration, Drexel University, PA.
- 04/16/02 BME 201, Introduction to Biomedical Engineering, SUNY SB, NY.
- 04/23/02 Promoting science, BNL Outreach Program (John Glenn High School, NY).
- 11/14/03 The quarterly BSA Science and Technology Steering Committee, Upton, NY.
- 01/07/04 Psychology (Brain and Behavior), Univ. of Haifa, Israel.
- 05/02/04 The first Long Island Psychology Conference, organized by The Psi Chi Chapters at Dowling College, Hofstra University, LIU - C.W. Post College, and St. Joseph's College.
- 12/31/04 The Joseph Sagol Neuroscience Center, Sheba Health Center, Ramat Gan, Israel.
- 04/01/05 Psychology, NYU, Memory and Brain series, Cognitive Neuroscience Journal Club.

- 12/14/05 Psychology, Beer Sheva University, Emotion symposium, Israel.
- 12/24/06 Functional Brain Imaging Unit, Wohl Institute for Advanced Imaging, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel.
- 06/12/07 Substance Abuse Fellowship weekly meeting (FR. Levin, M.D.), NYS Psychiatric Institute and Dept. of Psychiatry, College of Physicians and Surgeons, Columbia Univ., NY.
- 11/20/07 Neuropsychomaging of reward and inhibitory control in cocaine addiction”, Dept. of Psychology (Brain and Behavior), Univ. of Haifa, Israel.

Interviews in Media

- 11-12/02 BrainWork, the Neuroscience Newsletter of the Dana Foundation.
- 10/25/02 The North Shore Sun (“Brain Matter” by A. Clancy).
- 12/3/02 Brookhaven National Laboratory (“Addicts' Brains Work Harder to Control Behavior”, a press release).
- 08/06 A documentary on addiction for the RAI Italian National TV Channel, by M. Rosi of DocLab Productions.
- 10/15/06 BNL (“Altered perception of reward in human cocaine addiction”, a press release).
- 10/17/06 Newsday (“How drug skew values” by J. Talan).
- 10/18/06 Reuters Health (“Cocaine alters brain cells, impairs impulse control” by M. Kerr).
- 01/12/07 The Leonard Lopate Show on WNYC, New York Public Radio:
<http://www.wnyc.org/shows/lopate/episodes/2007/01>.
- 02/09/07 Congressional Quarterly Research (“Combating Addiction” by Marcia Clemmitt).
- 02/11/07 The San Francisco Chronicle (“Riddle of addiction lures researchers: Complex network of brain mechanisms underlies cravings” by Carl Hall).
- 02/28/07 Dana Foundation press: featured in the 2007 Advances in Brain Research: Brain Work (“Conversations with six leading neuroscientists on timely topics in brain research: Addiction and the Prefrontal Cortex” by Brenda Patoine).
- 03/19/07 Interview and TV documentary on Alcoholism, Substance Abuse and Mental Health (“Something of Substance” by Marc Myers, Media Development Coordinator), Suffolk County Department of Health Services, Division of Community Mental Hygiene, aired in April, 2007.
- 11/07/07 BNL (“Cocaine abuse blunts sensitivity to monetary reward”, a press release), featured in Join Together (<http://www.jointogether.org/> 11/15/07), an online source for understanding addiction.

Departmental and Institutional Service

- 2001 – 2002 Alternate member, Brookhaven National Laboratory Institutional Review Board.
- 2002 – 2005 Member, Brookhaven National Laboratory Institutional Review Board.
- 2004 Member, Medical Department Planning Committee, Brookhaven National Laboratory.

Teaching and Supervision

- 1999 – present Coordinator of neuropsychological testing in Brookhaven National Laboratory.
- 2000 – present Supervisor, Science Undergraduate Laboratory Internships (SULI, an educational research training program for undergraduate students).
- 2001 Lecturer, Neuropsychological Assessment Graduate course (PSY 563), Dept. of Psychology, SUNY SB.
- 2001 – 2002 Supervisor, Internship program worksite, SUNY Potsdam.

