Harvard Medical School Curriculum Vitae

Date Prepared:	May 4th 2023
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Education

1985	Baccalaureat es Lettres		Gymnase Cantonal, Lausanne, Switzerland
1993	MD	Medicine (advisor: Prof. S Clarke, MD)	Lausanne Medical School, Lausanne, Switzerland
2010	PhD	Neuroscience (advisor: Prof. B. de Gelder, PhD)	Tilburg University, The Netherlands

Postdoctoral training

1993	Clinical Research Fellow	Neuropediatrics (Lab PI: Prof. T. Deonna)	Lausanne University Hospital
1993-95	Research Fellow	Anatomy and Physiology (lab PI: Prof. F. De Ribeaupierre)	Lausanne Medical School
1995-96	Research Fellow	Laboratory for Brain Research and Positron Emission Tomography, (lab PI: Prof. P. Roland)	Nobel Institute of Neurophysiology, Karolinska Institute, Sweden
1997-99	Research Fellow	Radiology (lab PI: Prof. R. Tootell)	NMR Center, Harvard Medical School

Faculty Academic Appointments

1999-2002	Instructor	Radiology	Harvard Medical School
2002-2005	Assistant Professor	Radiology	Harvard Medical School
2005-2014	Affiliated Faculty	MIT	Harvard –MIT division of Health Science and Technology
2006-2012	SNF Professor	Brain Mind Institute	Swiss Federal Institute of Technology
2013-2019	Visiting Professor	GNC	Gothenburg University, Sweden (non-voting)
2006-present	**Associate Professor**	**Radiology**	**Harvard Medical School**
2019-present	**Professor**	**Experimental Child and Adolescent Psychiatry**	**Gothenburg University, Sweden**

Appointment at Hospitals/Affiliated Institutions

1999-2016	Assistant in Medical Imaging	Radiology	Massachusetts General Hospital
2016-present	**Associate Neuroscientist**	**Radiology**	**Massachusetts General Hospital**

Major Administrative Leadership Positions

Local

2015-present	Director	Neurolimbic Research, Athinoula A. Martinos Center for Biomedical Imaging

National and International

2006-2012	Director	Social Cognition Lab, Swiss Federal Institute of Technology
2007	Course Director	ADOS and ADI-R training course, Swiss Federal Institute of Technology
2011-2016	President	Vaincre l'autisme, International Scientific Committee
2011	Co-Founder	Neurochlore

Committee Service

Regional

2009	PhD Thesis Jury (K. Dominick)	Boston University
2021-	The Harvard MIND project	Advisory board

National

2016	Pre-Lim Committee (Vivek Subramanian)	Duke University

International

2009	PhD Thesis Jury (D. Bastard-Rosset)	University of Grenoble, France
2009	PhD Thesis Jury (M. Arminjon)	University Lyon 3, France
2009	PhD Thesis Jury (C Camen)	University of Lausanne, Switzerland
2009	PhD Thesis Jury (P. Vrticka)	University of Geneva, Switzerland
2009	PhD Thesis Jury (C. Destrieux)	University of Tours, France
2010	PhD Thesis Jury (F. Vasseur)	University of Grenoble, France
2010	PhD Thesis Jury (M. Boi)	Swiss Federal Institute of Technology Lausanne, Switzerland
2011	PhD Thesis Jury (T. Tadi)	Swiss Federal Institute of Technology Lausanne, Switzerland
2011	PhD Thesis Jury (B. Norris)	Swiss Federal Institute of Technology Lausanne, Switzerland
2012	HDR Thesis Jury (Christina Schmitz)	University of Lyon, France
2013	PhD Thesis Jury (Suzanne Robic)	University of Lyon, France
2013	HDR Thesis Jury (Marie Gomot)	University of Tours, France
2013	PhD Thesis Jury (Quentin Guillon)	University of Toulouse, France
2016	Organization committee for INSAR international leadership meeting	University of Rzeszów, Poland
2016	Scientific committee for the World Innovations Combining Medicine, Engineering and Technology in Autism Diagnosis and Therapy Conference	University of Rzeszów, Poland
2016	Scientific Board CERESA (Centre Régional, d'Education et de Services pour l'Autisme en Midi-Pyrénées)	Toulouse, France
2017	Organization Committee for ESSENCE conference	Gothenburg, Sweden
2017	Scientific Committee for Neurodevelopmental Disorders embraced in the clinical term ESSENCE – clinical practive and reseasrch	Rzeszów, Poland
2017	Scientific advisor for Art Exhibition "Dreams of __" for individuals with ASD	Stockholm, Sweden

Professional Societies

1996-	Society for Neuroscience	Regular Member
2006-	American Association for the Advancement of Science	Professional Member
2010-	International Society for Autism Research	Full Member
2008-	Asperger/Autism Network	Full Member
2008-	American Headache Society	Full Member
2010-	Autism Consortium	Full Member
2010-	Autisme Suisse Romande	Member of Scientific Committee
2011-2015	Association for Psychological Science	Member
2013-	Harvard Interdisciplinary Oxytocin Research Initiative	Full member
2014-	National Association of Professional Women	Full member
2015-	Healthy Weight Research Network/Children with Autism Spectrum Disorders	Associate Member
2017-2020	The New York Academy of Sciences	Full Member

Grant Review Activities

2002	National Institute of Neurological Disorders and Stroke	NIH Ad-hoc member
2002	ZRG1 BBBP-6, Child Psychopathology and Developmental Disorders	NIH Ad-hoc member
2003	National Eye Institute, VISB	NIH Ad-hoc member
2004	National Institute of Neurological Disorders and Stroke	NIH Ad-hoc member
2004	ZRG1 Integrative, Functional, and Cognitive Neuroscience IRG	NIH Ad-hoc member
2005	National Institute of Diabetes and Digestive and Kidney Diseases	NIH Ad-hoc member
2005	Swiss National Science Foundation	Reviewer
2006	ZMH1-BST-A(01) Bioengineering Sciences and Technologies	NIH Ad-hoc member
2007	ZRG Child Psychopathology and Developmental Disorders	NIH Ad-hoc member
2007	Swiss National Science Foundation	Reviewer
2009	ARRA: Child Psychopathology and Developmental Disorders	NIH Ad-hoc member
2009	BBBP-IRG, Child Psychopathology and Developmental Disorders	NIH Ad-hoc member

2008	AERES, Agence d'Evaluation de la Recherche et des Etablissements d'Enseignement Superieur	Reviewer
2009	MRC, Medical Research Concil (UK)	Reviewer
2011	Research Council, KU Leuven, Belgium	Reviewer
2011	ZonMw, Netherlands Organisation for Health Research and Development	Reviewer
2011-	FWO, Research Foundation Flanders	Reviewer
2012	ANR JCJC - SHS 2, Agence Nationale de la Recherche France	Reviewer
2012	Child Development Fund, The Waterloo Foundation	Reviewer
2013	M. J. Murdock Charitable Trust Foundation	Reviewer
2014	German-Israeli Foundation for Scientific Research and Development	Reviewer
2014	ZonMw, Netherlands Organisation for Health Research and Development	Reviewer
2016	DBD: Developmental Brain Disorders	NIH Ad-hoc member
2017	Churchill College Fellowship	Reviewer
2017	Fonds National de la Recherche Scientifique (FNRS, France)	Reviewer
2017	10 ZRG1 CFS-N (80)	NIH Ad-hoc member
2017	Harvard Catalyst Data Ideation Challenge	Harvard Catalyst Ad-hoc member
2018	ZRG1 F02B	NIH Ad-hoc member
2018	DABP CIHB	NIH Ad-hoc member
2018	European College of Neuropsychopharmacology (ECNP) preclinical Data Network Prize	Reviewer
2018	Lundbeck Foundation	Reviewer
2019-	The European Science Foundation	Reviewer
2022	ZRG1 IFCN-S	NIH Ad-hoc member

Editorial Activities

Ad-hoc Reviewer

Acta Paediatrica
American Journal of Psychiatry
Annals of Neurology
Archives of General Psychiatry
Autism
Autism Research
Biological Psychiatry
Brain
Brain Connectivity
Brain Imaging and Behavior
Brain Research
Brain Topography
British Medical Journal
Cephalagia
Cerebral Cortex
Cognitive Computation
Consciousness and Cognition
Cortex
Current Biology
Development and Psychopathology
Developmental Science
Emotion
European Journal of Neuroscience
European Review of Applied Psychology
Experimental Neurology
Headache
Human Brain Mapping
Journal of Autism and Developmental Disorders
Journal of Cognitive Neuroscience
Journal of Child Psychology and Psychiatry
Journal of Experimental Psychology
Journal of Nervous and Mental Disease
Journal of Neurodevelopmental Disorders
Journal of Neurophysiology
Journal of Neuroscience
Journal of Neuroradiology

Journal of Physiology
Journal of the International Neuropsychological Society
Magnetic Resonance in Medicine
Nature Clinical Practice Neurology
Nature Neuroscience
Neural Plasticity
NeuroImage
NeuroImage Clinical
Neurology
Neuron
Neuropsychologia
Neuropsychopharmacology
NeuroReport
Neuroscience
Neuroscience & Biobehavioral Reviews
Neuroscience Letters
Pain
Pediatrics
Proceedings of the National Academy of Science, USA
The Proceeding B of the Royal Society
PLoS ONE
Psychiatry and Clinical Neurosciences
Psychiatry Research
Psychopharmacology
Research in Autism Spectrum Disorders
Science
Science Advances
Scientific Reports
Social Cognitive Affective Neuroscience
Stroke
The American Journal of Psychiatry
The Journal of Headache and Pain
The Lancet Neurology
Trends in Cognitive Sciences
Trends in Neurosciences
Vision Research

Visual Neuroscience

Other Editorial Roles

2013-	Academic Editor	PLoS ONE
2019-	Editorial Board Member	The Journal of Headache and Pain
2022-	Editorial Board Member	Neurodiversity

Honors and Prizes

1995	Fellowship Award	Swedish Institute	
1995	Fellowship Award	Swiss National Foundation	
1995	Fellowship Award	Societe Academique Vaudoise	
2008	Stoicescu Fellowship Award	Stoicescu Foundation	
2010	Leenaards Scientific Prize	Leenaards Foundation	
2012	Chaire d'Excellence Pierre de Fermat	Conseil Regional Midi-Pyrenees	
2014	SAC Poster of Distinction Award	MGH Scientific Advisory Commitee	
2014	F1000Prime	Faculty of 1000 recommendation	Awarded for article on Emotional Contagion, Translational Psychiatry
2016	LifeWatch Award	LifeWatch Foundation, Stockholm, Sweden	Awarded for achievements in autism research
2019	Top 100 official author	Top 100 read neuroscience articles in Scientific Reports 2018	Nature Research Scientific Reports

Report of Funded and Unfunded Projects

Funding Information

Past

2002-2006 Visual-social cognition in neurodevelopmental disorders
NIH 5R01NS044824-03
Principal Investigator

2002-2007 Language in Autism: Clinical and Basic Studies
NIH U19 DC 03610-08 (PI Tager-Flusberg)
BU subcontract
Principal Investigator Project 3

2004-2006 DOT and fMRI Studies of Visual Perception and Imagery
NIH 1R21MH068610 A01A1 (PI: Ganis)
Investigator

2001-2006 Diffusion MRI of Complex White Matter and Connectivity
NIH 5 RO1 MH64044-04 (PI Wedeen)
Investigator

2001-2012 Migraine Pathophysiology and Treatment Mechanisms
NIH 5P01 NS 35611-09 (PI: Moskowitz)
Principal Investigator Project 3

2006-2012 Functional Imaging of Affective and Cognitive Disorders
Swiss National Science Foundation PPOOP3-130191
Principal Investigator

2007-2009 Cognitive remediation, executive function deficit and functional brain imaging of adolescents and adults with ADHD
Swiss National Science Foundation 3200B0-118373 (PI: Bader)
Investigator

2008-2012 The Perception of Emotion and Empathy in Autism – a Brain Functional Imaging Study
Velux Foundation
Principal Investigator

2008-2010 The Cerebellum in Migraine
Stoicescu Foundation
Principal Investigator

2010-2011 A Genetic Paradigm for Obesity, Autism and Schizophrenia
Leenaards Foundation (PI: Jacquemont)
Investigator

2010-2011 The 16p11.2 rearrangements: genetic paradigms for obesity and neurodevelopmental disorders
Swiss National Science Foundation CRSI33_133044 (PI: Raymond)
Investigator

2013-2016 Age and Accurate Face Impressions: Perceptual Neural, & Motivational Mechanism.
1R01AG038375-01 (PI: Zebrowitz)
Principal Investigator of imaging subcontract.

2014-2015 Emotionell uppfattning i ansikten hos ungdomar och vuxna med autism.
Wilhelm och Martina Lundgrens Vetenskaps Fond (Sweden) (PI: Gillberg)
Investigator

2014-2017 PET-MR investigation of microglial activation in migraine
1R21NS082926-01A1
Principal Investigator

2016-2017 ECOR, Internal MGH funding. Characterizing the specificities of ASD in females.
Principal Investigator

2015-2017 Autism as a disease of brain circuit timing. Hartwell Foundation (PI Nicolelis)
Duke University Subcontract
Principal Investigator of imaging subcontract.

