

David H. Gutmann, MD, PhD, FANA, FAAN, FAAS

Donald O. Schnuck Family Professor
Vice Chair for Research Affairs
Department of Neurology

Director, Neurofibromatosis (NF) Center
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PERSONAL INFORMATION

Date of Birth: August 18, 1959
Place of Birth: Cincinnati, Ohio

CITIZENSHIP USA

CURRENT POSITION

Donald O. Schnuck Family Professor
Vice Chair for Research Affairs, Department of Neurology
Director, Washington University Neurofibromatosis Center

EDUCATION

1977-1979 The University of Michigan, Ann Arbor, MI, B.S. in Comparative Physiology, Highest Honors
1979-1980 The University of Michigan, Ann Arbor, MI, M.S. in Human Genetics
1980-1984 The University of Michigan, Ann Arbor, MI, Ph.D. in Microbiology and Immunology (Thesis Advisor: John E. Niederhuber, M.D.)
1979-1986 The University of Michigan Medical School, Ann Arbor, MI, M.D., With Distinction
1986-1987 Internship, Internal Medicine, The Hospital of The University of Pennsylvania, Philadelphia, PA
1987-1990 Residency, Neurology, The Hospital of The University of Pennsylvania, Philadelphia, PA (Research Mentor: Kenneth H. Fischbeck, M.D.)
1990-1993 Postdoctoral Fellowship, Human Molecular Genetics, The Howard Hughes Medical Institute, The University of Michigan Medical Center, Ann Arbor, MI (Research Mentor: Francis S. Collins, M.D., Ph.D.)

ACADEMIC POSITIONS/EMPLOYMENT

1989-1990 Clinical Instructor, The University of Pennsylvania School of Medicine
1990-1992 Research Associate, Howard Hughes Medical Institute, The University of Michigan Medical Center, Ann Arbor, MI
1991-1993 Lecturer, Department of Neurology, The University of Michigan Medical Center, Ann Arbor, MI

- 1992-1993 Research Associate, Division of Medical Genetics, Department of Internal Medicine, The University of Michigan Medical Center, Ann Arbor, MI
- 1993-1998 Assistant Professor, Departments of Neurology, Pediatrics and Genetics, Washington University School of Medicine, St. Louis, MO
- 1998-2001 Associate Professor, Departments of Neurology, Pediatrics and Genetics, Washington University School of Medicine, St. Louis, MO
- 2001- Full Professor, Departments of Neurology, Pediatrics, and Genetics, Washington University School of Medicine, St. Louis, MO
- 2015- Vice Chair for Research Affairs, Department of Neurology, Washington University School of Medicine, St. Louis, MO
- 2017- Visiting Scientist, Max Delbrück Center for Molecular Medicine, Berlin, GERMANY

UNIVERSITY & HOSPITAL APPTS AND COMMITTEES

- Director, Neurofibromatosis Clinical Program, St. Louis Children's Hospital, 1994 to date
- Full Member, Washington University/Alvin J. Siteman Cancer Center, 1996 to date
- Co-Director, Neuro-Oncology, Washington University/Alvin J. Siteman Cancer Center, 2004-2013
- Member, Department of Neuroscience, Washington University, Invited Speaker Committee member, 2004-2007
- Director, Washington University Neurofibromatosis Center, 2004 to date
- Member, Executive Faculty Committee, Department of Neurology, 2005 to date
- Member, Genomics Curriculum Project Workgroup, 2007-2008
- Course Director, Neuro-Oncology Resident and Medical Student Elective, 2006 to date
- Member, Research Affairs Committee, Washington University School of Medicine, 2013-2016
- Selected Participant, Washington University Academic Medical Leadership Program, January-June 2014
- Member, Division of Biology and Biomedical Sciences Executive Faculty, 2014-2016
- Scientific Advisory Committee, Intellectual and Developmental Disabilities Research Center, 2014 to date
- Member, Promotions Committee, Department of Neurology, Washington University, 2015 to date

MEDICAL LICENSURE AND BOARD CERTIFICATION

Medical licenses: Pennsylvania (inactive), Michigan (inactive), Missouri (active), Illinois (active)