Mentored Students and Personnel

Name/degree at training	Institution	Period	Current position
High School and Undergraduate Students			
M. Schullery, B.A.	Bowdoin College	1999	Psy.D. at Widener Univ. (Chester, PA)
F. Bashan, B.S.	Northeastern Univ.	2000	Psy.D. at Wright Institute (Berkeley, CA)
S. S. Khalsa, B.A.	SUNY Stony Brook	2001- 2002	M.D./Ph.D. student at Iowa Medical School; honors student
D. D'Angelo	SUNY Potsdam	2002	Research Assistant at Nathan Klein Institute
V. Vassiliades, B.A.	SUNY Stony Brook	2003	CW Post psychology graduate student
C. Wong	Miller Place High School	2004	Columbia Univ.
D. Dellosch, B.A.	SUNY Stony Brook	2004 - 2005	Graduate studies in Boston Univ. School of Public Health (bioethics/health law)
R. McIntosh	Medgar Evers College	2005	
T. Lukasik	SUNY Stony Brook	2005 - 2006	NYU undergraduate student
O. Yeliosof	SUNY Stony Brook	2005 - 2007	NIDA (Cullen Trust travel awardee)
C. Urban	SUNY Geneseo	2007	Undergraduate student
B. Blankson	SUNY Stony Brook	2007	Undergraduate student
A. Henry	Dartmouth College	2007	Undergraduate student
P. Saxena	SUNY Stony Brook	2007 – 2008	Undergraduate student
A. Yakubov	SUNY Stony Brook	2007 -	Undergraduate student
G.E. Niebanck, B.A.	St. Joseph's College	2007 - 2008	BNL Research Assistant
Graduate Students			
Z. Jia, B.E.	SUNY Stony Brook	2001	Yale post-doctorate fellow
A. C. Leskovjan, B.S.	SUNY Stony Brook	2002 - 2005	PIBE Ph.D. student
S. Berry, B.A.	SUNY Stony Brook	2002 - 2004	Biopsychology graduate student
A. Wolf, B.S.	SUNY Stony Brook	2003	PIBE Ph.D. student
L. Zhang, M.S.	SUNY Stony Brook	2003 - 2005	Computer Sciences Ph.D. graduate
R. Bonanno, LMSW	SUNY Stony Brook	2005	School of Social Welfare graduate student
M. A. Parvaz, B.S.	SUNY Stony Brook	2006 -	PIBE Ph.D. student
A. Panagopoulos, B.S.	SUNY Stony Brook	2006 -	Computer Sciences Ph.D. student
S.T. Moeller, B.A.	University of Michigan	2006 -	Ph.D. student
S. Asensio, B.S.	Universidad CEU Cardenal Herrera, Valencia, Spain	2006 - 2007	Ph.D. student
J. Dunning, M.S.	SUNY Stony Brook	2007 -	Biopsychology Ph.D. student
T. Chalasani, B.S.	SUNY Stony Brook	2007 – 2008	Computer Sciences M.Sc. student
J. Honorio, B.S.	SUNY Stony Brook	2007 -	Computer Sciences Ph.D. student
Post-Doctorate Fellow/Equivalent			
L.A. Cottone, Ph.D.	SUNY Stony Brook	2000 - 2005	BNL Post-doctorate fellow
S. Shamay, Ph.D.	Haifa Univ., Israel	2002	Post-doctorate at Haifa Univ. (Israel)
N. Alia-Klein, Ph.D.	Columbia Univ.	2002 - 2005	BNL Associate Scientist
T. Maloney, Ph.D.	SUNY Stony Brook	2004 -	BNL non-scientific staff
P. A. Woicik, Ph.D.	SUNY Stony Brook	2005 -	BNL Post-doctorate fellow
A.S. Gonul, M.D.	Ege Univ. School of Medicine	2006 - 2007	Associate Professor of Psychiatry
D. Baeyens, Ph.D.	Ghent Univ., Belgium	2007	BNL Post-doctorate fellow
J. Trigo Diaz, Ph.D.	Universidad Complutense de Madrid	2007 -	BNL Post-doctorate fellow