2013-2018 NeuroimagingAutism / Neuroinflammation Study (PI:Hooker)
Private Sponsor
Investigator

2017-2019 Ultrahigh field MRI in ASD – looking for in vivo evidence of patchy cortical thinning
NIH 1R21MH115306-01
Principal Investigator

2018-2019 The Excitatory Inhibitory hypothesis in ASD
ECOR, Internal MGH funding
Principal Investigator ($80,000 direct costs)

Current:

2019-2022 Utvärdering av en molekylärpatologisk teori av autismspektrumstörningar
Vetenskapsrådet
Principal Investigator ($490,000 – total direct costs)
This project investigates the hypothesis that autism is related to an excitatory/inhibitory imbalance using eye-tracking

2018-2023 Boosting mind-body mechanisms and outcomes for chronic pain (PI: Rosen/Napadow)
P01AT009965
Co-Principal Investigator for Project 3 ($2,199,961 – direct costs for Project 3)
This is a program project grant aimed at testing complementary approaches to the treatment of migraine headache.

2019-2022 Microbiome-mediated oxytocin release in human health
Templeton Foundation
Investigator (PI: E. Lawson, MGH)
This project investigates the effect of microbiome manipulation in mother-infant bonding.

2019-2022 Assessing correlates of neuroinflammation in children with PANDAS, Obsessive Compulsive Disorders, and healthy controls using Magnetic Resonance Imaging
International OCD Foundation
Investigator (PI: K. Williams, MGH)
This project uses quantitative MRI to investigates markers of inflammation in PANDAS.

2022-2024 Intravenös immunoglobulinbehandling (IVIG) hos barn med pediatriskt akut neuropsykiatriskt syndrom (PANS): en öppen studie i Sydvästra Sverige / Intravenous immunoglobulin therapy (IVIG) in children with pediatric acute neuropsychiatric syndrome (PANS): an open-label study in southwestern Sweden
Vetenskapsrådet
Principal Investigator ($43,000 – total direct cost)
This project is a small scale pilot clinical trial of IVIG for the treatment of PANS in children.

2022-2026 Epigenetic involvement in socio-emotional behavior studied by PET-MRI
Investigator (PI: N. Zurcher Wimmer, total cost $3,549,460)
The aim of this simultaneous positron emission tomography-magnetic resonance imaging study is to assess whether histone deacetylase (HDAC) expression is associated with socio-emotional skills and brain activation and functional connectivity in healthy adults, and whether sex differences are observed.

Report of Local Teaching and Training

Teaching of Students in Courses

1994-95	The Visual System 4th year Medical School Students	Lausanne Medical School
2004	Human Nervous System and Behavior HST graduate students	HST
2007-2009	Methods in Cognitive Neurosciences Graduate Students in Neuroscience	Swiss Federal Institute of Technology
2008-2008	Topics in Cognitive Neurosciences Graduate Students in Neuroscience	Swiss Federal Institute of Technology
2009-2011	Introduction to Brain Imaging Graduate Students in Neuroscience	Swiss Federal Institute of Technology
2013-present	Behavioral Neuroscience Program Division of Graduate Medical Sciences Basic Neuroscience Survey Course GMS BN 777, 778, 779 Graduate students	Boston University School of Medicine
2019-20	Martinos Center Summer research enhancement program for medical students	Martinos Center for Biomedical Imaging Massachusetts General Hospital, guest lecturer
2020	MGH SYNAPSE program for undergraduate students	Martinos Center for Biomedical Imaging Massachusetts General Hospital, guest lecturer

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)

1998	Functional Imaging of visual functions Students and post-docs	MIT
1998	Functional Imaging of color vision Students and post-docs	Harvard University
1999	Anatomical and functional neuroimaging Post-docs and academics	MGH
1999	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging

2000	Introduction to Neuroscience Students and post-docs	MIT
2001	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2002	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2003	Functional imaging of cognitive functions Students and post-docs	MGH
2003	Annual Clinical fMRI conference Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2003	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2004	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2004	Annual Clinical fMRI conference Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2005	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2007	Mirror neurons and autism: Let's face it! Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2008	The many faces of autism Post-docs, fellows, academics	Massachusetts Neuropsychological Society
2008	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2009	fMRI visiting fellowship program Post-docs, fellows, academics	Martinos Center for Biomedical Imaging
2011	What imaging can teach us about autism! Post-docs, fellows, academics	Tewksbury Hospital, MA

2012	NeuroImaging in autism Post-docs, fellows, academics	VA Medical Center, Boston
2012	Forensic Neuropsychology Post-docs, fellows, academics	Boston University School of Medicine
2013	Brain imaging in migraine Post-docs, fellows, academics	Children's Hospital, Boston
2014	We see faces everywhere – but how Post-docs, fellows, academics	MedTech West, Chalmers University, Sweden
2015	Brain imaging in ESSENCE disorders Post-docs, fellows, academics, interns	Goteborg Children Hospital, Sweden
2015	Imagerie et autisme Post-docs, fellows, academics	Toulouse University Le Mirail, France
2016	Different locations, different cultures: becoming a brain imager in different environments Post-docs, fellows, academics	WISE, Chalmers University, Sweden
2019	Look me in the eyes, or not Clinicians, academics	Child Neuropsychiatry Continuing Education Day, Stockholm
2019	Looking autism in the eyes. Clinicians and academics	Annual Congres of the Swiss Pediatrics Society
2019	Looking me in the eyes – or not? Students and academics	University of Leiden, The Netherlands
2020	Writing an RO1/R21 Students and academics	MGH postdoctoral association (MGPA)
2020	From aura to neuroinflammation Students and academics	University of Copenhagen, Danish Headache Center and Dpt Neurology
2020	The migraine brain	HOPE Pain Frontiers Session, University of Michigan School of Dentistry (707 course, third year dental students)

Laboratory and Other Research Supervisory and Training Responsabilities

2003-2006	Supervision of Research Assistant / Martinos Center for Biomedical Imaging	Daily 1:1 mentoring
2006-2009	Supervision of Research Assistant / Martinos Center for Biomedical Imaging	Daily 1:1 mentoring
2010-2011	Supervision of Research Assistant / Martinos Center for Biomedical Imaging	Daily 1:1 mentoring
2014-2016	Supervision of graduate student Research Assistant / Martinos Center for Biomedical Imaging	Daily 1:1 mentoring
2016-2017	Supervision of post-doctoral research fellow / Martinos Center for Biomedical Imaging	Daily 1:1 mentoring
2018	Supervision of summer intern, graduate student	Daily 1:1 mentoring
2011-2021	Supervision of Research Assistant (Noreen Ward) / Martinos Center for Biomedical Imaging	Daily 1:1 mentoring
2018-present	Supervision/training of Instructor (Sarah O'Dor) / Martinos Center for Biomedical Imaging	Bi-monthly 1:1 mentoring
2019-present	Supervision/training of Assistant Professor (Franziska Plessow) / Martinos Center for Biomedical Imaging	Bi-monthly 1:1 mentoring
2020-present	Supervision/training of Research Assistant (Hope Housman)/ Martinos Center for Biomedical Imaging	Weekly 1:1 mentoring
2020-2021	Supervision/training of Research Assistant (Julia Zagaroli)/ Martinos Center for Biomedical Imaging	Monthly 1:1 mentoring
2020-present	Supervision of Post-doctoral Student (Ludovica Brusaferri)/ Martinos Center for Biomedical Imaging	Weekly 1:1 mentoring
2022-present	Supervision of doctoral Student (Marie-Louis Wronski)/ Martinos Center for Biomedical Imaging	Weekly 1:1 mentoring

Formally Mentored Harvard Medical, Dental and Graduate Students

2000-2006	Alexandre da Silva, DMD / co-author on 4 publications / Currently Associate Professor and Director, Headache & Orofacial Pain Effort at University of Michigan School of Dentistry, Ann Arbor
2011-2012	Elvira Pirondini, Master thesis co-supervision, EPFL, Lausanne and HMS Bertarelli Program in Translational Neuroscience and Neuroengineering / Currently Research Assistant Professor at University of Pittsburgh

Other Mentored Trainees and Faculty

2004-2009	Mentor for K award (R. Joseph), Boston U. School Of Medicine / co-author on 7 publications / Currently Associate Professor, Boston University
2006-2008	Cristina Granziera, MD, PhD / co-author on 9 publications / Currently Associate Professor, University of Basel, Switzerland
2007-2008	Nils Rettby Master thesis supervision, Swiss Federal Institute of Technology/ Currently Senior Clinical Scientist, Associate Director - Global Clinical R AND D at Bristol-Myers Squibb
2008-2010	Fei Chen, post-doctoral supervision, Swiss Federal Institute of Technology / Currently physician, Lausanne University Hospital
2008-2009	Antonia Lundquist, master thesis supervision, Swiss Federal Institute of Technology / Currently Project coordinator for Translational Medicine at Medicine for Malaria Venture
2008-2013	Nicole Zurcher, PhD thesis director, Swiss Federal Institute of Technology / co-author on 7 publications / currently Assistant Professor in Radiology at Harvard Medical School
2009	Amandine Lassalle, Master thesis supervision, Ecole Normale Superieure, Paris/ Currently post-doctoral fellow at University of Amsterdam, The Netherlands
2009-2010	Juliana Iranpour, Master thesis supervision, University Paris VI, France
2009-2010	Sandra Da Costa, Master thesis supervision, EPFL / Currently post-doctoral fellow at Centre d'Imagerie Biomedicale, Lausanne University Hospital, Switzerland
2010-2011	V. Roch, Master thesis supervision, EPFL / Currently engineer at CREM, Switzerland
2011-2012	Kalliroi Retzepi, Bachelor thesis supervision, EPFL / Currently Master Student at the Media Lab, MIT. I am still mentoring this student regularly.
2010-2012	Ophelie Rogier, Post-doctoral supervision, Swiss Federal Institute of Technology / co-author on 5 publications / Currently project coordinator, Paris, France
2011-2012	Lorenzo Casari, Master thesis supervision, EPFL, Lausanne / Currently Software Engineer at Frontiers, Lausanne, Switzerland
2011-2012	Torsten Ruest, Post-doctoral supervision, EPFL, Lausanne / Co-author on 3 papers/ Currently MD student
2012-2014	Co-director for Quentin Guillon PhD Thesis, at University of Toulouse / Co-author on 5 publications / Currently post-doctoral fellow at University of Toulouse
2012-2015	Co-Mentor for Aurore Curie, post-doc in Randy Gollub's lab / Co-author on 4 publications / Currently MCU-PH in Laboratoire sur le langage, le cerveau et la cognition, CNSR, Lyon
2016-2017	Amandine Lassalle, Post-doctoral supervision, Harvard Medical School/ Currently post-doctoral fellow at University of Amsterdam, The Netherlands
2014-2018	Mentor for Nicole Zurcher, for her Meixner Postdoctoral fellowship from Autism Speaks (monthly mentorship)
2014-	Mentor for Eri Ichijo, post-graduate student from Wellesley, currently in a PhD program at Oxford after a Master at King's College London (bi-annual mentorship)

2015-2020	Director for Lisa Dinkler, PhD Thesis at Gothenburg University (weekly mentorship)
2016-	Co-director for Darko Sarovic, PhD Thesis at Gothenburg University (weekly mentorship)
2018	Morgan Frost, Master Thesis supervision at University of Skovde (weekly mentorship)
2019-	Director for Sara Lundberg, PhD thesis at Gothenburg University (weekly mentorship)
2020-	Director for Max Thorsson, PhD thesis at Gothenburg University (weekly mentorship)
2020-	Mentor for Mary Catanese, post-doctoral fellow, Martinos Center (monthly mentorship)
2020-	Mentor for Meena Makary, post-doctoral fellow, Martinos Center (bi-annual mentorship)
2021-	Co-director for Manus Warhang, PhD thesis at Gothenburg University (weekly mentorship)
2022-	Mentor for Marie-Louis Wronski, PhD candidate, MGH Neuroendocrine Unit (monthly mentorship)

Report of Regional, National and International Invited Teaching and Presentations

Those presentation below sponsored by outside entities are so noted and the sponsor are identified

Invited Presentation and Courses

Regional

2016	Social Brain Sciences Symposium, Brandeis University, Waltham.
2017	Neurology Grand Round Lecture.
	Tufts University School of Medicine, Boston
2017	Pediatrics Grand Round Lecture
	Tufts University School of Medicine, Boston
2018	Brain Imaging and Migraine, 4th Annual Headache and Face Pain Symposium
	Tufts University School of Dental Medicine, Boston
2019	BU Anatomy and Neurobiology Seminar series
	Boston University School of Medicine, Boston
2020	Pannel on writing a grant as a foreign post-doctoral fellow
	HMS/HSDM Office for Postdoctoral Fellow
2020	Eye-tracking.
	HMS/HSDM Office for Postdoctoral Fellow

National

2010 Imaging studies of face and emotion perception in autism, Seavers Center, Mount Sinai Hospital, New York, NY.

2011 Mirror Neurons System and psychiatric disorders. UCLA, Los Angeles, CA.

2016 Fear: Wherefore, Whence?, The Helix Center for Interdisciplinary Investigation, New York, NY.

2016 Autism and the Mind/Brain. The Helix Center for Interdisciplinary Investigation, New York, NY.

International

1996	PET imaging of the claustrum, Human Brain Mapping International Conference, Boston, USA *[Plenary Presentation]*
1998	Retinotopy and Color Sensitivity, Human Brain Mapping International Conference, Montreal, Canada *[Plenary Presentation]*
1999	Functional imaging in migraine, Zurich University Hospital, Switzerland *[Invited Lecture]*