Board certification: Neurology #35357

HONORS AND AWARDS

- Gordon-Timmis Research Fellowship, 1977
- Michigan Alumni-Regents Scholarship, 1977
- Henry Ford Hospital Research Fellowship, 1978
- Campbell Cancer Research Fellowship, 1980, 1981, 1982, 1983
- March of Dimes Thomas Francis, Jr. Award, 1980
- Horace H. Rackham PreDoctoral Fellowship, 1982, 1983
- March of Dimes Young Investigator Award, FASEB Summer, 1993
- Peter A. Aron National Neurofibromatosis Foundation Award, 1994
- Elected Fellow, American Neurological Association, 1997
- National Neurofibromatosis Foundation Crystal Award, 1998
- Eliason Teaching Award, Department of Neurology, 1999
- National Neurofibromatosis Foundation Center of Excellence Award, 2002
- Washington University School of Medicine Clinical Teacher of the Year Award, 2003
- American Society for Clinical Investigation, inducted 2003
- Award for Excellence in Pediatric Basic/Translational Research, Society for Neuro-Oncology, 2007

Award for Excellence in Pediatric Translational Research, Society for Neuro-Oncology, 2008
 2010 Washington University/Siteman Cancer Center "Rock Doc"
 Children's Tumor Foundation Frederich Von Recklinghausen (Lifetime Achievement) Award, 2012
 Washington University Distinguished Faculty Research Award, 2013
 National Institute for Neurological Disorders and Stroke R35 Research Program (MERIT) Award, 2016
 Alexander von Humboldt Research Award, 2017
 Elected Fellow, American Academy of Neurology (AAN), 2018
 American Academy of Neurology Neuro-Oncology Scientific Award, 2020
 National Neurofibromatosis Network Advocate of Hope Award, 2020
 American Neurological Association George W. Jacoby Award, 2020
 Elected Fellow, American Association for the Advancement of Science (AAAS), 2020

MAJOR INVITED PROFESSORSHIPS AND LECTURESHIPS

Decade of the Brain Plenary Session Speaker, American Academy of Neurology, 1996
 Carolyn Farb Endowed Lecture in Neurofibromatosis, 1998
 Walker Lecturer in Neurofibromatosis, 1999
 Linse Block Neuro-oncology Visiting Professor, Mayo Clinic Foundation, 2001
 Manuel R. Gomez Named Visiting Professor, 2006
 Ninth Annual Arthur and Sonia Labatt Brain Tumor Research Centre Lecturer, 2007
 Takao Hoshino Lectureship, University of California – San Francisco, 2008
 University of Arkansas MD/PhD Student Choice Speaker, 2010
 Pfizer Visiting Professor, University of Virginia, 2010
 16th Annual Sara Hertafeld Memorial Lectureship, 2013
 Susan B. Stine Memorial Lectureship, 2013
 8th Annual Riley Church Guest Professor, Stanford University, 2014
 Oregon Society for Neuroscience Retreat Keynote speaker, 2015
 Society for Neuro-Oncology Abjihit Guha Award and Lecture, 2019

PROFESSIONAL ACTIVITIES

Ad Hoc Manuscript Reviewer

Annals of Neurology, Blood, Cancer Cell, Cancer Discovery, Cancer Research, Cell, Cell Stem Cell, Clinical Cancer Research, eLife, Experimental Neurology, Genes & Development, GLIA, Human Molecular Genetics, Journal of Clinical Investigation, Nature, Nature Communications, Nature Neuroscience, Nature Protocols, Nature Reviews Cell Biology, Nature Reviews Neuroscience, Neurobiology of Disease, Neurology, Neuron, Neuro-Oncology, Oncogene, Proc Natl Acad Sci USA, Science

Editorial Boards

Familial Cancer, 1998-2018
Neurobiology of Disease, 2000-2008
Associate Editor, Cancer Research, 2003-2013
Experimental Neurology, 2003-2011
GLIA, 2004 to date
Neuro-Oncology, 2005 to date
Disease Models and Mechanisms, 2008-2015
Experimental Neurology, Section Editor, 2011-2012

Grant Reviewer

National Institutes of Health
 NINDS, Special Emphasis Panel, 1996, 1997, 1988, 1999, 2001, 2003, 2004
 NINDS, CNBT study section, permanent (standing) member, 2005-2009