Publications

Peer-Reviewed Journals

1. Raz S, **Goldstein R**, Hopkins TL, Lauterbach MD, Shah F, Porter CL, Riggs WW, MaGill LH, Sander CJ. (1994). Sex differences in early vulnerability to cerebral injury and their neurodevelopmental implications. Psychobiology, *22*(3), 244-253.
2. **Goldstein R**, Harvey AS, Duchowny M, Jayakar P, Altman N, Resnick T, Levin B, Dean P, Alvarez L. (1996). Preoperative clinical, EEG, and imaging findings do not predict seizure outcome following temporal lobectomy in childhood. Journal of Child Neurology, *1*(6), 445-450.
3. **Goldstein RZ**, Volkow ND, Wang G-J, Fowler JS, Rajaram S. (2001). Addiction changes orbitofrontal gyrus function: involvement in response inhibition. NeuroReport, *12*(11), 2595-2599.
4. **Goldstein RZ**, Hurwitz BE, Llabre MM, Schneiderman N, Gutt M, Skyler JS, Prineas RJ, Donahue RP. (2001). Modeling preclinical cardiovascular risk for use in epidemiologic studies: Miami community health study. American Journal of Epidemiology, *154*(8), 765-776.
5. **Goldstein RZ**, Giovannetti T, Schullery TM, Zuffante P, Lieberman JA, Robinson DG, Barr WB, Bilder RM. (2002). Neurocognitive correlates of response to treatment in formal thought disorder in first-episode schizophrenia. Neuropsychiatry, Neuropsychology, and Behavioral Neurology, *15*(2), 88-98.
6. **Goldstein RZ**, Volkow ND, Chang L, Wang G-J, Fowler JS, Depue RA, Gur RC. (2002). The Orbitofrontal Cortex in Methamphetamine Addiction: Involvement in Fear. NeuroReport, *13*(17), 1-5.
7. **Goldstein RZ**, Volkow ND. (2002). Drug Addiction and its Underlying Neurobiological Basis: Neuroimaging Evidence for the Involvement of the Frontal Cortex. American Journal of Psychiatry, *159*(10), 1642-1652. ****Cited >270 times.**
8. Volkow ND, Fowler JS, Wang G-J, **Goldstein RZ**. (2002). Role of Dopamine and the Frontal Cortex in Drug Addiction In Humans. Neurobiology of Learning and Memory, *78*(3), 610-624.
9. Giovannetti T, **Goldstein RZ**, Schullery TM, Barr WB & Bilder RM. (2003). Semantic knowledge degradation does not explain reduced category fluency in first episode schizophrenia patients. Journal of the International Neuropsychological Society, *9*, 384-393.
10. **Goldstein RZ**, Leskovjan AC, Hoff AL Hitzemann R, Bashan F, Khalsa SS, Wang G-J, Fowler JS, Volkow ND. (2004). Severity of neuropsychological impairment in drug addiction: association with metabolism in the brain reward circuit. Neuropsychologia, *42*, 1447-1458. ****The 5th most heavily downloaded articles from the journal, 7/05.**
11. **Goldstein RZ**, Alia-Klein N, Leskovjan AC, Fowler JS, Wang G-J, Gur RC, Hitzemann R, Volkow ND. (2005). Anger and depression in cocaine addiction: association with the orbitofrontal cortex. Psychiatry Res: Neuroimaging, *138*, 13-22.
12. Volkow ND, Wang G-J, Begleiter H, Porjesz B, Fowler JS, Telang F, Ma Y, Wong C, Logan J, **Goldstein R**, Thanos PK, Alexoff D. (2006). High Dopamine D2 Receptors in Unaffected Members of Alcoholic Families: Possible Protective Factors. Archives of General Psychiatry, *63*, 999-1008.
13. **Goldstein RZ**, Cottone LA, Jia Z, Maloney T, Volkow ND, and Squires NK. (2006). The effect of graded monetary reward on cognitive event-related potentials and behavior in young healthy adults. International Journal of Psychophysiology, *62*, 272-279.
14. **Goldstein RZ**, Alia-Klein N, Tomasi D, Zhang L, Cottone LA, Maloney T, Telang F, Caparelli EC, Chang L, Ernst T, Samaras D, Squires NK, and Volkow ND. (2007). Is decreased prefrontal cortical sensitivity to monetary reward associated with impaired motivation and self-control in cocaine addiction? American Journal of Psychiatry, *164*, 43-51.
15. **Goldstein RZ**, Tomasi D, Alia-Klein N, Cottone LA, Zhang L, Telang F, and Volkow ND. (2007). Subjective sensitivity to monetary gradients is associated with frontolimbic activation to reward in cocaine abusers. Drug and Alcohol Dependence, *87*, 233-240.
16. **Goldstein RZ**, Tomasi D, Alia-Klein N, Zhang L, Telang F, and Volkow ND. (2007). The effect of practice on a sustained attention task in cocaine abusers. Neuroimage *35*(1), 194-206.
17. **Goldstein RZ**, Tomasi D, Rajaram S, Cottone LA, Zhang L, Maloney T, Telang F, Alia-Klein N, and Volkow ND. (2007). Role of the anterior cingulate and medial orbitofrontal cortex in processing drug cues in cocaine addiction. Neuroscience, *144*, 1153-1159.