1999 Functional imaging in migraine, Human Brain Mapping International Conference, Dusseldorf, Germany *[Plenary Presentation]*

2000 Clinical fMRI in migraine, International Headache Society, New York, USA *[Plenary Presentation]*

2001 Neuroimaging, National Yang-Ming University, Laboratory for Cognitive Psychology, Taipei, Taiwan *[Invited Lecture]*

2004 Face perception in autism, International Meeting For Autism Research, Sacramento, USA *[Plenary Presentation]*

2005 Functional imaging in autism, Department of Radiology, University Hospital, Geneva, Switzerland *[Invited Lecture]*

2005 Face and Emotion Perception in Autism - Insights from fMRI, Brain and Mind Institute, EPFL, Lausanne, Switzerland *[Seminar]*

2005 What can Functional Imaging Teach us about Migraine Pathophysiology?, **Sponsor:** Elitriptan Advisory Board. Bern, Switzerland *[Invited Lecture]*

2006 Functional and Anatomical Imaging in Migraine, Faculdade de Medicina da UFRJ, Rio de Janeiro, Brazil *[Invited Lecture]*

2007 Autism - a neurodevelopmental disorder, PENS *[Seminar]*

2007 Minimal brain lesions in migraine, COSBID, Berlin, Germany *[Invited Lecture]*

2007 Normal fusiform but abnormal social brain activation during face perception in ASD , Autism Europe Congres, Oslo, Norway *[Plenary Presentation]*

2008 L'image de l'autisme, CHUV, Lausanne, Switzerland *[Invited Lecture]*

2008 Mind the brain, University of Lausanne, Switzerland *[Seminar]*

2008 Mirror neurons and autism, Ecole Normale Superieure, Paris, France *[Invited Lecture]*

2008 The many faces of autism, Swiss Federal Institute of Technology, Zurich, Switzerland *[Invited Lecture]*

2008 Comprendre L'autisme. University Hospital, Geneva, Swizerland *[Invited Lecture]*

2008 Brain imaging and migraine, GSK, London, UK
Sponsor: GSK

2008 Autism. University of Zurich, department of Neuroinformatics, Zurich, Switzerland *[Invited Lecture]*

2008 Autism, let's face it!, University of Modena, Italy *[Invited Lecture]*

2008 Autisme et neurones miroir, University of Geneva, Child Psychiatry, Switzerland *[Invited Lecture]*

2008 Brain imaging and autism, Societe romande de neuropsychologie, Lausanne, Switzerland *[Invited Lecture]*

2008 A new look on autism, TED Geneve (ASD parents association), Geneva, Switzerland *[Invited Lecture]*

2008 Autism: let's face it, Journees Signoret, Hopital Salpétrière, Paris, France *[Plenary Presentation]*

2009 Mirror Neurons and Autism, University of Parma, Italy *[Invited Lecture]*

2009 Brain imaging in Autism, University of Aberdeen, Scotland *[Invited Lecture]*

2009 Asperger syndrome, Association Enjeu, Sion, Switzerland *[Invited Lecture]*

2009 Mirror Mechanisms and Autism, Societé de Neuropsychologie de Langue Francaise, Paris, France *[Plenary Presentation]*

2009 The amygdala and autism, Lemanic Neuroscience Annual Meeting, Lausanne, Switzerland*[Plenary Presentation]*

2009 Imagerie Cérébrale et Autisme, Societé de Psychologie Cognitive, Geneva, Switzerland *[Plenary Presentation]*

2009 The role of brain imaging in Autism, Autisme France, Paris, France *[Plenary Presentation]*

2009 What is wrong with faces, Innovative Research in Autism Conference, Tours, France *[Plenary Presentation]*

2009 Cognition, emotion and society, University of Lausanne, Switzerland *[Invited Lecture]*

2010 IRMf du traintement des emotions dans l'autisme, European Society of Pediatric Neurology annual meeting, Geneva, Switzerland *[Plenary Presentation]*

2010 Les visages de l'autisme, CerCo, University of Toulouse, France *[Invited Lecture]*

2010 Regards Croisés sur l'autisme, University of Brest, France *[Invited Lecture]*

2010 Imaging studies of face and emotion perception in autism, Pasteur Institute *[Invited Lecture]*

2011 Imagerie de l'autisme, University le Mirail, Toulouse, France *[Invited Lecture]*

2011 What imaging can teach us about autism, INMED, Marseille, France *[Invited Lecture]*

2011 The missing social instinct – what can brain imaging teach us about autism, Leibniz Institute for Neurobiology, Magdeburg, Germany *[Invited Lecture]*

2011 The missing social instinct, European Institute of Neuroscience Goettingen, Germany *[Invited Lecture]*

2011 Déficit de l'instinct social - ce que l'imagerie peut nous apprendre sur l'autisme, University of Nanterre, Paris, France *[Invited Lecture]*

2011 The Thalamus and Migraine. Lausanne University Hospital, Lausanne, Switzerland *[Invited Lecture]*

2012 What brain imaging can teach us about autism, Aalto University, Helsinki, Finland *[Invited Lecture]*

2012 Behavioral and functional data of emotional face perception in autism, Innovative Research in Autism Conference (IRIA), Tours, France *[Plenary Presentation]*

2012 Les bases anatomiques de l'instinct social. University of Fribourg, Switzerland *[Invited Lecture]*

2013 What brain imaging can teach us about autism, University of Gothenburg, Sweden *[Invited Lecture]*

2014 What brain imaging can teach us about ESSENCE, University of Gothenburg, Sweden *[Invited Lecture*]

2014 Social Perception and empathy in autism, University of the Faroe Islands, Faroe Islands *[Invited Lecture]*

2014 L'autisme est un trouble neurodeveloppemental. Ecole d'Etudes Sociales et Pedagogiques, Lausanne, Switzerland *[Invited Lecture]*

2014 Improving emotional face perception in autism with Bumetanide. EMBO conference, Marseilles, France *[Plenary Presentation]*

2014 Brain imaging in migraine. University of Gothenburg, Sweden. *[Invited Lecture]*

2014 Social perception and empathy in autism. Social Affective Cognitive Neurosciences SANS Denver 2014. *[Invited lecture]*

2015 Neuroimaging of ESSENCE disorders. Ostra Sjukhuset, Gothenburg, Sweden. *[Invited lecture]*

2016 Neuroimaging and autism. 44th reunion of the European Society of Neurological Pediatrics, Lugano, Switzerland *[Plenary Presentation]*

2016 The Diuretic Bumetanide Improves Social Processing in Individuals with Autism. ASPET Annual Meeting at Experimental Biology 2016, San Diego, *[Invited lecture]*

2016 What Neuroimaging can teach us about ESSENCE. The world innovations combining medicine, engineering and technology in autism diagnosis and therapy. Rzesrow, Poland [*Plenary Presentation*]

2017 What happens in the brain of people with autism. MedTech West, Gothenburg, Sweden *[Invited lecture]*

2017 Perception emotionelle dans l'autisme. University Jean-Jaures Toulouse, France *[Invited lecture]*

2018 The Ever Changing Brain. ESSENCE 2018, Gothenburg, Sweden *[Keynote lecture]*

2018 Eye Contact in Autism: the excitatory inhibitory hypothesis. Shenzhen International Autism Spectrum Disorder Forum *[Invited lecture]*

2018 The Excitatory/Inhibitory hypothesis in Autism, International Paediatrics Conference, Rzeszow, Poland *[Invited lecture]*

2018 First National Autism Conference, Switzerland *[Keynote lecture]*

2019 Affective Empathy & Autism. 19th Nationaal Autism Congres, Rotterdam, The Netherlands *[Invited lecture]*

2019 Look me in the eyes – or not? Simons Center Colloquium Series, MIT *[Invited lecture]*

2019 Gender bias in autism diagnosis. The Second International Forum on Women's Brain and Mental Health, University of Zurich, Switzerland *[Invited lecture]*

2020 From aura to Neuroinflammation – imaging studies from MGH. Joint annual meeting 2020, Swiss Headache Society and Swiss Pain Society Switzerland *[Invited lecture, virtual presentation]*

2021 Eye contact in autism and its relationship with disturbance of the excitation-inhibition balance in the brain. Moscow State Psychological and Pedagogical University *[Invited lecture, virtual presentation*]

2021 From aura to neuroinflammation: Has imaging resolved the puzzle of migraine pathophysiology?. Brain Prize Virtual Seminar series, Lundbeck Foundation *[Invited lecture, virtual presentation*]

2022 Neuroimaging of aura: inflammatory markers. The Brain Conference 2022, Clinical/Translational talk
[Invited lecture, virtual presentation]

Report of Clinical Activities and Innovation:

Current Licensure and Board Certification

1992 Licensed Physician, Switzerland
1995 USMLE step 1 & 2, Educational Committee for Foreign Medical Graduates (ECFMG) certification
2017 Leg Läkare, Swedish Medical License

Report of Education of Patients and Service to the Community:

No presentations below were sponsored by outside entities

Education of Patients and Service to the Community

2008 A New Look on Autism, TED Feneva (Autism Parent Association)
General presentation on autism

2009 Asperger Syndrome, Association Enjeu, Sion, Switzerland.
Presentation Asperger Syndrome

2012 Autisme et Création Artistique. Musée de l'Art Brut, Lausanne, Switzerland
Presentation on the artistic creation in autism

2015 Fright Factors: The Science of Fear. MIT museum, Cambridge.
Presentation on the mechanisms of fear for an event at the MIT museum

2016 Autisms – explorations with eye-tracking and brain imaging. iMotion, Boston
Presentation on how eye-tracking technologies can be used in autism research

2018 Asperger Autism Network Grandparents Support Group, AANE, Watertown, MA
Presentation on Autism and issues related to eye contact

2018 Asperger Autism Network Board, AANE, Watertown, MA
Presentation on latest findings in autism research

Educational Material for Patients and the Lay Community

No educational material below was sponsored by outside entities

2010 Emission 36.9, Au coeur du cerveau autiste, Television Suisse Romande, Switzerland
Documentary about Autism

2011 Emission Specimen, La Peur au Ventre, Television Suisse Romande, Switzerland
Documentary about Fear

2012 The History Channel - How the Earth Made Man
Documentary about face processing

2012 Le Cerveau d'Hugo, Escazal Productions, France 2, France
Principal Scientific Advisor for a Docu-fiction on Autism

2012 Emission Specimen, Comment avoir une idee geniale, Television Suisse Romande, Switzerland
Documentary about Creativity

2012 Autisme: Lire les intentions
Webdocumentary about Autism

2013 Emission 36.9, Migraine: le casse tête, Television Suisse Romande, Switzerland
Documentary about Migraine

2013 Le Webdoc de l'Autisme
Documentary about Autism

2014 Kobra, Swedish Television - We see faces everywhere
Documentary about face and pareidolia perception

2017 Migraine de Folie, Television Suiss Romande, Switzerland
Documentary about what is means to suffer from migraine

2018 Ministère de l'Education Nationale (France): Enfants autistes: bienvenue à l'école!
Documentary about inclusion of children with autism at school

Recognition

2006 Clinical Neurology News: *Pain and Headache, Image of the Month*

2007 The Washington Post: *Brain Differences Seen in Migraine Sufferers*

2007 The Boston Globe: *Migraine study shows brain change*

2007 The Guardian*: Severe headaches may cause other pains, study suggests*

2007 BBC news: *Migraine brains 'are different'*

2007 Reuters: *Brain Differences detected in Migraine Sufferers*

2007 American Academy of Neurology: *Brain Differences found in people with migraine.*

2007 WebMD: *Migraine sufferers have different brains*

2007 U.S. News & World Report: *Migraine Tied to Thickening in Brain Area*

2007 CBS News: *Migraine sufferer's brain show changes in pain-sensing areas*

2007 Science Daily: *Brain Differences Found in People with Migraine*

2007- Listing in Who's Who

2008 Nature Clinical Practice Neurology: *Somatosensory cortex thickening in patients with migraine*

2008 L'Hebdo (Switzerland): *Autistes Hypersensibles ou indifferents aux autres?*

2010 L'Hebdo (Switzerland): Forum des 100 award, Awarded to the 100 most influential persons in French-Speaking Switzerland

2010 L'Hebdo (Switzerland): "*Obèses, autistes, migraineux, votre cerveau m'intéresse"*

2010 Swissinfo.ch (Switzerland): *Advocates want turnaround in autism treatment*

2010 RSR.ch (Switzerland): *Journée internationale de sensibilisation à l'autisme*

2010 24Heures (Switzerland): *Vous Cherchez? Nouchine Hadjikhani*

2010 L'Hebdo (Switzerland): *Forum des 100, Nouchine Hadjikhani: Le cerveau au scanner*

2011 TSR Swiss National Television news (Switzerland): *Autism Day 2011*

2011 Harvard Medicine: *The Chill of Fear*

2011 CNN.com (July 2011): *Antidepressant use in pregnancy may raise autism risk*

2013 Le Temps (Switzerland): *Le cerveau hyper-connecté des autistes*

2013 BBC news (2013): *Pareidolia: Why we see faces in hills, the Moon and toasties*

2013 Dagens Nyheter (Sweden): *Därfor är Hitler en tekanna*

2014 National Geographic: *Why Do People See Faces in the Moon*

2014 Tech Times: *Why Do We See Faces and Mysterious Objects On the Surfaces of Other Planets?*

2014 The Huffington Post: *Is This Perfect Face In The Clouds For Real?*

2014 The Week: *The Science of Fear*

2015 Vice: *The Futility of Modern Fears*

2015 Spectrum News: *Rare glimpse of neurons refine understanding of the amygdala*

2016 Swedish TV4 News: *Hennes forskning kan lösa autismens gåtor*

2017 The Philadelphia Enquirer: *Study: Overstimulation, not indifference, makes eye contact hard for people with autism*