NCI, Intramural Research Program Reviewer (Clinical Genetics), 2011
 NCI, Provocative Questions Initiative grant review panel, 2012
 NCI, New Innovator grant review panel, 2013
 NCI R21/R03 Omnibus review panel, 2014
 NCI, ZRG1 New Innovator Award (DP2) panel, 2014, 2015
 NCI, Intramural Research Program Reviewer (Childhood Cancer, Cancer Biology), 2015
 NINDS Advisory Council, member, 2015 (*ad hoc*), 2016-2019 (full appointment)
 NINDS, Research Program Award (R35) Special Emphasis Panel, 2020

Private Foundations

Israel Cancer Res. Fund, 2006-2008
 Chair, Drug Discovery Initiative, Children's Tumor Foundation, 2006-2008
 Children's Tumor Foundation, Drug Discovery Initiative, Chair, 2006-2008
 Goldhirsch Foundation, 2007-2009
 St. Jude Children's Research Hospital, Brain Tumor Program, External Review Panel, 2009
 Brain Tumors Funders Collective, 2009-2011
 American Association for Cancer Research Research Grants Scientific Review Committee (Basic Science, Clinical Translation, and Judah Folkman Awards), 2011-2019
 Society for Neuro-Oncology, Annual Meeting Abstract Review Committee, 2013 to date
 Alex's Lemonade Stand Foundation, Reviewer, 2014
 Children's Tumor Foundation, Annual Meeting Abstract Review Committee, 2015 to date
 Berlin Institute of Health, Excellence Award for Sex and Gender Aspects in Health Research, Evaluation Committee, 2019
 Alex's Lemonade Stand Foundation, Crazy 8 Initiative, Scientific Review Board, 2020
 International Society for Pediatric Neuro-Oncology Society, Abstract Review Committee, 2020
 American Association for Cancer Research Research Pediatric Brain Tumor Research Grants Scientific Review Committee, 2019-2021

PROFESSIONAL SOCIETIES AND ORGANIZATIONS

American Academy of Neurology, 1987 to date
 American Association for the Advancement of Science, 2016 to date
 American Association for Cancer Research, active member, 1994 to date
 Society for Neuro-Oncology (founding member), 1995 to date
 American Neurological Association, 1997 to date
 American Society for Clinical Investigation, 2003 to date
 German Neuroscience Society, 2018 to date
 Federation of European Neuroscience Societies, 2018 to date

MEDICAL SCHOOL TEACHING RESPONSIBILITIES

2006-2020, "The Use of Mouse Models to Understand Human Disease", First Year Medical School Genetics Curriculum

SERVICE

Vice-Chairman, Clinical Care Advisory Board, National Neurofibromatosis Foundation, 1996-2014
 Chairman, Optic Pathway Glioma Task Force, National Neurofibromatosis Foundation, 1995-2010
 Co-Moderator, Neurogenetics Session, American Society for Human Genetics Meeting, 1996
 National Neurofibromatosis Foundation, Research Advisory Board, 1997-2007
 Member, Professional Scientific Advisory Board, National Tuberous Sclerosis Association, 1997-2003
 Member, Research Advisory Board, National Neurofibromatosis Foundation, 1997-2004
 National Tuberous Sclerosis Association, Research Advisory Board, 1998-2003
 Member, Neuro-oncology Basic Science Committee, Radiation Therapy Oncology Group, 1999-2000
 Member, Hereditary Cancer Core Committee, Siteman Cancer Center, 2000-2006