18. **Goldstein RZ**, Woicik PA, Lukasik T, Maloney T, Volkow ND. (2007). Drug Fluency: A Potential Marker for Current Cocaine Abuse. Drug and Alcohol Dependence 89(1), 97-101.
19. Tomasi D, **Goldstein RZ**, Telang F, Maloney T, Alia-Klein N, Caparelli EC, Volkow ND. (2007). Thalamo-cortical dysfunction in cocaine abusers: implications in attention and perception. Psychiatry Research: Neuroimaging 155(3), 189-201.
20. Alia-Klein N, O'Rourke TM, **Goldstein RZ**, Malaspina D. (2007). Insight into illness and adherence to psychotropic medications predict violence severity in a forensic sample. Aggressive Behavior, 33(1), 86-96.
21. Alia-Klein N, **Goldstein RZ**, Tomasi D, Zhang L, Telang F, Wang G-J, Fowler JS, Volkow ND. (2007). What is in a word? *No* versus *Yes* differential activate the lateral orbitofrontal cortex. Emotion 7(3), 649-659.
22. Fowler JS, Alia-Klein N, Kriplani A, Logan J, Williams B, Zhu W, Craig IW, Telang F, **Goldstein R**, Volkow ND, Vaska P, Wang G-J. (2007). Evidence that brain MAO A activity does not correspond to MAO A genotype in healthy male subjects. Biological Psychiatry 62, 355-358.
23. Tomasi D, **Goldstein RZ**, Telang F, Maloney T, Alia-Klein N, Caparelli EC, Volkow ND. (2007). Widespread disruption in brain activation patterns to a working memory task during cocaine abstinence. Brain Research 1171, 83-92.
24. Tomer R, **Goldstein RZ**, Wang G-J, Wong C, Volkow ND. (2008). Incentive motivation is associated with asymmetry in striatal markers of dopamine neurotransmission. Biological Psychology 77(1), 98-101.
25. Alia-Klein N, **Goldstein RZ**, Logan J, Tomasi D, Kriplani A, Telang F, Shumay E, Biegan A, Henn F, Wang G-J, Volkow ND, Fowler JS. (2008). Brain MAO A Activity Associated with Trait Aggression. Journal of Neuroscience 28(19), 5099-5104.
26. Woicik PA, Moeller SJ, Alia-Klein N, Maloney T, Lukasik T, Yeliosof O, Wang G-J, Volkow ND, **Goldstein RZ**. (2008). The Neuropsychology of Cocaine Addiction: Recent Cocaine Use Masks Impairment. Neuropsychopharmacology, *in press*.
27. Alia-Klein N, Kriplani A, Pradhan K, Ma J-Y, Logan J, Williams B, Craig IW, Telang F, Tomasi D, **Goldstein RZ**, Wang G-J, Volkow ND, Fowler JS. (2008). The MAO A genotype does not modulate resting brain metabolism in adults. Psychiatry Research: Neuroimaging, *in press*.
28. **Goldstein RZ**, Parvaz MA, Maloney T, Alia-Klein N, Woicik PA, Telang F, Wang G-J, Volkow ND. (2008). Compromised sensitivity to monetary reward in current cocaine users: an ERP study. Psychophysiology 45, *in press*.

Peer-Reviewed Full-Length Proceedings

29. Zhang L, Samaras D, Volkow ND, **Goldstein RZ**. (2005). Machine Learning for Clinical Diagnosis from Functional Magnetic Resonance Imaging (#169). In IEEE Proc. of Computer Vision and Pattern Recognition, I, 1211-1217.
30. Zhang L, Samaras D, Tomasi D, Alia-Klein N, Cottone LA, Leskovjan LC, Volkow ND, **Goldstein R**. (2005). Exploiting Temporal Information in Functional Magnetic Resonance Imaging Brain Data. In Proc Medical Image Computing and Computer Assisted Intervention, 8, pp. 679-687.
31. Zhang L, Samaras D, Alia-Klein N, Volkow ND, **Goldstein RZ**. (2006). Modeling Neuronal Interactivity using Dynamic Bayesian Networks. In Advances in Neural Information Processing Systems 18, Y. Weiss, B. Scholkopf, and J. Platt, Eds. MIT Press, Cambridge, MA.

Book Chapters

1. Hurwitz BE, **Goldstein R**, Massie CA, Llabre MM, Schneiderman N. (2000). Low-flow circulatory state and the pathophysiological development of cardiovascular disease: A model of autonomic mediation of cardiovascular regulation. In P.M. McCabe, N. Schneiderman, T. Field, & A. R. Wellens (Eds.), Stress, Coping, and Cardiovascular Disease. Lawrence Erlbaum Associates. Mahwah, NJ, pp 85-122.
2. **Goldstein RZ**, Alia-Klein N, Cottone LA, Volkow ND. (2006). Addiction and the Orbitofrontal Cortex. In D Zald & S Rauch (Eds.), The Orbitofrontal Cortex. Oxford University Press.
3. Volkow ND, Wang G-J, Fowler JS, **Goldstein RZ**. (2006). Imaging the Addicted Brain. In BK Madras, CM Colvis, JD Pollock, JL Rutter, D Shurtleff, & MV Zastrow (Eds.), Cell Biology of Addiction. The Cold

Spring Harbor Laboratory Press.

4. **Goldstein** RZ, Alia-Klein N, Volkow ND. (2008). Drugs of Addiction: Neuroimaging. In Larry R Squire, Editor-in-Chief, Encyclopaedia of Neuroscience, Academic Press, Oxford.

Conference Activities

Symposia Organization/Chairing

1. Organized, **co-chaired**, and presented in a symposium on “The Orbitofrontal Cortex in Drug Addiction: Role in Salience Attribution and Inhibitory Control”; the 42nd American College on Neuropsychopharmacology (ACNP) Annual Meeting, Puerto Rico, December 2003. Talk **title**: Functional neuroimaging evidence for a modified function of the orbitofrontal cortex in human cocaine addiction: Involvement in inhibitory control and salience attribution.
2. Organized, **chaired**, and presented in a symposium on “Inhibitory Control in fMRI Studies: Application of Basic Cognitive-Behavioral Research to the Study of Psychopathology”; Organization for Human Brain Mapping (HBM), Toronto Canada, June 2005. Talk **title**: The Lateral Orbitofrontal Cortex and Inhibitory Control in Cocaine Addiction.”
3. Organized and **chaired** a symposium on “Functional neuroimaging evidence for a brain network underlying impaired insight (into illness) in drug addiction”; Society for Neuroscience (SFN) Annual Meeting, Washington, DC, November 2008.