2017 Science Daily: *Why do those with autism avoid eye contact.*

2017 MedicalXpress: *Researchers explore why those with autism avoid eye contact*

2017 Science Alert: *For Those With Autism, Eye Contact Isn't Just Weird, It's Distressing*

2017 DoctorsLounge: *Why People with Autism Avoid Eye Contact*

2017 Sioux City Journal: *Why People with Autism Avoid Eye Contact*

2017 Harvard Medical School News: *Ocular Overdrive*

2017 The Mass General Research Institute Blog: *More Than Meets the Eye: Researchers Find Eye Contact Causes Stress and Overactivation in the Brains of Autistic Individuals*

2017 New York Magazine: *Here is why Eye Contact Is So Awkward for Some People*

2017 U.S. News & World Report: *Why People With Autism Avoid Eye Contact*

2017 The Huffington Post: *Why Eye Contact Is So Distressing For People With Autism*

2017 Massachusetts General Hospital Research Institute: *Brain imaging studies provide new insights into biological basis of behaviors in schizophrenia and autism*

2017 AutisMag: *Can Your Child's Eye Movement Help You Visualize their Future Well-Being?*

2017 Omaha Herald: *Cooking up just the right scare*

2018 Les Echos (France): *Vers un premier traitement contre l'autisme?*

2018 Tagesspiegel (Germany): *Fatal Giant Waves in the head*

2019 Medscape: *Brain Imaging Reveals Neuroinflammation in Migraine with Aura.*

2020 Express.co.uk: *Autism symptoms: Study delves into why lack of eye contact is often a symptom of condition*

Report of Scholarship

ORCID: orcid.org/0000-0003-4075-3106

Publications

Peer-Reviewed Scholarship in Print or other media

1. Tootell RB, Mendola JD, **Hadjikhani** N, Ledden PJ, Liu AK, Reppas JB, Sereno MI, Dale AM. Functional analysis of V3A and related areas in human visual cortex. J Neuroscience. 1997;17(18):7060-78. PMID: 927854 2

2. Tootell RBH, **Hadjikhani** N, Mendola JD, Marrett S, Dale AM. From retinotopy to recognition: fMRI in human visual cortex. Trends in Cognitive Sciences. 1998;1(2):174-183. PMID: 21227152

3. **Hadjikhani** N, Roland PE. Cross-modal transfer of information between the tactile and the visual representations in the human brain: A positron emission tomographic study. J Neuroscience. 1998;18(3):1072-84. PMID: 9437027

4. Tootell RB, Mendola JD, **Hadjikhani** N, Liu AK, Dale AM. The representation of the ipsilateral visual field in human cerebral cortex. Proc Natl Acad Sci USA. 1998;95(3):818-24. PMID: 9448246

5. Tootell RB, **Hadjikhani** N, Vanduffel W, Liu AK, Mendola JD, Sereno MI, Dale AM. Functional analysis of primary visual cortex (V1) in humans. Proc Natl Acad Sci USA. 1998;95(3):811-7. PMID: 9448245

6. **Hadjikhani** N, Liu AK, Dale AM, Cavanagh P, Tootell RB. Retinotopy and color sensitivity in human visual cortical area V8. Nature Neuroscience. 1998;1(3):235-41. PMID: 10195149

7. Tootell RB, **Hadjikhani** N, Hall EK, Marrett S, Vanduffel W, Vaughan JT, Dale AM. The retinotopy of visual spatial attention. Neuron. 1998;21(6):1409-22. PMID: 9883733

8. **Hadjikhani** N, Tootell RB. Projection of rods and cones within human visual cortex. Human Brain Mapping. 2000;9(1):55-63. PMID: 10643730

9. Tootell RB, **Hadjikhani** N. Attention -brains at work! Nature Neuroscience. 2000;3(3):206-8. PMID: 10700248

10. Van Essen DC, Lewis JW, Drury HA, **Hadjikhani** N, Tootell RB, Bakircioglu M, Miller MI. Mapping visual cortex in monkeys and humans using surface-based atlases. Vision Res. 2001; 41(10-11):1359-78. PMID: 11322980

11. Pellerin L, Sibson NR, **Hadjikhani** N, Hyder F. What you see is what you think--or is it? Trends in Neuroscience. 2001;24(2):71-2. PMID: 11252265

12. Sasaki Y, **Hadjikhani** N, Fischl B, Liu AK, Marrett S, Dale AM, Tootell RB, Marret S. Local and global attention are mapped retinotopically in human occipital cortex. Proc Natl Acad Sci USA. 2001; 98(4):2077-82. PMID: 11172078

13. Tootell RB, **Hadjikhani** N. Where is 'dorsal V4' in human visual cortex? Retinotopic, topographic and functional evidence. Cerebral Cortex. 2001;11(4):298-311. PMID: 11278193

14. **Hadjikhani** N, Sanchez Del Rio M, Wu O, Schwartz D, Bakker D, Fischl B, Kwong KK, Cutrer FM, Rosen BR, Tootell RB, Sorensen AG, Moskowitz MA. Mechanisms of migraine aura revealed by functional MRI in human visual cortex. Proc Natl Acad Sci USA. 2001;98(8):4687-92. PMID: 11287655

- *Cited as « The most most thorough investigation of changes in neuronal activity during migraine aura. Signal changes showed a number of characteristics that were consistent with CSD during migraine aura in humans » by Pietrobon D & Striessnig J : Neurobiology of migraine. Nature Reviews Neuroscience 2003 ; 4 :386-398*

15. Bonmassar G, **Hadjikhani** N, Ives JR, Hinton D, Belliveau JW. Influence of EEG electrodes on the BOLD fMRI signal. Human Brain Mapping. 2001;14(2):108-15. PMID: 11500994

16. **Hadjikhani** N, de Gelder B. Neural basis of prosopagnosia: an fMRI study. Human Brain Mapping. 2002;16 (3):176-82. PMID: 12112771

17. DaSilva AF, Tuch DS, Wiegell MR, **Hadjikhani** N. A primer on diffusion tensor imaging of anatomical substructures. Neurosurg Focus. 2003;15(1):E4. PMID: 15355006

18. de Gelder B, Frissen I, Barton J, **Hadjikhani** N. A modulatory role for facial expressions in prosopagnosia. Proc Natl Acad Sci USA. 2003;100(22):13105-10. PMID: 14561892

19. **Hadjikhani** N, de Gelder B. Seeing fearful body expressions activates the fusiform cortex and amygdala. Current Biology. 2003;13(24):2201-5. PMID: 14680638

20. **Hadjikhani** N, Chabris CF, Joseph RM, Clark J, McGrath L, Aharon I, Feczko E, Tager-Flusberg H, Harris GJ. Early visual cortex organization in autism: an fMRI study. NeuroReport. 2004;15(2):267-70. PMID: 15076750

21. **Hadjikhani** N, Joseph RM, Snyder J, Chabris CF, Clark J, Steele S, McGrath L, Vangel M, Aharon I, Feczko E, Harris GJ, Tager-Flusberg H. Activation of the fusiform gyrus when individuals with autism spectrum disorder view faces. NeuroImage. 2004;22(3):1141-50. PMID: 15219586

22. de Gelder B, Snyder J, Greve D, Gerard G, **Hadjikhani** N. Fear fosters flight: A mechanism for fear contagion when perceiving emotion expressed by a whole body. Proc Natl Acad Sci U S A. 2004;101(47):16701-6. PMID: 15546983

23. **Hadjikhani** N, Joseph RM, Snyder J, Tager-Flusberg H. Anatomical differences in mirror neurons system and social cognition network in autism. Cerebral Cortex. 2006;(16):1276-82. PMID: 16306324

24. Granziera C, Da Silva AFM, Snyder J, Tuch D, **Hadjikhani** N. Anatomical alterations of the visual motion processing network in migraine with and without aura. PLoS Medicine. 2006;10(3) e402. PMID: 17048979

25. de Gelder B, **Hadjikhani** N. Nonconscious recognition of emotional body language. NeuroReport. 2006;17:583-586. PMID: 16603916

26. **Hadjikhani** N, Joseph RM, Snyder J, Tager-Flusberg H. Abnormal activation of the social brain during face perception in autism. Human Brain Mapping. 2007;28(5):441-9. PMID: 17133386

27. DaSilva AF, Granziera C, Snyder J, Tuch DS, Vincent M, **Hadjikhani** N. Interictal alterations of the trigeminal somatosensory pathway and PAG in migraine. NeuroReport. 2007;18:301-305. PMID: 17435592

28. Vincent M, **Hadjikhani** N. The cerebellum and migraine. Headache. 2007;47(6):820-833. PMID: 17578530

29. Whitcher B, Wisco JJ, **Hadjikhani** N, Tuch DS. Statistical Group Comparison of Diffusion Tensors via Multivariate Hypothesis Testing. Magnetic Resonance in Medicine. 2007;57(6):1065-1074. PMID: 17534902

30. Vincent M, **Hadjikhani** N. Migraine aura and related phenomena: beyond scotomata and scintillations Cephalagia. 2007;27(12)1368-1377. PMID: 17944958

31. DaSilva AF, Granziera C, Snyder J, **Hadjikhani** N. Thickening in the somatosensory cortex of patients with migraine. Neurology. 2007;69:1990-1995. PMID: 18025393

    - *Highlighted in Nature Clinical Practice Neurology. 2008; 4 :124*

32. Knaus T, Silver A, Lindgren K, **Hadjikhani** N, Tager-Flusberg H. fMRI activation during a language task in adolescents with autism spectrum disorder" The Journal of the International Neuropsychological Society. 2008;14(16):967-979. PMID: 18954477

33. Thakkar K, Polli F, Joseph R, Tuch D, **Hadjikhani** N, Barton J, Manoach D. Response monitoring, repetitive behavior, and anterior cingulate abnormalities in autism spectrum. Brain. 2008;131:2464-2478. PMID: 18550622

34. **Hadjikhani** N. Relevance of cortical thickness in migraine sufferers. Expert Rev. Neurotherapeutics. 2008; 8(3):327-329. PMID: 18345963

35. **Hadjikhani** N, Hoge R, Snyder J, de Gelder B. Pointing with the eyes: the role of gaze in communicating danger. Brain and Cognition. 2008;68(1)1-8. PMID: 18586370

36. Kaaro J, Partonen T, Naik P, **Hadjikhani** N. Is migraine a lateralization defect? NeuroReport. 2008;19(13)1351-1353. PMID: 18695522

37. Meeren HK, **Hadjikhani** N, Ahlfors S, Hämäläinen MS, de Gelder B. Early category-specific cortical activation revealed by visual stimulus inversion. PLoS One. 2008;3(10)e3503. PMID: 18946504

38. Granziera C, Schmahmann JD, **Hadjikhani** N, Heiko M, Meuli R, Wedeen VJ, Krueger G. Diffusion Spectrum imaging shows the structural basis of functional cerebellar circuits in the human cerebellum in vivo. PLoS One. 2009;4(4):e5101. Epub 2009 Apr 2, PMID: 19340289

39. **Hadjikhani** N, Kveraga K, Naik P, Ahlfors S. Early activation of face-specific cortex by face-like objects. NeuroReport. 2009; 20:403-407. PMID: 19218867

40. Dahlem M, **Hadjikhani** N. Migraine aura: retracting particle-like waves in weakly susceptible cortex. PLoS One. 2009; 4(4):e5007. Epub 2009 Apr 1. PMID: 19337363

41. **Hadjikhani** N, Joseph RM, Maoach DS, Naik P, Snyder J, Dominick K, Hoge R, Van den Stock J, Tager-Flusberg H, de Gelder B. Body expressions of emotion do not trigger fear contagion in autism. Social Cognitive and Affective Neuroscience. 2009; Mar;4(1):70-8. PMID: 19151375

42. Adams RB Jr, Franklin RG Jr, Rule NO, Freeman JB, Kveraga K, **Hadjikhani** N, Yoshikawa S, Ambady N. Culture, Gaze and the neural processing of fear expressions. Social Cognitive and Affective Neuroscience. 2010; 5(2-3):340-8. PMID 20019073

43. **Hadjikhani** N. Serotonin, pregnancy and increased autism prevalence: is there a link? Medical Hypotheses. 2010; 74(5):880-3] PMID 20018455