Member, Basic Science Committee, Society for Neuro-oncology, 1999-2002, 2006-2011
 Co-Organizer, NCI Mouse Models of Human Cancers Consortium Nervous System Tumors Workshops, 2002, 2005, 2007, 2010
 Chair, Society for Neuro-Oncology, Education Day Symposium, 2003-2005
 Member, Board of Directors, Society for Neuro-Oncology, 2003-2005
 Co-organizer, National Neurofibromatosis Foundation International Symposium on NF1 and NF2, 2003
 ASCI representative, FASEB, Science Policy Committee, 2004-2007
 Steering Committee, NCI Mouse Models of Human Cancers Consortium (MMHCC), 2004-2014
 Advisory Board, Mayo Clinic Foundation Brain Tumor SPORE, 2004-2008
 Medical Affairs Committee, National Neurofibromatosis Foundation, 2004-2008
 Co-Organizer, Mouse Models of NF-Associated Tumors Workshop, November 2005
 Co-Organizer, Juvenile Pilocytic Astrocytoma Workshop, May 2006
 Member, The Cancer Genome Atlas Steering Committee, National Cancer Institute, 2007-2016
 Co-Organizer, National Institutes of Health Symposium on mTOR signaling, January 2008
 Co-Organizer, James S. McDonnell Conference on Mathematical Modeling of Glioma, April 2009
 Member, Scientific Review Committee, American Association of Cancer Research, February 2010
 Co-Organizer, Mechanisms of Neural Differentiation and Brain Tumors, Cold Spring Harbor Laboratories, July 2010
 Chair, Neurofibromatosis Inc., Medical Advisory Board, 2010-2015
 Member, Education and Community Advisory Board, Jazz St. Louis, 2011 to date
 Co-Organizer, Mechanisms of Neural Differentiation and Brain Tumors, Cold Spring Harbor Laboratories, July 2012
 Scientific Program Committee, Pediatric Society for Neuro-Oncology Meeting, Ft. Lauderdale FLA, May 2013
 American Association for Cancer Research Annual Meeting Scientific Program Committee, 2013-2014
 Max Delbrück Center for Molecular Medicine, 2019 Brain Tumor Symposium, Co-organizer, 2017 to date
 Member, Jazz St. Louis Board of Directors, 2020-2022
 Member, Arts and Healing Advisory Panel, Missouri Arts and Education Council, 2020

RESEARCH SUPPORT

Active

Co-PD, The Giorgio Foundation Dermal Neurofibroma Consortium, 2016-2019
 PI, NCI, R01, Defining risk factors for NF1-optic glioma, 2016-2021
 PI, NINDS, R35, Defining the Mechanistic Basis for Neurofibromatosis-1 Nervous System Disease Heterogeneity, 2016-2024
 PI, Neurofibromatosis Therapeutic Acceleration Program, Leveraging human iPSCs to determine the impact of patient-derived *NF1* gene mutations on peripheral sensory neuron-driven Schwann cell growth, 2018-2021
 PI, Gilbert Vision Restoration Initiative, 2018-2022
 Co-PD, The Giorgio Foundation Dermal Neurofibroma Consortium, 2019-2021
 PI, Pediatric Low-Grade Astrocytoma Foundation, 2020-2022
 PI, Ian's Friends Foundation, 2021

Past

Site PI, (B. R. Korf, PI), US Army Department of Defense, NF Clinical Trials Consortium, 2012-2017.
 Co-Investigator, (A. Stemmer-Rachamimov, PI), Children's Tumor Foundation, NF1-associated Gliomas Multicenter Consortium, 2012-2014.
 Co-Investigator, (D. Hambardzumyan, PI), NCI Tumor Microenvironment Network (TMEN) U01, Non-neoplastic cell types dictate gliomagenesis and response to therapy, 2012-2017.
 PI, James S. McDonnell Foundation, Brain Tumor Ecology Collective, 2013-2016.
 PI, Pediatric Brain Tumor Society, KIA1549:BRAF genetically-engineered mice for pediatric glioma-targeted therapeutic drug discovery and evaluation, 2013-2015.
 PI, Department of Defense, Identifying Novel Glioma Therapeutic Targets Using An Ecosystems Approach, 2013-2016.
 PI, Alex's Lemonade Stand Foundation, "Developing Personalized (Precision) Medicine Strategies to Optimize Pediatric Brain Tumor Management, 2014-2016.