Participation in Conference Symposia

4. Symposium on “Stress and relapse in drug addiction: lessons from human neuroscience”; Society for Biological Psychiatry; Chair: J. Neumaier; NY, May 2004. Talk **title**: Neuroimaging evidence for a modified function of the orbitofrontal cortex in human cocaine addiction: implications for stress induced relapse.
5. A NIDA/APA-sponsored symposium for the American Psychological Association Annual Meeting in Washington DC, August 2005, on "Neurobiological Aspects of Drug Addiction: Implications for Treatment". Talk **title**: Neuropsychological impairment in drug addiction and its association with prefrontal cortical activity.
6. A mini-symposium “Just say No” on the role of the prefrontal cortex in drug addiction; SFN; Chair: A. Levin, Co-Chair: JD. Jentsch; Atlanta GA, October 2006. Talk **title**: The prefrontal cortex in the I-RISA (Impaired Response Inhibition and Salience Attribution) syndrome of drug addiction. **Selected by SFN’s Public Education and Communication Committee for a Neuroscience 2006 Press Book submission.**
7. A symposium on “monkey and human studies of altered cognition and cortical function due to cocaine addiction”; ACNP Annual Meeting; Chair: C. Bradberry; Boca Raton FL, December 2007. Talk **title**: Altered prefrontal cortical function underlies impairments in attention to reward and inhibitory control in cocaine addicted individuals.

Conference Slide Presentations

8. **Goldstein** RZ, Cottone LA, Alia-Klein N, Leskovjan AC, Fowler JS, Wang GJ, Gur RC, Hitzemann R, Volkow ND. The neurobiology of anger in cocaine addiction: role of the lateral orbitofrontal gyrus. College on Problems of Drug Dependence, Puerto Rico, June 2004.
9. Alia-Klein N, **Goldstein** RZ, Tomasi D, Cottone LA, Wang G-J, Fowler JS, and Volkow ND. The word "NO" activates areas associated with negative emotion and inhibitory control. SFN, San Diego CA, October 2004.
10. Fowler JS, Klein N, Kriplani A, Logan J, Craig IW, Telang F, **Goldstein** RZ, Volkow ND, Wang G-J. Brain MAO A Activity and MAO A Genotype in Healthy Male Subjects. Society of Nuclear Medicine Annual Meeting, Toronto Canada, June 2005.
11. Wang G-J, Alia-Klein N, Telang F, Ma Y, Jayne M, Zhu W, **Goldstein** RZ, Volkow ND, Fowler JS. Brain metabolic response to violent video presentation. Society of Nuclear Medicine Annual Meeting, Toronto Canada, June 2005.
12. **Goldstein** RZ, Woicik PA, Moeller SJ, Telang F, Wang G-J, Jayne MC, Wong C, Fowler JS, Volkow ND.

Extending incentive sensitization theory to human self-report: wanting exceeds liking for drugs but not for other primary rewards in cocaine addiction. SFN, Atlanta GA, October 2006. **Selected by SFN's Public Education and Communication Committee for a Neuroscience 2006 Press Book submission.**

13. Tomasi D, **Goldstein** RZ, Maloney T, Telang F, Caparelli EC, Alia-Klein N, Volkow ND. Abnormal Thalamo-Cortical Activation during working memory and visual attention in Cocaine Abusers. ISMRM workshop on Cerebral Perfusion and Brain Function, Salvador Brazil, August 2007.
14. **Goldstein** RZ, Tomasi D, Alia-Klein N, Woicik PA, Maloney T, Panagopoulos A, Wang R, Volkow ND. An event-related color-word Stroop task in cocaine addiction: an fMRI study. SFN, San Diego CA, November 2007.
15. Parvaz MA, Maloney T, Woicik PA, Alia-Klein N, Telang F, Wang G-J, Volkow ND, **Goldstein** RZ. Compromised sensitivity to relative monetary reward in Current Cocaine Addiction: evidence from the P300. SFN, San Diego CA, November 2007. **Selected by the SFN's Public Education and Communication Committee for a Neuroscience 2007 Press Book submission.**