44. Walters RG, Jacquemont S, Valsesia A, de Smith AJ, Martinet D, Andersson J, Falchi M, Chen F, Andrieux J, Lobbens S, Delobel B, Stutzmann F, El-Sayed Moustafa JS, Chèvre JC, Lecoeur C, Vatin V, Bouquillon S, Boute O, Cuisset JM, Ambresin AE, Brioshi A , Gaillard M, Giusti V, Fellmann F, Ferrarini A, **Hadjikhani** N, Campion D, Goldenberg A, Calmels N, Mandel JL, Le Caignec C, David A, Isidor B, Cordier MP, Dupuis-Girod S, Labalme A, Sanlaville D, Béri-Deixheimer M, Jonveaux P, Leheup B, Õunap K, Ellis R, MacDermot KD, Vincent-Delorme C, Plessis G, Touraine R, Philippe A, Malin V, Blaumeiser B, Frank Kooy RF, Caiazzo R, Pigeyre M, Balkau B, Sladek R, Bergmann S, Mooser V, Waterworth D, Reymond A, Vollenweider P, Waeber G, Kurg A, Palta P, Esko T, Metspalu A, Nelis M, Elliott P, Hartikainen AL, McCarthy MI, Peltonen L, Carlsson L, Jacobson P, Sjöström L, Männik K, Jarvelin MR, Pattou F, Meyre D, Walley AJ, Coin LJM, Blakemore AIF, Froguel P, Beckmann JS. A new highly-penetrant form of obesity due to a 740kb deletion on chromosome 16p11.2. Nature. 2010;463(7281):671-5. PMID: 20130649

45. Donnelly N, Zürcher N, Cornes K, Snyder J, Naik P, Hadwin J, **Hadjikhani** N. Discriminating grotesque from typical faces: evidence from the Thatcher illusion. PLoS One. 2011;6(8):e23340. PMID: 21912594

46. Mainero C, Boshyan J, **Hadjikhani** N. Altered functional resting-state connectivity in the periacqueductal gray networks in migraine. Annals of Neurology. 2011;70(2):838-845. PMID: 22162064

- *Commented in Burch R, Wells R. Pathophysiology of Migraine. Headache. 2013;53(2) :420-422*

47. Granziera C, **Hadjikhani** N, Arzy S, Seeck M, Meuli R, Krueger G. In vivo imaging of the structural core of Papez circuit in humans. NeuroReport. 2011;22(5):227-31. PMID: 21346644

48. Jacquemont S, Curie A, Des Portes V, Torrioli MG, Berry-Kravis E, Hagerman RJ, Ramos FJ, Cornish K, He Y, Paulding C, Neri G, Chen F, **Hadjikhani** N, Martinet D, Meyer J, Beckmann JS, Delange K, Brun A, Bussy G, Gasparini F, Hilse T, Floesser A, Branson J, Bilbe G, Johns D, Gomez-Mancilla B. Epigenetic modification of the FMR1 gene in fragile X leads to a differential response to the mGluR5 antagonist AFQ056. Science Translational Medicine. 2011;3(64):64ra1. PMID: 21209411

49. Lemonnier E, Degrez C, Phelep M, Tyzio R, Josse F, Grandgeorges M, **Hadjikhani** N, Ben-Ari Y. A randomized controlled trial of bumetanide in the treatment of autism in children. Translational Psychiatry. 2012 ; (2),e202. DOI : 10.1038/tp.2012.124.

50. Bakhtiari R, Zürcher N, Rogier O, Russo B, Hippolyte L, Granziera C, Araabi B, Ahmadabadi M, **Hadjikhani** N. Differences in white matter reflect atypical developmental trajectory in autism: a tract-based spatial statistics study. NeuroImage: Clinical. 2012;1(1):48-56. PMID: 24179736

51. Noris B, Nadel J, Barker M, **Hadjikhani** N, Billard A. Investigating gaze of children with ASD in naturalistic settings. PLoS One. 2012;7(9):e44144. PMID 23028494

52. Granziera C, Daducci A, Meskaldji D, Roche A, Maeder P, Michel P, **Hadjikhani** N, Sorensen G, Frackowiak R, Thiran J.P., Meuli R, Krueger G. A new early and automated MRI-based predictor of motor improvement after stroke Neurology. 2012 ;Jul 3;79(1):39-46. PMID 22722626.

53. Van den Stock J, Vandenbulke M, Zhu Q, **Hadjikhani** N, de Gelder B. Developmental prosopagnosia in a patient with hypoplasia of the vermis cerebelli. Neurology. 2012; 78(21) :1700-1702. PMID: 22573630

54. Van der Zwaag W, Da Costa S, Zürcher N.R, Adams R.B, **Hadjikhani** N. A 7 Tesla fMRI study of amygdala response to fearful faces. Brain Topography. 2012; Apr;25(2):125-8 PMID: 22270846.

55. Adams RB, Franklin RG, Kveraga K, Ambady N, Kleck RE, Whalen P, **Hadjikhani** N, Nelson AJ. Amygdala responses to averted vs direct gaze fear vary as a function of presentation speed. Social Cognitive Affective Neuroscience. 2012; 7(5):568-77. PMID: 21666261

56. Zürcher N, Rogier O, Boshyan J, Hippolyte L, Russo B, Gillberg N, Helles A, Ruest T, Lemonnier E, Gillberg Ch, **Hadjikhani** N. Perception of social cues of danger in autism spectrum disorders. PLoS One. 2013; Dec 4;8(12):e81206. PMID: 24324679

57. Sabatier I, Chabrier S, Brun A, Hees L, Cheylus A, Gollub R, **Hadjikhani** N, Kong J, des Portes V, Floret D, Curie A. Stroke by Carotid Artery Complete Occlusion in Kawasaki Disease: Case Report and Review of Literature. Pediatric Neurology. 2013; Dec;49(6):469-73. PMID: 24095647

58. Meeren HKM, de Gelder B, Ahlfors SP, Hamalainen M, **Hadjikhani** N. Different cortical dynamics in face and body perception: an MEG study. PLoS One. 2013; Sep 6;8(9):e71408. PMID: 24039712

59. Granziera C, Romascano D, Daducci A, Roche A, Vincent M, Krueger G, **Hadjikhani** N. Migraineurs without aura show microstructural abnormalities in the cerebellum and the frontal lobe The Cerebellum. 2013 ; Dec;12(6):812-8. PMID 23703313

60. **Hadjikhani** N. Ward N, Boshyan J, Napadow V, Maeda Y, Truini A, Caramia F, Tinelli E, Mainero C. The missing link: Enhanced functional connectivity between amygdala and the viscerоceptive cortex in migraine. Cephalagia. 2013 ; 33(15):1264-1268. PMID: 23720503

61. Jiang X, Bollich A, Cox P, Hyder E, James J, Gowani SA, **Hadjikhani** N, Blanz V, Manoach DS, Barton JS, Gaillard WD, Riesenhuber M. A quantitative link between face discrimination deficits and neuronal selectivity for faces in autism NeuroImage Clinical. 2013; 2:320-321. PMID: 24179786

62. Zürcher N, Donnelly N, Rogier O, Russo B, Hippolyte L, Hadwin J, Lemonnier E, **Hadjikhani** N. It's all in the eyes: subcortical and cortical activation during grotesqueness perception in autism. PLoS One. 2013;8(1):e54313. PMID: 23342130

63. Granziera C, Daducci A, Romascano D, Roche A, Helms G, Krueger G, **Hadjikhani** N. Structural abnormalities in the thalamus of migraineurs with aura: a multiparametric study at 3T. Human Brain Mapping. 2014; 35(4):1461-8. PMID: 23450507

64. Guillon Q, **Hadjikhani** N, Baduel S, Kruck J, Arnaud M, Roge B. Both dog and human faces are explored abnormally by young children with ASD. NeuroReport. 2014;25(15):1237-41. PMID: 25162783

65. Guillon Q, **Hadjikhani** N, Baduel S, Rogé B. Visual social attention in Autism Spectrum Disorder: insights from eye tracking studies. Neuroscience & Biobehavioral Reviews. 2014 ;(42):279-297. PMID: 24694721

66. Curie A, Nazir T, Brun A, Paulignan Y, Reboul A, Delange K, Cheylus A, Bertrand S, Rochefort F, Bussy G, Marignier S, Lacombe D, Chiron C, Cossée M, Leheup B, Philippe C, Laugel V, De Saint Martin A, Sacco S, Poirier K, Bienvenu T, Souville I, Gilbert-Dussardier B, Bieth E, Kauffmann D, Briot P, de Fréminville B, Prieur F, Till M, Rooryck-Thambo C, Mortemousque I, Bobillier-Chaumont I, Toutain A, Touraine R, Sanlaville D, Chelly J, Freeman S, Kong J, **Hadjikhani** N, Gollub RL, Roy A, des Portes V. The c.429_452 duplication of the ARX gene: a unique developmental-model of limb kinetic apraxia. Orphanet J Rare Dis. 2014; Feb 14;9(1):25. PMID: 24528893

67. Fernell E, Wilson P, **Hadjikhani** N, Bourgeron T, Neville B, Taylor D, Gillberg C. Screening, intervention and outcome in autism and other developmental disorders – the role of randomized controlled trials. Journal of Autism and Developmental Disorders. 2014; 44(8):2074-6. PMID: 24554162

68. **Hadjikhani** N, Zürcher NR, Rogier O, Hippolyte L, Lemonnier E, Ruest T, Ward N, Lassalle A, Gillberg N, Billstedt E, Helles A, Gillberg C, Solomon P, Pkrachin K, Gillberg C. Emotional contagion for pain is intact in Autism Spectrum Disorders. Translational Psychiatry. 2014; Jan 14;4:e343. PMID: 24424389

    • *Selected as Must Read by the Faculty of 1000*

69. Bader M, **Hadjikhani** N. The concept of instability: a French perspective on the concept of ADHD. Attention Deficit and Hyperactivity Disorders. 2014; Mar;6(1):11-7. PMID: 24307288

70. **Hadjikhani** N. Deconstructing scientifically some of the myths regarding autism. Swiss Archives of Neurology and Psychiatry. 2014;165(8):272-6.

71. Guillon Q, **Hadjikhani** N, Roge B. L'utilisation de la technique de suivi du regard dans l'etude des trouble du spectre de l'autisme. L'Information Psychiatrique. 2014;90(10)827-34. doi:10.1684/ipe.2014.1274.

72. Kveraga K, Boshyan J, Adams R, Mote J, Betz N, Ward N, **Hadjikhani** N, Bar M, Barrett L. If it bleeds, it leads: Separating threat and negativity. Social Cognitive and Affective Neuroscience. 2015;10(1):28-35. PMID: 24493851

73. Durrleman S, Hippolyte L, Zufferey S, Iglesias K, **Hadjikhani** N. Complex Syntax in Autism Spectrum Disorders: A Study of Relative Clauses. International Journal of Language & Communication Disorders. 2015;50(2):260-7. PMID: 25244532

74. Maillard A, Ruef A, Pizzagalli F, Migliavacca E, Hippolyte L, Adaszewski S, Dukart J, Ferrari F, Conus Ph, Männik K, Zazhytska M, Siffredi V, Maeder Ph, Kutalik Z, Kherif F, **Hadjikhani** N, Beckmann J, Reymond A, Draganski B. (2014) The 16p11.2 locus modulates brain structures common to autism, schizophrenia and obesity. Molecular Psychiatry. 2015;20(1):140-7. PMID 25421402

75. Kveraga K, Boshyan J, Ward N, **Hadjikhani** N, Adams R Jr. Vision for action : saccadic and manual responses to clear threat and ambiguous negative scenes. Journal of Vision. 2015;15(12); 338. Doi: 10.1167/15.12.538

76. Guillon Q, Afzali MH, Roge B, Baduel S, Kruck J, **Hadjikhani** N. The importance of networking in autism gaze analysis. PLoS One. 2015 ;Oct 23;10(10):e0141191. PMID: 26496498.

77. Østergaard L, Dreier JP, **Hadjikhani** N, Jespersen SN, Dirnagl U, Dalkara T. Neurovascular coupling during cortical spreading depolarization and depression. Stroke. 2015 ;May;46(5):1392-401. PMID: 25882051.

78. **Hadjikhani** N, Zürcher N, Rogier O, Ruest T, Hippolyte L, Ben-Ari Y, Lemonnier E. Improving emotional face perception in autism with diuretic bumetanide: a proof-of-concept behavioral and functional brain imaging pilot study. Autism. 2015;19(2)149-157. PMID: 24343334

79. Dahlem MA, Schmidt B, Bojak I, Boie S, Kneer F, **Hadjikhani** N, Kurths J. Cortical hot spots and labyrinths: Why cortical neuromodulation for episodic migraine with aura should be personalized. Frontiers in Computational Neuroscience. 2015; 9:29. PMID: 25798103

80. Hippolyte L, Maillard AM, Rodriguez-Herreros B, Pain A, Martin-Brevet S, Ferrari C, Conus P, Macé A, **Hadjikhani** N, Metspalu A, Reigo A, Kolk A, Männik K, Barker M, Isidor B, Le Caignec C, Mignot C, Schneider L, Mottron L, Keren B, Albert D, Doco-Fenzy M, Gérard M. Bernier R, Goin-Kochel RP, Hanson E, Green Snyder L, 16p11.2 European Consortium, The Simons VIP Consortium, Ramus F, Beckmann JS, Draganski B, Reymond A, Jacquemont S. The number of genomic copies at the 16p11.2 locus modulates language, verbal memory and inhibition. Biological Psychiatry. 2016;80(2):129-139. PMID: 26742926.