PI, NCI, R01, Leveraging genetically-engineered mice to optimize pediatric glioma management, 2015-2018.
Co-PD, Children's Tumor Foundation Synodos NF1 Low-Grade Glioma Consortium, 2015-2018

PATENTS & INVENTIONS

Neurofibromatosis Gene

U.S. Patent No. 5,859,195

Issued 1/12/99 (expires 5/25/15)

Neurofibromin Pathway Modulators

U.S. Patent No. 8,101,606 B2

Issued 1/24/2012

Neurofibromin/Dopamine Signaling as a Biomarker for Cognitive and Behavioral Problems in Children with Neurofibromatosis Type 1

U.S. Patent No. 62/181,949

Patent filed

CLINICAL TITLE & RESPONSIBILITIES

Attending Neurologist – Barnes-Jewish and St. Louis Children's Hospital

Division Chief, Neuro-Oncology/Neurofibromatosis, Department of Neurology, Washington University School of Medicine

GRADUATE SCHOOL RESPONSIBILITIES

Division of Biology and Biomedical Sciences Graduate School Admissions Committee, 1996-1998 (3 years)

Member, Division of Biology and Biomedical Sciences Executive Council, Washington University, 2014-2016

Thesis Committees:

Paul Kotzbauer

Stacia Peiffer

Jennifer Doll (Chair)

John SunWoo (Chair)

Judy Cheng

Alexander Swirnoff

Vivek Gupta

Heming Xing

Dorothy Turetsky

Josh Hasbani

Ferrin Noonan

Paul Frohnert

Eunice Lee

Karolyn Au (Univ of Toronto)

Michelle Schlieff

Patricia Goldhof

Shannon Macauley

Priya Bhola (Univ of Toronto)

Mahil Rao

Namiko Abe

Liana Roberts-Stein (Chair)

Parul Kothari

Michael Vasek

Charles Shyng

Danny Abernathy

Breanna Hartly

Fiona Coutinho (Univ of Toronto)

Jamie Grit (Van Ardle Cancer Center)

Verena Haage (Max Delbrück Center)

Patricia Rakopoulos (Univ of Toronto)

Aldrin Yim

Current Trainees:

Nicole Brossier, MD, PhD (Pediatrics PSTP & T32 Training Grant Fellow; Hyundai Hope on Wheels fellow; ALSF fellow; Medical Oncology K12 Fellow; NTAP Francis S. Collins Award)

Jit Chatterjee, PhD

Amanda Costa, PhD

Yunshuo "Caroline" Tang, MD, PhD (R25 Training Grant Fellow)

Alexander Chen, PhD (CRM T32 Training Grant Fellow)

Elizabeth Cordell (ALSF POST Fellow)

Andrea Goldstein, MD
Anna Wilson
Astoria Chao
Rujuta Idate
Ameera Zafar
Malavika Pillai
Kyra Rosen

Past Trainees:

M. Livia Bajenaru, PhD (NIH F32 NRSA awardee)	Anne Solga (PhD student)
Erik Uhlmann, MD-PhD (NIH F32 NRSA awardee)	Hugh Bender (PhD student; CTF Young Investigator awardee)
Zhi-yong Huang, MD, PhD	Yi-Hsien Chen, PhD (ABTA post-doctoral fellowship awardee)
Chun-Xiao Sun, MD, PhD	Kelly Diggs-Andrews, PhD (NCI Diversity grant awardee)
Jun Li, MD, PhD	Anthony J. Apicelli, MD, PhD (HHMI Predoctoral Fellowship awardee, Holman Fellowship awardee)
Victoria Hildebrandt Robb, PhD (NIH F32 NRSA awardee)	Corina Anastasaki, PhD (NCI R50 Award)
Ezequiel I. Surace (PhD student)	Sonika Dahiya, MD
Biplab Dasgupta, PhD	Lucy D'Agostino, MSBIS
Kevin C. Ess, MD, PhD	Laura Smithson, PhD
Mukesh Sharma, PhD	Patrick J. Cimino, MD, PhD
Eriks Lulis, MD (Doris Duke Fellow)	Angela Hirbe, MD, PhD (Medical Oncology PSTP K12 Fellow; SARC CDA Fellow; Francis S. Collins Award)
Danielle Scheidenhelm Sandsmark (MSTP student)	Joseph Toonen, PhD (Vision & Neurology T32 Training Grant Fellow)
Girish Dagainakatte, PhD	Yuan Pan, PhD (McDonnell Center Fellowship)
Mark Gerber, PhD (NIH F32 NRSA awardee)	Stephanie Morris, MD (NSADA K12 Fellow)
Balazs Hegedus, PhD	Ran Chen, PhD
Sean Houshmandi, PhD (NIH F32 NRSA awardee)	Michelle Wegscheid (MSTP student; CTF Young Investigator Award)
Huabiao Zhang, MD, PhD	Kristen Jacobsen, PhD (Vision T32 Training Grant Fellow)
Da Yong Lee, PhD (CTF Young Investigator awardee)	Xiaofan "Gary" Guo (CSC PhD Student Fellow)
Tu-Hsueh Yeh, MD, PhD	Olivia Cobb, MSBIS
Sutapa Banerjee, PhD (CTF Young Investigator awardee)	Alice Bewley, MDBIS
Jacqueline Brown, PhD (NCI Diversity grant awardee)	
Jourdan Stuart (CTSA Clinical Research Fellow)	
Grant Simmons, PhD	
Aparna Kaul, PhD	
Cynthia Garcia (PhD student; NIH NRSA awardee)	
Winnie Pong, PhD (Keck fellowship awardee)	
Ibrahim Hussain (Doris Duke Medical Fellow)	