Conference Poster Presentations

1. **Goldstein** R, Duchowny MS, Jayakar P, Resnick TJ, Altman N, Alvarez LA. (1993). Predictors of seizure relief after temporal lobectomy in children. *Epilepsia*, 34 (suppl 6): 102.
2. Duchowny MS, Harvey AS, **Goldstein** R, Bruce JH, Jayakar P, Resnick TJ, Alvarez LA, Altman N. (1994). Cortical dysplasia in children with intractable partial epilepsy. *Epilepsia*, 35 (suppl 8): 14.
3. **Goldstein**, R., Harvey, A. S., Duchowny, M. S., Bruce, J. H., Jayakar, P., Resnick, T. J., Altman, N., & Alvarez, L. A. (1994). Clinical correlates of abnormal columnar organization in children with chronic focal epilepsy. *SFN Abstracts*, 20: 1494.
4. Harvey AS, Duchowny MS, **Goldstein** R, Bruce JH, Jayakar P, Resnick TJ, Alvarez LA, Altman N. (1994). Developmental neuropathology in children with intractable partial epilepsy. *Annals of Neurology*, 36: 487.
5. **Goldstein**, R, Llabre MM, Donahue RP, Schneiderman N, Prineas RJ, Hurwitz BE. (1997). A model of autonomic regulation of cardiovascular function in White, Black, and Cuban men. *Annals of Behavioral Medicine*, 19, S156.
6. **Goldstein** R, Llabre MM, Donahue RP, Milanovich JR, Kibler JL, Motivala SJ, Vallenilla CT, Stern N, Prineas RJ, Schneiderman N, Hurwitz BE. (1998). Cross-validation of a model of autonomic and cardiovascular function in men and women. *Annals of Behavioral Medicine*, 20(suppl), S86.
7. Zuffante P, Gunduz H, Wu H, Alvir J, Robinson D, Szeszko P, Crandall D, Reiter G, Bates J, Goldman R, **Goldstein** R, Ashtari M, Lieberman J, Bilder R. (1999). Superior temporal gyrus grey matter volumes and neuropsychological functions in first episode schizophrenia. *Schizophrenia Research* 36 (1-3), 215.
8. Baker N, Brownley KA, Llabre MM, Gutt M, **Goldstein** R, Schneiderman N, Donahue RP, Hurwitz BE. (2000). Miami Community Health Study: Cardiovascular Reactivity in African-American, Cuban-American and White Men and Women. *Annals of Behavioral Medicine*, 22 (suppl), S180.
9. Davis CL, Llabre M, **Goldstein** R, Donahue R, Prineas R, Hurwitz BE, Schneiderman N. (2000). Differential LDL-SBP Relationships in Black and White Men. *Annals of Behavioral Medicine*, 22 (suppl), S101.
10. Giovannetti T, **Goldstein** RZ, Schullery M, Lieberman J, Robinson D, Bilder RM, Barr WB (2001). First episode schizophrenia patients show preserved semantic knowledge. *Journal of the International Neuropsychological Society* 7(2), 163.
11. **Goldstein** R, Giovannetti T, Schullery M, Wu H, Lieberman J, Robinson D, Barr WB, Bilder RM (2001). Psychiatric and neuroanatomical correlates of cognitive function in schizophrenia. *Journal of the International Neuropsychological Society* 7(2), 162-163.
12. **Goldstein** RZ, Giovannetti T, Schullery M, Lieberman J, Robinson D, Barr WB, Bilder RM. (2001). Predicting formal thought disorder from semantic vs. executive dysfunction in first-episode schizophrenia. *Schizophrenia Research* 49 (1-2 Suppl.), 107.
13. **Goldstein** RZ, Volkow ND, Bashan F, Wang G-J, Fowler JS. Addiction changes orbitofrontal function: role in response inhibition. Recruitment by bottom-up processes? SFN annual meeting, Nov 2001, San Diego, CA.