81. Zebrowitz L, Ward N, Boshyan J, Gutchess A, **Hadjikhani** N. Dedifferentiated Face Processing in Older Adults is Linked to Lower Resting State Metabolic Activity in Fusiform Face Area. Brain Research. 2016; 1644:22-31. PMID: 27163722

82. Meeren HKM, **Hadjikhani** N, Ahlfors SP, Hämäläinen MS, de Gelder B. Early preferential response to fear stimuli in human right dosal visual stream – a MEG study. Scientific Reports. 2016;Apr 20;6:24831. PMID: 27095660

83. Guillon Q, Roge B, Afzali MH, Baduel S, Kruck J, **Hadjikhani** N. Intact perception but abnormal orientation towards face-like objects in young children with ASD. Scientific Reports. 2016;Feb 25;6:22119. PMID: 26912096

84. Curie A, Brun A, Cheylus A, Reboul A, Nazir T, Bussy G, Delange K, Paulignan Y, Mercier S, David A, Marigner S, Merle L, de Freminville B, Prieur F, Till M, Mortemousque I, Toutain A, Bieth E, Touraine R, Sanlaville D, Chelly J, Kong J, Ott D, Kassai B, **Hadjikhani** N, Gollub R, de Portes V. A novel analog reasoning paradigm: new insights in intellectually disabled patients. PLoS One. 2016; eb 26;11(2):e0149717. PMID: 26918704

85. Ellingsen DM, Garcia RG, Lee J, Lin RL, Kim J, Thurler AH, Castel S, Dimisko L, Rosen BR, **Hadjikhani** N, Kup B, Napadow V. Cyclic Vomiting Syndrome is characterized by altered functional brain connectivity of the insular cortex: A cross-comparison with migraine and healthy adults. Neurogastroenterology and Motility. 2017; 28(6). PMID 27910222

86. Åsberg Johnels J, Hovey D, Zürcher N, Hippolyte L, Lemonnier E, Gillberg C, **Hadjikhani** N. Autism and emotional viewing. Autism Research. 2017; 10(5):901-910. PMID 27891819

87. Lee J, Lin RL, Garcia RG, Kim J, Loggia ML, Mawla I, Wasan AD, Edwards R, Rosen BR, **Hadjikhani** N, Napadow V. Reduced insula habituation associated with amplification of trigeminal brainstem input in migraine. Cephalalgia. 2017;37(11)1026-1038. PMID: 27521844

88. Zebrowitz L, Boshyan J, Ward N, Gutchess A, **Hadjikhani** N. The Older Adult Positivity Effect in Evaluations of Trustworthiness Emotion : Regulation or Cognitive Capacity? PLoS One. 2017;Jan 6;12(1):e0169823. PMID: 28060919

89. **Hadjikhani** N, Zürcher N, Lassalle A, Hippolyte L, Ward N, Åsberg Johnels J. The effect of constraining eye-contact during emotional face perception – an fMRI study. Social Cognitive and Affective Neuroscience. 2017;12(7):1197-1207. PMID: 28402536

90. Garcia RG, Lin RL, Lee J, Kim J, Barbieri R, Sclocco R, Wasan A, Edwards R, Rosen BR, **Hadjikhani** N, Napadow V. Modulation of Brainstem Activity and Connectivity by Respiratory-gated Auricular Vagal Afferent Nerve Stimulation (RAVANS) in migraine patients. PAIN. 2017;Aug;158(8):1461-1472. PMID: 28541256

91. **Hadjikhani** N, Åsberg Johnels J,Zürcher NR, Lassalle A, Guillon Q, Hippolyte L, Billstedt E, Ward N, Lemonnier E, Gillberg C. Look me in the eyes: constraining gaze in the eye region provokes abnormally high subcortical activation in autism. Scientific Reports. 2017;Jun 9;7(1):3163. PMID: 28600558

92. Lassalle A, Åsberg Johnels J, Zürcher NR, Hippolyte L, Billstedt E, Ward N, Lemonnier E, Gillberg C. **Hadjikhani** N. Hypersensitivity to low intensity fearful faces in autism when fixation is constrained to the eyes. Human Brain Mapping. 2017; Dec;38(12):5943-5957. PMID: 28881454

93. Schmelkin C, Plessow F, Thomas JJ, Gray EK, Marengi DA, Pulumo R, Miller KK, **Hadjikhani** N, Franko DL, Eddy K, Lawson EA. Low oxytocin levels are related to alexithymia in anorexia nervosa. International Journal of Eating Disorders. 2017;50(11):1332-1338. PMID: 29044580

94. Bader M, Tannock R, **Hadjikhani** N. The Zappel-Philipp a historical example of ADHD Clinics. Attention Deficit and Hyperactivity Disorders. 2017;Sep 13. doi: 10.1007/s12402-017-0239-4. [Epub ahead of print]. PMID: 28905267

95. Zebrowitz L, Ward N, Boshyan J, Gutchess A, **Hadjikhani** N. Older Adults' Neural Activation in the Reward Circuit is Sensitive to Face Trustworthiness. Cognitive, Affective, & Behavioral Neuroscience. 2018;18(1):21-34. PMID: 29214437

96. **Hadjikhani** N, Åsberg Johnels J, Lassalle A, Zürcher NR, Hippolyte L, Gillberg C, Lemonnier E, Ben-Ari Y. Bumetanide for Autism : more eye-contact, less amygdala activation. Scientific Reports. 2018; 8:3602. PMID: 29483603

    - *Article in the Top 100 Scientific Reports neuroscience papers in 2018*

97. Zebrowitz LA, Boshyan J, Ward N, Hanlin L, Wolf JM, **Hadjikhani** N. Dietary dopamine depletion blunts reward network sensitivity to face trustworthiness. J. Psychopharmacology. 2018; Sep ;32(9) :965-978. PMID: 29620428

98. Martin-Brevet S, Rodriguez-Herreros B, Nielsen JA, Moreau C, Modenato C, Maillard AM, Pain A, Richetin S, Jønch AE, Qureshi AY, Zürcher NR, Conus P, 16p11.2 European Consortium, Simons Variation in Individuals Project (VIP) Consortium, Chung WK, Sherr EH, Spiro JE, Kherif F, Beckmann JS, **Hadjikhani** N, Reymond A, Buckner RL, Draganski B, Jacquemont S. Quantifying the effects of the 16p11.2 copy number variants on brain structure: A multi-site 'genetic-first' study. Biological Psychiatry. 2018; Aug 15 ;84(4) :253-264. PMID: 29778275

99. Lassalle A, Zürcher NR, Porro CA, Benuzzi F, Hippolyte L, Lemonnier E, Åsberg Johnels J, **Hadjikhani** N. Influence of anxiety and alexithymia on brain activation associated with the perception of others' pain in autism. Social Neuroscience. 2018; 7(1-9). PMID: 29683406

100. Curie A, Friocourt G, des Portes V, Roy A, Nazir T, Brun A; Cheylus A, Marcorelles P, Retzepi K, Maleki N, Bussy G, Paulignan Y, Reboul A, Ibarrola D, Kong J, **Hadjikhani** N, Laquerrière A, Gollub RL. Basal ganglia involvement in ARX patients: the reason for ARX patients very specific grasping? NeuroImage Clinical. 2018 ; Apr 5 ;19 :454-465. PMID 29984154

101. Orekhova EV, Sysoeva OV, Schneiderman JF, Lundström S, Galuta IA, Goiaeva DE, Prokovyev AO, Riaz B, Keeler C, **Hadjikhani** N, Gillberg C, Stroganova TA. Input-dependent modulation of MEG gamma oscillations reflects gain control in the visual cortex. Scientific Reports. 2018; May 31;8(1):8451. PMID 29855596

102. Lassalle A, Zürcher NR, Hippolyte L, Billstedt E, Porro CA, Benuzzi F, Solomon P, Prkachin K, Lemonnier E, Gillberg C, Åsberg Johnels J, **Hadjikhani** N. Effect of visual stimuli of pain on empathy brain network in people with and without Autism Spectrum Disorder. European Journal of Neuroscience. 2018; Sep ;48(6) :2333-2342. PMID 30168869

103. Galazka-Carney M, Åsberg Johnels J, Zürcher NR, Hippolyte L, Lemonnier E, Billstedt E, Gillberg C, **Hadjikhani** N. Pupillary Contagion in Autism. Psychological Science. 2018; 2019 Feb;30(2):309-315. PMID : 30444671

104. Orekhova EV, Stroganova TA, Schneiderman JF, Lundström S, Riaz B, Sarovic D, Sysoeva OV, Brant G, Gillberg C, **Hadjikhani** N. Neural gain control measured through cortical gamma oscillations is associated with sensory sensitivity. Human Brain Mapping 2019, Apr 1;40(5):1583-1593 PMID 30549144

105. Albrecht D, Mainero C, Ichijo E, Ward N, Granziera C, Zurcher NR, Akeju O, Bonnier G, Price J, Hooker J, Napadow V, Loggia M, **Hadjikhani** N. Imaging of neuroinflammation in migraine with aura- a [11C]PBR28 PET/MRI study. Neurology 2019 Apr 23;92(17):e2038-e2050. doi: 10.1212/WNL.0000000000007371. Epub 2019 Mar 27.PMID : 30918090

106. Dinkler L, Rydberg Dobrescu S, Råstam M, Gillberg C, Gillberg C, Wentz E, **Hadjikhani** N. Visual scanning during emotion recognition in long-term recovered anorexia nervosa: an eye-tracking study. International Journal of Eating Disorders 2019, Mar 4. doi: 10.1002/eat.23066. [Epub ahead of print]. PMID 30828832

107. **Hadjikhani** N, Vincent M. Neuroimaging clues of migraine aura. The Journal of Headache and Pain 2019, Apr 3;20(1):32. PMID 30943894

108. Karlsson M, Galazka M, Gillberg C, Cillberg C, Miniscalo C, Billstedt E, **Hadjikhani** N, Åsberg Johnels J. Social Scene Perception in Autism Spectrum Disorders: An Eye-tracking and Pupillometric study. Journal of Clinical and Experimental Neuropsychology, 2019, Dec;41(10)1024-1032. PMID 31362564.

109. Cárdenas-de-la-Parra A. Martin-Brevet,S. Moreau C. Rodriguez-Herreros B, Fonov VS, Maillard AM, Zürcher NR, 16p11.2 European Consortium, **Hadjikhani** N, Beckmann JS, Reymond A, Draganski B, Jacquemont S, Louis Collins D, Developmental trajectories of neuroanatomical alterations associated with the 16p11.2 Copy Number Variations, NeuroImage 2019, Dec; 203:116155 PMID 31494251

110. Kerem L, Hadjikhani N, Holsen L, Lawson E, Plessow F. Oxytocin reduces the functional connectivity between brain regions involved in eating behaviors in men with overweight and obesity. International Journal of Obesity 2020, May;44(5):980-989 PMID 31740723

111. Dinkler L, Taylor MJ, Råstam M, Hadjikhani N, Bulik CM, Lichtenstein P, Gillberg C, Lundström S. Association of etiological factors across the extreme end and continuous variation in disordered eating in female Swedish twins. Psychological Medicine, 2019, Dec 17:1-11. PMID 31843035

112. Zürcher NR, Loggia ML, Mullett JE, Tseng CE, Bhanot A, Richey L, Hightower B, Wu C, Parmar AJ, Butterfield RI, Dubois JM, Chonde D, Izquierdo-Garcia D, Wey HY, Catana C, Hadjikhani N,

McDougle CJ, Hooker JM. [11C]PBR28 MR-PET imaging reveals lower regional brain expression of translocator protein (TSPO) in young adult males with autism. Molecular Psychiatry, 2021, May;26(5):1659-1669. doi: 10.1038/s41380-020-0682-z. Epub 2020 Feb 19. PMID: 32076115

113. **Hadjikhani** N, Albrecht DS, Mainero C, Ichijo E, Ward N, Granziera C, Zurcher NR, Akeju O, Bonnier G, Price J, Hooker J, Napadow V, Nahrendorf M, Loggia ML, Moskowitz MA. Extra-axial inflammatory signal in parameninges in migraine with visual aura. Annals of Neurology, 2020, Jun;87(6):939-949 PMID 32932342

114. Sarovic D, **Hadjikhani N**, Schneiderman J, Lundström S, Gillberg C. Autism classified by MRI: a pilot study of a potential diagnostic tool. International Journal of Methods in Psychiatric Research, 2020, Dec;29(4)1-18. PMID 32945591

115. Sotoodeh MS, Taheri-Torbati H, **Hadjikhani N**, Lassalle A. Preserved action recognition in children with autism spectrum disorders: evidence from an EEG and eye-tracking study. Psychophysiology 2021 Mar;58(3):e13740. doi: 10.1111/psyp.13740. Epub 2020 Dec 6. PMID: 33280150

116. Lemonnier E, Rabiei H, Makowski D, **Hadjikhani N**, Ben-Ari Y. Treating autism with bumetanide: are large multicentric and monocentric trials on selected populations complementary? Journal of the American Academy of Child & Adolescent Psychiatry, 2020, J Am Acad Child Adolesc Psychiatry. 2020 Dec 29:S0890-8567(20)32224-3. doi: 10.1016/j.jaac.2020.09.025. PMID: 33385505

117. Dinkler L, Taylor MJ, Råstam M, **Hadjikhani** N, Bulik CM, Lichtenstein P, Gillberg C, Lundström S. Anorexia nervosa and autism: A prospective twin cohort study. Journal of Child Psychology and Psychiatry, 2021, Mar; 62(3)316-326*,* PMID 32496594

118. Xie Y, Ksander J, Gutchess A, **Hadjikhani** N, Ward N, Boshyan J, Zebrowitz L. Age differences in neural activation to face trustworthiness: Voxel pattern and activation level assessments. Cognitive, Affective, and Behavioral Neuroscience, 2021, Cogn Affect Behav Neurosci. 2021 Apr;21(2):278-291. doi: 10.3758/s13415-021-00868-y. Epub 2021 Mar 22. PMID: 33751423

119. Terrier LM, **Hadjikhani** N, Velut S, Magnain C, Amelot A, Bernard F, Zöllei L. Destrieux C. The trigeminal system: the meningovascular complex. A review. Journal of Anatomy, 2021 Jul;239(1):1-11. doi: 10.1111/joa.13413. Epub 2021 Feb 18. PMID: 33604906

120. **Hadjikhani** N, Vincent M. Can you have a migraine aura without knowing it? Current Opinions in Neurology, 2021, Jun 1;34(3):350-355. PMID 33661163

121. Ashina M, Terwindt GM, Al-Karagholi MA, de Boer I, Lee MJ, Hay DL, Schulte LH, **Hadjikhani** N, Sinclair AJ, Ashina H, Schwedt TJ, and Goadsby PJ. Migraine: disease characterisation, biomarkers, and precision medicine. Lancet. 2021 Apr 17;397(10583):1496-1504. PMID: 33773610.