BIBLIOGRAPHY

Current H-Index = 89 (SCOPUS: January 2021); 83 (Web of Science; January 2021)

ORCID = 0000-0002-3127-5045

Peer-reviewed Manuscripts

1. Groux N, **Gutmann DH**. Carcinoma of the lung. *Physician Assistant-Health Care Practitioner* 4:20-29, 1980.
2. Doneen BA, **Gutmann DH**. Lipid composition and *in vitro* biosynthetic rates of neutral lipids and phosphatidylcholine and anterior and posterior chambers of the goldfish swimbladder. *Comparative Biochemistry and Physiology A* 60:291-295, 1981.
3. Schook LB, Bingham EL, **Gutmann DH**, Niederhuber JE. Characterization and expression of H-2I region gene products on bone marrow derived macrophages. *Eur J Immunol.* 12:991-997, 1982. PMID: 6819150
4. **Gutmann DH**. The use of restriction endonucleases in the prenatal diagnosis of hemoglobinopathies. *Am J Med Technol.* 48:361-366, 1982. PMID: 6285741
5. **Gutmann DH**, Allen PM, Niederhuber JE. Separation of the immune response genes for LDH-B and MOPC-173. I. Description of an immune response defect in B10.BASR1. *J. Immunol.* 131:2919-2923, 1983. PMID: 6417235
6. **Gutmann DH**. Restriction Endonucleases. *Am J Med Technol.* 49:60, 1983. PMID: 6303123
7. **Gutmann DH**, Niederhuber JE. Separation of the immune response genes for LDH-B and MOPC-173: II. Description of an immune response defect in BIO.ASR7. *J Immunol.* 132:1955-1959, 1984. PMID: 6199419
8. Allen PM, **Gutmann DH**, Sher MR, Niederhuber JE. Characterization of the three new Intra-I-Region recombinant mouse strains, B10.ASR7 (H-2^{as3}), B10.BAR4 (H-2^{h4}), and B10.BASR1 (H-2^{as4}). *Immunogenetics* 19:175-178, 1984. PMID: 6421725
9. Schook LB, **Gutmann DH**, Marlin LE, Niederhuber JE. *In vitro* derived bone marrow macrophages: Expression of Ia antigens during macrophage differentiation. *Transplantation* 37:585-590, 1984. PMID: 6427997
10. **Gutmann DH**, Niederhuber JE. Separation of the immune response genes for LDH-B and MOPC-173. III. The failure of B10. BASR1 to respond to LDH-B is due to an antigen presenting cell defect. *Transplantation* 40:556-562, 1985. PMID: 2932822
11. **Gutmann DH**, Niederhuber JE. Major histocompatibility complex regulation of the immune response. *J Surg Res.* 39:172-181, 1985. PMID: 3894799
12. **Gutmann DH**, Beard BA, Collinge ML. Nonfatal disseminated mucocutaneous herpes simplex virus type 2 infection in an otherwise healthy woman presenting with a urinary tract infection. *Obstetrics and Gynecology* 72:506-508, 1988. PMID: 3405569
13. **Gutmann DH**, Fischbeck KH, Sergott RC. Hereditary vasculopathy with cerebral white matter lesions. *Am J Med Genet.* 34:217-220, 1989. PMID: 2817001
14. **Gutmann DH**, Scherer S. Ataxic hemiparesis syndrome: Localization to the corona radiata by magnetic resonance imaging. *Stroke* 20:1571-1573, 1989. PMID: 2815193
15. Raps EC, **Gutmann DH**, Brorson J, O'Connor MJ, Hurtig HH. Symptomatic hydrocephalus and reversible spinal cord deformity in *Listeria monocytogenes* meningitis. *J Neurosurg.* 71:620-622, 1989. PMID: 2795184
16. **Gutmann DH**, Fischbeck KH. Molecular biology of Duchenne and Becker Muscular Dystrophy: Clinical Applications. *Ann Neurol.* 26:189-194, 1989. PMID: 2673003
17. **Gutmann DH**, Fischbeck KH, Kamholz J. Complicated hereditary spastic paraparesis with cerebral white matter lesions. *Am J Med Genet.* 36:251-7, 1990. PMID: 2368815
18. **Gutmann DH**, Grossman RI, Mollman JE. Personality changes associated with thalamic infiltration. *J Neuro-Oncol.* 8:263-267, 1990. PMID: 2358857
19. **Gutmann DH**, Cantor CR, Piacente GJ, McCluskey LF. Isolated cerebral vasculopathy and infarction in a woman with carcinomatous meningitis. *J Neuro-Oncol.* 9:183-5, 1990. PMID: 2262804
20. **Gutmann DH**, Marino P. An alternative apnea test for the evaluation of brain death. *Ann Neurol.* 30:852-853, 1991. PMID: 1789700
21. **Gutmann DH**. Chromosome 11q23.3-qter deletion and Alexander's disease. *Am J Med Genet.* 39:226, 1991. PMID: 2063930
22. **Gutmann DH**, Zackai EH, McDonald-McGinn DM, Fischbeck KH, Kamholz J. Oculodentodigital dysplasia syndrome associated with abnormal cerebral white matter. *Am J Medical Genetics* 41:18-20, 1991. PMID: 1659191