14. **Goldstein** RZ, Cottone LA, Jia J, Leskovjan AC, Volkow ND, Squires NK. The effect of graded monetary reward on event-related potentials and behavior: relevance to drug addiction. Cognitive Neuroscience Society, Annual Meeting, March, 2003.
15. Leskovjan AC, **Goldstein** RZ, Volkow ND, Wang G-J, Fowler JS. Use of the Rey-Osterrieth Complex Figure to identify cocaine-addicted individuals with frontal lobe dysfunction. Cognitive Neuroscience Society, Annual Meeting, March, 2003.
16. D'Angelo D, **Goldstein** RZ, Leskovjan AC, Volkow ND. The abbreviation of neuropsychological testing for clinical research. Cognitive Neuroscience Society, Annual Meeting, March, 2003.
17. **Goldstein** RZ, Berry SA, Leskovjan AC, Caparelli E, Tomasi D, Chang L, Telang F, Volkow ND, Squires NK, and Ernst T. Money activates reward circuits in cocaine addiction: A functional MRI study at 4 T. International Society for Magnetic Resonance in Medicine, 11th Meeting, July, 2003.
18. **Goldstein** RZ, Volkow ND, Tomasi D, Caparelli EC, Berry SA, Leskovjan AC, Telang F, Chang L, Ernst T. A modified role for the orbitofrontal cortex in attribution of salience to monetary reward in cocaine addiction: an fMRI Study at 4 T. HBM Annual Meeting, Budapest, Hungary, June 14, 2004.
19. **Goldstein** RZ, Leskovjan AC, Hoff AL, Hitzemann R, Bashan F, Khalsa SS, Wang GJ, Fowler JS, Volkow ND. Severity of neuropsychological impairment in cocaine addiction: association with metabolism in the brain reward circuit. College on Problems of Drug Dependence, Puerto Rico, June 12-17, 2004.
20. Alia-Klein N, O'Rourke T, **Goldstein** RZ, Cottone LA, Volkow ND. Cannabis interacts with specific psychotic symptoms to increase severity of violent behavior in individuals with psychotic disorders. College on Problems of Drug Dependence, Puerto Rico, June 12-17, 2004.
21. **Goldstein** RZ, Tomasi D, Cottone LA, Telang F, Caparelli EC, Zhang L, Leskovjan AC, Chang L, Ernst T, and Volkow ND. Loss of sensitivity in appraising relative saliency of money in drug abusers is associated with disrupted activity in orbitofrontal cortex. SFN, San Diego, October 2004.
22. Alia-Klein N, **Goldstein** RZ, Tomasi D, Zhang L, Cottone L, Fowler J, Wang GJ, Volkow ND. Role of Genotype in Cingulate Function and Inhibitory Control: a Functional Magnetic Resonance Imaging (fMRI) Study. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005; in Journal of Cognitive Neuroscience, S33-34.
23. Leskovjan AC, Tomasi D, Zhang L, Cottone LA, Telang F, Caparelli EC, Samaras D, Chang L, Ernst T, Volkow ND, and **Goldstein** RZ. Modulation of neural response in the prefrontal cortex and cerebellum by monetary reward and instrumental response on a GO/NO-GO task. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005; in Journal of Cognitive Neuroscience, S36.
24. Delosh D, Leskovjan AC, Cottone LA, Alia-Klein N, and **Goldstein** RZ. Cocaine Addiction is associated with impaired learning on the Wisconsin Card Sort Task: findings in high functioning individuals. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005. in Journal of Cognitive Neuroscience, S226.
25. Tomer R, **Goldstein** RZ, Wang G-J, Christopher W, Volkow ND. Incentive motivation is associated with striatal dopamine asymmetry. Cognitive Neuroscience Society, Annual Meeting, New York, NY, April, 2005. in Journal of Cognitive Neuroscience, S167.
26. Alia-Klein N, **Goldstein** RZ, Tomasi D, Zhang L, Cottone L, Fowler J, Volkow ND, Wang GJ. Increased amygdala and decreased anterior cingulate responses to a signal to stop behavior (emphatic vocalizations of the word "No!") in aggression-prone individuals. HBM Annual Meeting, Toronto, Canada, June, 2005.
27. Cottone L.A., Maloney T., Delosh D., Leskovjan A., Alia-Klein N., Telang F., Squires N.K., Fowler J.S., Volkow N.D., **Goldstein** R.Z. The effect of monetary reward on event-related potentials in cocaine addiction. SFN, Washington, 2005.
28. **Goldstein** RZ, Delosh D, Cottone LA, Leskovjan AC, Alia-Klein N, Fowler JS, Wang GJ, Telang F, Maloney T, and Volkow ND. Relationship between cognitive functioning and recent cocaine use: evidence from neuropsychological testing and urine toxicology. SFN, Washington, 2005.
29. Zhang L, Samaras D, Alia-Klein N, Cottone L, Maloney T, Leskovjan A, Tomasi D, Fowler J, Volkow ND, **Goldstein** RZ. Using Advanced Computational Methods to Analyze Neuroimaging Data to Diagnose Psychopathology. SFN, Washington, 2005.
30. **Goldstein** RZ, Tomasi D, Cottone LA, Zhang L, Alia-Klein N, Maloney T, Telang F, Caparelli EC,

Swanson JM, Volkow ND. Decreased corticolimbic response to monetary reward in cocaine addiction: Association with motivation and self-control. *Neuropsychopharmacology* 30: S143-S144 Suppl. 1; ACNP, Hawaii, December 2005.