122. Caly H, Rabiei H, Coste-Mazeau P, Hantz S, Alain S, Eyraud JL, Chianea T, Caly C, Makowski D, **Hadjikhani** N, Lemonnier E, and Ben-Ari Y. Machine learning analysis of pregnancy data enables

early identification of a subpopulation of newborns with ASD. Sci Rep. 2021 Mar 25;11(1):6877. PMID: 33767300.

123. **Hadjikhani N,** Vincent M. Visual perception in migraine: a narrative review. Vision.2021 April 28;5(2)20. PMID 33924855.

124. Galazka M, **Hadjikhani** N, Sundqvist M, Åsberg Johnels J. Facial processing speech in children with and without dyslexia. Annals of Dyslexia. 2021, Jun 11. doi: 10.1007/s11881-021-00231-3. Online ahead of print. PMID: 34115279

125. Fischi-Gomez E, Bonnier G, Ward N, Granziera C, **Hadjikhani N**. Ultra-high field in vivo characterization of microstructural abnormalities in the orbitofrontal cortex and amygdala in autism. European Journal of Neurosciences, 2021 54(6):6229-6236. PMID 34390517.

126. Dinkler L, Yasumitsu-Lovell K, Eitoku M, Fujieda, M, Suganuma, N, Hatakenaka, Y, **Hadjikhani**, N, Bryant-Waugh, R, Råstam, M, Gillberg, C. Development of a parent-reported screening tool for avoidant/restrictive food intake disorder (ARFID) : Initial validation and pevalence in 4-7-year-old Japanese children. Appetite 2022 168 :105735. PMID 34626573

127. Masulli P, Galazka M, Eberhard D, Åsberg Johnels J, Gillberg C, **Hadjikhani** N, Andersen TS. Data-driven analysis of gaze patterns in face perception: Methodological and clinical contributions. Cortex 2021 147:9-23. PMID 34998084

128. Andréen L, Galazka M, **Hadjikhani** N, Jeuris S, Masulli P, Åsberg Johnels J. Developing tolerance to eye contact in autism: A feasibility study with adults using behavioral, interview, and psychophysiological data. Psychology of Language and Communication 2022 25(1):240-263. doi:10.2478/plc-2021-0011

129. Wiggers A, Ashina H, **Hadjikhani N**, Sagare A, Zlovic BV, Lauritzen M, Ashina M. Brain Barriers and Their Potential Role in Migraine Pathophysiology. Journal of Headache and Pain 2022 Jan26 ;23(1) :16. PMID 35081902.

130. MüllerJ, Sinnecker T, Wendebourg MJ, Schläger R, Kuhle J, Schädelin S, Benkert P, Derfuss T, Cattin P, Jud C, Spiess F, Amann M, Lincke T, Barakovic M, Cagol A, Tsagkas C, Parmar K, Pröbstel AK, Reimann S, Asseyer S, Duchow A, Brandt A, Ruprecht K, **Hadjikhani N**, Fukumoto S, Watanabe M, Masaki K, Matsushita T, Isobe N, Kira JI, Kappos L, Würfel J, Granziera C, Friedemann P, Yaldizli Ö. Choroid Plexus Volume in Multiple Sclerosis versus Neuromyelitis Optica Spectrum Disorder: a retrospective, cross-sectional analysis Neurology: Neuroimmunology & Neuroinflammation 2022, 9(3)e :1147.

131. Åsberg Johnels J, **Hadjikhani** N, Sundquist M, Galazka M. Face processing in school children with dyslexia: neuropsychological and eye-tracking findings. Developmental Neuropsychology 2022, 47(2) :78-92. PMID 35148650

132. Terrier LM, **Hadjikhani N**, Destrieux C. The trigeminal pathways – A review. Journal of Neurology 2022, 269(7) :3443-3460. PMID 35249132

133. Brusaferri L, Alshelh Z, Martins D, Kim M, Weerasekera A, Housman H, Morrisey EJ, Knight PC, Castro-Blanco KA, Albrecht D, Tseng C, Zürcher NR, Ratai EM, Johnson-Akeju O, Makary M, Mercaldo ND, **Hadjikhani N**, Veronese M, Turkheimer F, Rosen BR, Hooker JM, Loggia M. The Pandemic Brain: neuroinflammation in non-infected individuals during the COVID-19 pandemic. Brain Behavior and Immunity, 2022, 102:89-97. PMID 35181440.

134. Christensen RH, Gollion C, Amin FM, Moskowitz MA, **Hadjikhani** N, Ashina M. Imaging the inflammatory phenotype in migraine. The Journal of Headache and Pain, 2022, 23(1):60 PMID 35650524

135. Dinkler L, Yasumitsu-Lovell K, Eitoku M, Fujieda, M, Suganuma, N, Hatakenaka, Y, **Hadjikhani**, N, Bryant-Waugh, R, Råstam, M, Gillberg, C. Early neurodevelopmental problems and risk for avoidant/restrictive food intake disorder (ARFID) in 4-7-year-old children: a Japanese birth cohort study. JCPP Advances 2022, *accepted*

136. **Hadjikhani** N, Galazka M, Kenet T, Joseph RM, Åsberg Johnels J. Discrepancy between high non-verbal intelligence and low accuracy at reading emotional expressions in the eyes reflects the magnitude of social-emotional difficulties in autism. European Archives of Psychiatry and Clinical Neuroscience 2022, online ahead of print, PMID 35980452

137. Åsberg Johnels J, Galazka M, Sundqvist M, **Hadjikhani** N. The left visual field bias during face perception aligns with individual differences in reading skills, and is absent in dyslexia. British Journal of Educational Psychology 2022, online ahead of print, PMID 36317253

138. Thorsson M. Galazka M, Åsberg Johnels J, **Hadjikhani** N. A novel end-to-end dual camera system for eye gaze symchrony assessment in face-to-face interaction. Attention, Perception and Psychophysics 2023, *accepted*

139. Thorsson M, Galazka M, Hajjari P, Fernell E, Delafield-Butt J, Gillberg C, Johnson M, Åsberg Johnels J, **Hadjikhani** N. A novel tablet-based motor coordination test performs on par with the Beery VMI subtest and offers superior temporal metrics: findings from children with Pediatric Acute-onset Neuropsychiatric Syndrome. Experimental Brain Research 2023, *accepted*.

140. **Hadjikhani** N, Åsberg Johnels J. Overwhelmed by the man in the moon? Pareidolic objects provoke increased amygdala activation in autism. Cortex 2023, *accepted*.

Non-peer reviewed scholarship in print or other media

1. Tootell RBH, **Hadjikhani** N. Has a new color area been discovered (editorial). Nature Neuroscience. 1998;1 :335-336.

2. **Hadjikhani** N. fMRI made clear. Trends in Neurosciences. 2002;25:485-486.

3. de Gelder B, **Hadjikhani** N. Shakespeare on the brain, Vivaldi on the weather, and Darwin on docu-soap? Trends in Cognitive Sciences. 2003;7(11):479-480.

4. DaSilva A, **Hadjikhani** N. Human Thalamic Response to Experimental Pain (Neuroimaging). In: Encyclopedic Reference of Pain. Springer-Verlag; 2006.

5. **Hadjikhani**, N. Le cerveau social – qu'est-ce qui ne fonctionne pas avec la reconnaissance des visages. IRIA, Tours. 2009.

6. **Hadjikhani**, N. Mécanismes miroir et autisme: l'oeuf, la poule ou les effets collatéraux? In: La Lettre des Neurosciences. Bordeaux, France: Societe des Neurosciences. 2011; p. 18-19

7. Ben-Ari, Y. **Hadjikhani**, N. Lemonnier, E. Ni Rituel Psychanalytique Ni Réductionnisme Génétique. In: Le Monde. Paris, France: Le Monde. 2012.

8. Granziera, C **Hadjikhani**, N. Surface-Based Structural Changes in Migraine. In: The Migraine Brain, Imaging Structure and Function. Oxford: Oxford University Press; 2012.

9. **Hadjikhani**, N Vincent, M. Visual Aura. In: The Migraine Brain, Imaging Structure and Function. Oxford: Oxford University Press; 2012.

10. **Hadjikhani**, N. Frontal Lobes Findings in Autism. In: Encyclopedia of Autism Spectrum Disorders. Springer; 2012.

11. DaSilva A, **Hadjikhani** N. Human Thalamic Response to Experimental Pain (Neuroimaging). In: Encyclopedic Reference of Pain. Berlin Heidelberg: Springer-Verlag; 2013

12. **Hadjikhani** N, Guillon Q. Zeroing in on illusions in eye-gaze research. Guest Blog, Simons Foundation Autism Research Initiative (SFARI) 13 may 2014 http://sfari.org/news-and-opinion/blog/2014/guest-blog-zeroing-in-on-illusions-in-eye-gaze-research

13. Ben-Ari Y,Lemonnier E, **Hadjikhani N.** Traiter l'autisme? Au-delà des gènes et de la psychanalyse. De Boeck Solal, 2015

14. Allely C.S., **Hadjikhani** N., Toro R. and Gillberg C. (2015) Neuropsychiatry. In: Arthur W. Toga, editor. Brain Mapping: An Encyclopedic Reference, vol 3, pp. 1049-1060. Academic Press: Elsevier

15. **Hadjikhani**, N. Eye-to-eye. Blog (2017), Gillberg Neuropsychiatry Center: http://gnc.gu.se/english/gillberg-s-blog/eye-to-eye

16. **Hadjikhani**, N. Confusing Empathy. Blog (2018), Gillberg Neuropsychiatry Center: https://gillberg.blogg.gu.se/en/2018/01/23/confusing-empathy/

17. **Hadjikhani**, N. Whose Shoes. Blog (2019), Gillberg Neuropsychiatry Center: https://gillberg.blogg.gu.se/en/2019/04/02/whose-shoes/

18. Gillberg C., Alely C., Bourgeron T., Coleman M., Fernell E., HAdjikhani N., Sarovic D. The Neurobiology of Autism. In: Volkmar, F. (ed) Autism and Pervasive Developmental Disorders. Cambridge University Press, 2019.

19. Lemonnier E, **Hadjikhani N**, Ravel D, Ben Ari Y. Bumetanide to treat autism spectrum disorders: clinical observations. In Tang, X: Neuronal Chloride Transporters in Health and Disease (chapter 25, pp 701-708). Academic Press: Elsevier, 2020.

20. Hadjikhani N. A Better Definition of Empathy. Asperger/Autism Network (AANE) Blog, 2021. https://www.aane.org/a-better-definition-of-empathy/

Theses

Hadjikhani N. The pattern of visual callosal connections in human extrastriate cortex. Switzerland: Lausanne;1995

Hadjikhani, N. Emotion Perception in Autism. The Netherlands: Tilburg;2010.