23. **Gutmann DH**, Brooks ML, Emmanuel BS, McDonald-McGinn DM, Zackai EH. Congenital nystagmus in a (46XX, 45X) mosaic female from a family with X-linked congenital nystagmus. *Am J Medical Genetics* 39:167-169, 1991. PMID: 2063919
24. Yousem DM, **Gutmann DH**, Milestone BN, Lenkinski RE. Integrated magnetic resonance imaging and spectroscopy in a family with complicated hereditary spastic paraparesis. *Am J Neuroradiol.* 12:785-790, 1991. PMID: 1882768
25. **Gutmann DH**, Wood DL, Collins FS. Identification of the neurofibromatosis gene type 1 product. *Proc Natl Acad Sci USA* 88:9658-9662, 1991. PMID: 1946382
26. Marchuk DA, Saulino AM, Tavakkol R, Swaroop M, Wallace MR, Andersen LB, Mitchell AL, **Gutmann DH**, Boguski M, Collins FS. cDNA cloning of the type 1 neurofibromatosis gene: Complete sequence of the *NF1* gene products. *Genomics* 11:931-940, 1991. PMID: 1783401
27. Basu TN, **Gutmann DH**, Fletcher JA, Glover TW, Collins FS, Downward J. Aberrant regulation of ras proteins in tumor cells from type 1 neurofibromatosis patients. *Nature* 356:713-715, 1992. PMID: 1570015
28. **Gutmann DH**, Zackai EH, Emanuel BS. Congenital nystagmus in a (46XX, 45X) mosaic female from a family with X-linked congenital nystagmus: a reply. *Am J Med Genetics* 43:897, 1992. PMID: 2063919
29. **Gutmann DH**, Collins FS. Recent progress towards understanding the molecular biology of von Recklinghausen neurofibromatosis. *Ann Neurol* 31:555-561, 1992. PMID: 1596091
30. **Gutmann DH**, Boguski M, Marchuk D, Wigler M, Collins FS, Ballester R. Analysis of the neurofibromatosis type 1 (*NF1*) GAP-related domain by site directed mutagenesis. *Oncogene* 8:761-769, 1993. PMID: 8437860
31. Andersen LB, Ballester R, Marchuk DA, Chang E, **Gutmann DH**, Saulino AM, Camonis J, Wigler M, Collins FS. A conserved alternative splice in the von Recklinghausen neurofibromatosis (*NF1*) gene produces two neurofibromin isoforms, both with GAP activity. *Mol Cell Biol.* 13:487-495, 1993. PMID: 8417346
32. Gregory PE, **Gutmann DH**, Mitchell AL, Park S, Jacks T, Wood DL, Boguski M, Jove R, Collins FS. The neurofibromatosis type 1 gene product co-localizes with microtubules. *Somatic Cell and Molecular Genetics* 13:487-495, 1993. PMID: 8332934
33. Andersen LB, Fountain JW, **Gutmann DH**, Tarle SA, Glover TW, Dracopoli NC, Housman DE, Collins FS. Mutations in the neurofibromatosis 1 gene in sporadic malignant melanoma. *Nature Genetics* 3:118-121, 1993. PMID: 8499944