31. **Goldstein** RZ, Tomasi D, Rajaram S, Cottone LA, Zhang L, Maloney T, Telang F, Alia-Klein N, and Volkow ND. Role of the anterior cingulate cortex in negative valence attribution and accuracy on a drug Stroop task in cocaine addiction. HBM, Florence, Italy, 2006.
32. D. Tomasi, R.Z. **Goldstein**, F. Telang, T. Maloney, E.C. Caparelli, N.D. Volkow. Cocaine abusers have widespread disruption in brain activation patterns to a working memory task. HBM, Florence, Italy, 2006.
33. Alia-Klein N, **Goldstein** RZ, Tomasi D, Zhang L, Telang F, Wang GJ, Fowler JS, Volkow ND. What is in a word? *No* versus *Yes* differentially activate the lateral orbitofrontal cortex. HBM Annual Meeting, Florence, Italy, 2006.
34. Alia-Klein N, Kriplani A, Logan J, Telang F, Wang GJ, Craig I, Williams B, Tomasi D, **Goldstein** RZ, Ma J, Volkow ND, Fowler JS. Divergent Associations between MAO A Genotype on Anterior Cingulate Metabolism, MAO A levels and Cognitive Control. Society of Nuclear Medicine, Annual Meeting, San Diego, CA, June, 2006.
35. **Goldstein** RZ, Woicik PA, Maloney T, Lukasik T, Yeliosif O, Alia-Klein N, Wang G-J, Fowler JS, Wong C, Volkow ND. Drug fluency: A Potential Marker for Substance Abuse. College on Problems of Drug Dependence Annual Meeting, 2006.
36. Woicik PA, Bonanno R, Alia-Klein N, Wang G-J, Wong C, Fowler JS, Volkow ND, **Goldstein** RZ. Does Personality Predict Performance on Behavioral Tasks of Inhibitory Control in Cocaine Abusers? College on Problems of Drug Dependence Annual Meeting, 2006.
37. Parvaz MA, Maloney T, Tomasi D, Alia-Klein N, Telang F, Wang G-J, Volkow ND, **Goldstein** RZ. A multimodal analysis of decreased neural sensitivity to reward in cocaine addiction. BioMedical Engineering Society, Annual Meeting, Chicago, IL, October, 2006.
38. **Goldstein** RZ, Alia-Klein N, Tomasi D, Rajaram S, Henn F, Volkow ND. Testing the I-RISA (Impaired Response Inhibition and Salience Attribution) model in cocaine addiction using a newly developed drug Stroop task for fMRI. *Neuropsychopharmacology* 31: S202-S203 Suppl. 1 DEC 2006; ACNP Annual Meeting, FL, 2006.
39. Gonul AS, Woicik PA, Tomasi D, Alia-Klein N, Maloney T, Wong C, Wang G-J, Sedler M, Volkow ND, **Goldstein** RZ. Increased gray matter volume in the lateral orbitofrontal cortex of current cocaine users. New York Academy of Science, Linking Affect to Action: Critical Contributions of the Orbitofrontal Cortex, 2007. **Selected for a monetary and panel fellowship.**
40. Woicik PA, Westmaas JL, Conrod PJ, **Goldstein** RZ. An Examination of Disinhibitory Personality Risk for Alcohol Use/Abuse. *Alcoholism-Clinical and Experimental Research* (2007), 31(6): 162A-162A Suppl.
41. Alia-Klein N, Shumay E, **Goldstein** RZ, Kriplani A, Logan J, Telang F, Williams B, Craig I, Wang G-J, Henn F, Volkow ND, Fowler JS. Gene-Brain-Behavior relationships: evidence that trait aggression is associated with brain MAO A activity in healthy male subjects. Society of Nuclear Medicine Annual Meeting, Washington, D.C., June 2007. **Selected as 2007 "Image of the Year."**
42. Wang RL, Tomasi D, Wang G-J, Caparelli EC, **Goldstein** RZ, Volkow ND, and Fowler JS. Induced Magnetic Forces in the Human Head during MRI procedures: A group analysis. **3rd Place Award winner on MR safety studies**, 16th ISMRM Scientific Meeting in Toronto, Canada May 4-9, 2008.
43. Alia-Klein N, Wang G-J, Logan J, Woicik PA, Diaz JT, Telang F, Biegon A, **Goldstein** RZ, Fowler JS, Volkow ND. Enduring assault behavior and serotonin transporters in the orbitofrontal cortex. SFN 2008, submitted.
44. Moeller SJ, Parvaz MA, Dunning JP, Maloney T, Alia-Klein N, Woicik PA, Hajcak G, Telang F, Wang G-J, Volkow ND, and **Goldstein** RZ. Behavioral preference for cocaine stimuli in cocaine addiction: results of two novel choice tasks. SFN 2008 submitted.

Abstracts for DOE's Science Undergraduate Laboratory Internships

45. Khalsa SS, **Goldstein** RZ, Bashan F, Fowler JS, Volkow ND. The Neuropsychology of Cocaine Addiction: Preliminary results from Brookhaven National Laboratory. US Department of Energy "Journal of

Undergraduate Research", Volume 2, 2002.

46. Delosh D and **Goldstein** RZ. Motor Functioning in Drug Addicted Individuals: Chronic and Past Cocaine and Alcohol Abusers. US Department of Energy "Journal of Undergraduate Research", Volume 5, 2005.
47. Delosh D and **Goldstein** RZ. The Effects of Urine Toxicology on Motor Performance in Cocaine Addicted Individuals. US Department of Energy "Journal of Undergraduate Research", Volume 5, 2005.
48. Yeliosof O, **Goldstein** RZ, Alia-Klien N. Uncovering the neurobiological underpinnings of aggression. US Department of Energy "Journal of Undergraduate Research", Volume 6, 2006.
49. Lukasik T, **Goldstein** RZ. An Examination of Perseveration in Cocaine Abusers. US Department of Energy "Journal of Undergraduate Research", Volume 6, 2006.
50. Urban CL, Woicik PA, Moeller S, **Goldstein** RZ. A Personality profile in current cocaine addicted individuals. US Department of Energy "Journal of Undergraduate Research", Volume 7, 2007.
51. Blankson B, Moeller S, Woicik PA, **Goldstein** RZ. Conflict Resolution is Impaired in Currently Withdrawn Cocaine Addicted Individuals. US Department of Energy "Journal of Undergraduate Research", Volume 7, 2007. **Selected for a slide presentation.**