34. **Gutmann DH**, Andersen LB, Cole JL, Swaroop M, Collins FS. An alternatively-spliced mRNA in the carboxy terminus of the neurofibromatosis type 1 (*NF1*) gene is expressed in muscle. *Hum Mol Genet.* 2:989-992, 1993. PMID: 8364582
35. **Gutmann DH**, Tennekoon GI, Cole JL, Collins FS, Rutkowski JL. Modulation of the neurofibromatosis type 1 (*NF1*) gene product, neurofibromin, during Schwann cell differentiation. *J Neurosci Res.* 36:216-223, 1993. PMID: 7505343
36. Boyer M, **Gutmann DH**, Collins F, Bar-Sagi D. Co-capping of neurofibromin, but not GAP, with surface immunoglobulins in B lymphocytes. *Oncogene* 9:349-357, 1994. PMID: 8290249
37. Nakamura T, Nemoto T, Arai M, Yamazaki Y, Kasuga T, **Gutmann DH**, Collins FS, Ishikawa T. Specific expression of the neurofibromatosis type 1 (*NF1*) gene in the hamster Schwann cell. *Am J Path.* 144:549-555, 1994. PMID: 8129040
38. **Gutmann DH**, Cole JL, Stone WJ, Ponder BAJ, Collins FS. Loss of neurofibromin in adrenal gland tumors from patients with neurofibromatosis type 1. *Genes, Chromosomes and Cancer* 10:55-58, 1994. PMID: 7519874
39. Yousem DM, **Gutmann DH**, Lenkinski RE. Limitations of Magnetic Resonance Spectroscopy in patients with white matter disease. *Ann Neurol.* 36:932-933, 1994. PMID: 7998784
40. **Gutmann DH**, Cole JL, Collins FS. Modulation of neurofibromatosis type 1 (*NF1*) gene expression during *in vitro* myoblast differentiation. *J. Neurosci Res.* 37:398-405, 1994. PMID: 8176761
41. **Gutmann DH**, Geist RT, Rose K, Wright DE. Expression of two new protein isoforms of the neurofibromatosis type 1 gene product, neurofibromin, in muscle tissues. *Dev Dynamics* 202:302-311, 1995. PMID: 7780179
42. **Gutmann DH**, Silos-Santiago I, Geist RT, Daras M, Rutkowski JL. Lack of *NF1* gene expression in a sporadic schwannoma from a patient without neurofibromatosis. *J Neuro-Oncol* 25:103-111, 1995. PMID: 8543966

43. **Gutmann DH**, Geist RT, Rose K, Wallin G, Moley JF. Loss of neurofibromatosis type 1 (NF1) gene expression in pheochromocytomas from patients without NF1. *Genes, Chromosomes and Cancer* 13:104-109, 1995. PMID: 7542904
44. **Gutmann DH**, Geist RT, Wright DE, Snider WD. Expression of the neurofibromatosis type 1 (NF1) isoforms in rat embryonic and adult tissues. *Cell Growth and Differentiation* 6:315-322, 1995. PMID: 7794799
45. Norton KK, Carey JC, **Gutmann DH**. Oculodentodigital dysplasia with cerebral white matter lesions in a two generation family. *Am J Med Genet.* 57:458-461, 1995. PMID: 7677152
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