Abstract, Poster Presentations andExhibits Presented at Professional Meegings

1. **Hadjikhani** N, Clarke S, Drury H, Kraftsik R. Distribution of visual callosal afferents in human areas 19 and 37. European Journal of Neurosciences. 1994;7:189.
2. **Hadjikhani** N, Clarke S. NADPH diaphorase in human primary visual cortex. Experientia. 1995;51:A82.
3. Van Essen DC, Clarke S, **Hadjikhani** N, Drury H, Coogan TA, Carman G, Kraftsik R. Two-dimensional maps of visual callosal projections in the human extrastriate cortex. Soc Neurosci Abstr. 1995;20:248
4. Clarke S, Van Essen DC, **Hadjikhani** N, Drury H, Coogan T. Understanding human area 19 and 37: contribution of two-dimensional maps of visual callosal afferents. Hum Brain Mapp Paris. 1995;1:33
5. **Hadjikhani** N, Roland P. The role of the Claustrum in the crossmodal transfer of information. Hum Brain Mapp Boston. 1996
6. Tootell RBH, **Hadjikhani** NK, Hall EK, Vanduffel W, Marrett S, Dale AM. Mapping the spotlight of attention in human visual cortex. Soc Neurosci Abstr. 1998;24:1250
7. Mendola JD, Dale AM, **Hadjikhani** N, Tootell RBH. Retinotopic localization of novel picture encoding. J Cognitive Neurosci Suppl. 1998:22.
8. Sasaki Y, Murakami I, **Hadjikhani** N, Cavanagh P, Tootell RBH. Brain activity during illusory visual jitter. NeuroImage. 1999;9:857.
9. **Hadjikhani** N, Sanchez del Rio M, Bakker D, Wu O, Tootell RBH, Fischl B, Kwong KK, Cutrer FM, Sorensen G, Rosen BR, Moskowitz, MA. fMRI of visual cortical activation during visual aura in migraine. NeuroImage. 1999;9:S541.

10. Tootell RBH, **Hadjikhani** N, Somers, DC. fMRI reveals subthreshold activation in human visual cortex: implications for consciousness. Soc Neurosci Abstr. 1999;25:33.
11. Ledden P, Wald L, **Hadjikhani** N, Dale A. High sensitivity RF coil system for visual fMRI studies at 3T. NeuroImage. 2001;13:25.
12. Strangman G, Bonmassar G, West WC, **Hadjikhani** N, Belliveau JW, Boas DA. Simultaneous NIRS and EEG recording during visual stimulation. NeuroImage. 2001;13:46.
13. de Gelder B, Pourtois G, **Hadjikhani** N. The time course of face recognition: learning from face evidence for a dual route model. Int J Psychophysiol. 2001;41:215.
14. DaSilva A, Loder E, Sorensen GA, **Hadjikhani** N. Development of a craniofacial pain map for use in neuroimaging studies. Cephalalgia. 2003;23:659
15. DaSilva A, Tuch DS, Snyder J, **Hadjikhani** N. Diffusion tensor imaging (DTI) in migraine patients. Soc Neurosci Abstr. 2004.
16. **Hadjikhani** N, Joseph RM, Snyder J, Tager-Flusberg H. Anatomical differences in the mirror neurons system and social cognition network in autism. IMFAR. 2005.
17. Meeren, H. **Hadjikhani**, N. Ahlfors, S. de Gelder, B. MEG source analysis of early visual response during face perception: Anatomically-constraint noise-normalized minimum estimate. Journal of Cognitive Neuroscience. 2005;suppl S:247.
18. DaSilva A, Granziera C,Tuch DS, Snyder J, **Hadjikhani** N. Microstructural changes in white matter tracts in migraine patients. American Headache Society. 2005
19. Zurcher N, Russo B, **Hadjikhani** N. Functional Connectivity of the Somatosensory Cortex during Face Perception in Autism. IMFAR. 2009
20. Mainero C, Rettby N, Benner T, **Hadjikhani** N. Altered functional connectivity in the pain modulatory system of migraineurs. ISMRM. 2009
21. Dahlem MA, Knerr F, **Hadjikhani** N, Scholl E. Dynamics of wave segments on curved cortex. Dynamic Days Europe. 2009
22. Jacquemont S, Curie A, des Portes V, He Y, Paulding C,Torrioli MG,Chen F, **Hadjikhani** N, Martinet D,Meyer J,Beckmann JS, Neri G, Gasparini F, Hilse T, Floesser A, Branson J, Bilbe G, Johns D, Gomez-Mancilla B. Testing the metabotropic glutamate receptor theory in fragile X syndrome: a randomized, placebo-controlled, proof-of-concept study of AFQ056, a novel, sub-type selective mGluR5 inhibitor. American Society of Human Genetics 2010.
23. Leopizzi S, **Hadjikhani** N, Fornari E, Pierrehumbert B, Halfon O, Bader M. Cognitive Remediation and Executive Function Deficit in Adolescents with ADHD. Annual Meeting of the American Academy of Child and Adolescent Psychiatry (AACAP). 2010.
24. Maillard-Wermelinger A, Hippolyte L, **Hadjikhani** N, Munsch S, Jacquemont S. 16p11.2 genetic rearrangement: Neuropsychological profile through lifespan. International Neuropsychological Society, Basel. 2011.

25. Rogier O, Zurcher N, Hippolyte L, Lemonnier E, **Hadjikhani** N. Decreased empathy for facial expression of pain in high functioning autism. Human Brain Mapping. 2011.
26. Kveraga K, Boshyan J, Adams RB, Bar M, **Hadjikhani** N, Feldman Barrett L. Differential neural responses to threatening and merely negative visual scenes. Human Brain Mapping. 2011.
27. Zurcher N, Cornes K, Donnelly N, Hadwin J, Hippolyte L, Lemonnier E, **Hadjikhani** N. fMRI study of the Thatcher Effect in high functioning autism. Human Brain Mapping. 2011
28. van der Zwaag W, Da Costa S, Zurcher N, Adams R, **Hadjikhani** N. Stimulus duration can change polarity of BOLD response in the amygdalae: a 7T fMRI study. Human Brain Mapping. 2011
29. Granziera C, Daducci A, Romascano D, Roche A, Helms G, Kruger G, **Hadjikhani** N. Structural abnormalities in the thalamus of migraine patients: a multi-parametric study at high field. International Society for Magnetic Resonance in Medicine (ISMRM) conference, Melbourne, Australia, 2012.
30. Rogier O, Zurcher N, Hippolyte L, Lemonnier E, **Hadjikhani** N. Decreased empathy for facial expressions of pain in high functioning autism. International Conferences on Innovative Research in Autism (IRIA). 2012
31. Durrleman S, **Hadjikhani** N, Hippolyte L, Zufferey S, Iglesias K. Investigating Syntax in Autism Spectrum Disorders: A Study of Relative Clauses. International Conferences on Innovative Research in Autism (IRIA). 2012
32. Zurcher N, Donnelly N, Rogier O, Russo B, Hippolyte L, Hadwin J, Lemonnier E, **Hadjikhani** N. It_s all in the eyes: subcortical and cortical activation during grotesqueness perception in autism. International Conferences on Innovative Research in Autism (IRIA). 2012
33. Kveraga K, Boshyan J, Ward N, Alhfors S, Hamalainen M, Naik P, **Hadjikhani** N. Abnormal Neurodynamics of Face Processing in Autism. Biomag Paris. 2012.
34. Zurcher N, Rogier O, Boshyan J, Hippolyte L, Russo B, Ruest T, Lemonnier E, **Hadjikhani** N. The neural basis of joint attention deficits in autism spectrum disorders. Mirror Neurons: New Frontiers 20 Years After Their Discovery. Erice (Italy) September 2012
35. Rogier O, Zurcher N, Hippolyte L, Russo B, Ruest T, Lemonnier E, **Hadjikhani** N. Preserved affective but decreased cognitive empathy for facial expression of pain in autism. Mirror Neurons: New Frontiers 20 Years After Their Discovery. Erice (Italy) September 2012
36. Guillon Q, **Hadjikhani** N, Roge B. Looking to the left or looking to the right? Revisiting visual scanning of faces in young children with ASD – preliminary results. IMFAR SanSebastian 2013
37. **Hadjikhani** N, Mainero C, Ward N, Loggia M, Anderson T, Zurcher N, Arabasz G, Catana C, Hooker J. PET/MRI evidence of neuroinflammation in migraine. 67th annual Meeting of the MGH Scientific Advisory Committee SAC 2014
38. Maillard AM , Ruef A, Pizzagalli F, Migliavacca E, Hippolyte L, Adaszewski S, Dukart J, Ferrari C, Conus P, Männik K, Zazhytska M, Siffredi V, Maeder P, Kutalik Z, Kherif F, **Hadjikhani** N, Beckmann JS , Reymond A, Draganski B, Jacquemont S. The 16p11.2 locus modulates brain structures common to autism, schizophrenia and obesity. American Society of Human genetics San Diego 2015

39. Garcia RG, Lin R, Lee J, Loggia M, Jung H, Kim J, Wasan AD, Edwards R, **Hadjikhani** N, Napadow V. Trigeminal sensory nucleus connectivity is modulated by respiratory-gated auricular vagus nerve stimulation in migraine patients. Society for Neuroscience SfN 45th annual meeting, Chicago, 2015

40. Garcia RG, Lin R, Lee J, Sclocco R, Loggia M, Polimeni J, Wasan A, Edwards R, Kettner N, **Hadjikhani** N, Napadow V. Evaluating brainstem mechanisms of Respiratory-gated Auricular Vagus Afferent Nerve Stimulation (RAVANS) for migraine with 3T and 7T fMRI. The International Association for the Study of Pain (IASP) 16th World Congress on Pain, Yokohama, Japan

41. Orekhova EV, Schneiderman J, Lundström S, Riaz B, Rajaei S, **Hadjikhani** N, Sysoeva O, Stroganova T, Gillberg S. Visual gamma frequency reflects behavioral differences in visual sensitivity. BIOMAG 2016, Seoul, Korea

42. Orekhova EV, Schneiderman J, Lundström S, Riaz B, Rajaei S, **Hadjikhani** N, Sysoeva O, Stroganova TA, Gillberg C. Frequency of visual gamma oscillations in adults with ASD: a pilot study**.** Society for Neuroscience SfN 46th meeting 2016, San Diego

43. Jamal W, **Hadjikhani** N, Christodoulou JA, Cardinaux A, Vogelsang A, Kjelgaard M, Sinha P. Investigating the Predictive Impairment in Autism Hypothesis. IMFAR 2017 San Francisco

44. Martin-Brevet S, Rodriguez-Herreros B, Nielsen J, Moreau C, Maillard A, Pain A, Modenato C, Richetin S, Zürcher NR, **Hadjikhani** N, Reymond A, Buckner RL, Draganski B, Jacquemont S. The Effects of 16p11.2 Gene Dosage on Brain Structure. IMFAR 2017 San Francisco

45. Curie A, Friocourt G, des Portes V, Roy a, Nazir T, Brun-Laurisse A, Cheylus A, Marcorelles P, Retzepi K, Maleki N, Bussy G, Paulignan Y, Reboul A, Ibarrola D, Kong J, **Hadjikhani** N, Laquerriere A, Gollub R. Basal ganglia involvement in ARX gene mutated patients: the reason for very specific grasping in ARX mutated patients? European Pediatric Neurology Society (EPNS) 2017, Lyon, France.

46. Lassalle A, Johnels JÅ, Zürcher NR, Hippolyte L., Billstedt E., Ward N., Lemonnier E., Gillberg C., **Hadjikhani** N. . Hypersensitivity to low intensity fearful faces in people with autism focusing on the eye region. F1000Research 2017, 6:979 . 16th Vision Science Society (VSS) Annual Meeting, Florida. 2017.

47. Dinkler L, Rydberg Dobrescu, S., Råstam, M. Gillberg, C., Wentz, E., **Hadjikhani**, N. Subtle emotion recognition deficits in individuals recovered from teenage-onset anorexia nervosa. XXIIIrd Annual Meeting of the Eating Disorders Research Society, Leipzig, Germany, 2017.

48. Rynkiewicz A, Garnett M, Attwood T, Brownlow C, Baron-Cohen S, **Hadjikhani** N, Lassalle A, Sarah O, Pieniazek A, Kalisz K, Cazalis F, Lacroix A, Lucka I. Autism spectrum conditions (ASC) in females. Clinical perspectives on diagnosis and new directions in the assessments' construct. 1st International Conference of Polish Child and Adolescent Psychiatry, Katowice, Poland 2017

49. Rynkiewicz A, Grabowski K, Lassalle A, Baron-Cohen S, Schuller B, Cummins N, Baird A, **Hadjikhani** N, Podgorska-Bednarz J, Pieniazek A, Lucka I, Mazur A, Tabarkiewicz J. Humanoid robots and modern technology in ADOS-2 and BOSCC to support the clinical evaluation and therapy of patients with autism spectrum conditions (ASC). 1st International Conference of Polish Child and Adolescent Psychiatry, Katowice, Poland 2017

50. Albrecht , Mainero C, Ichijo E, Ward N, Granziera C, Zürcher NR, Akeju O, Bonnier G, Price J, Hooker J, Napadow V, Loggia M, **Hadjikhani** N. In-vivo imaging of neuroinflammation in migraine with aura – a [11C]PBR28 PET/MR study. International Association for the Study of Pain (IASP), Boston, USA 2018.

51. Zürcher NR, Loggia ML, Mullett JE, Bhanot A, Richey L, Hightower B, Wu C, Butterfield RI, Chonde D, Izquierdo-Garcia D, Wey HY, Catana C, **Hadjikhani** N, McDougle CJ, Hooker JM. [11C]PBR28 PET imaging reveals regional dereased brain expression of translocator protein (TSPO) in young adult males with autism. The XII International Symposium of Functional Neuroreceptor Mapping in the Living Brain, London, UK 2018.

52. Orekhova E, Stroganova TA, Schneiderman JF, Lundström S, Riaz B, Sarovic D, Sysoeva O, Gillberg C, **Hadjikhani** N. Response gain of MEG gamma oscillations predits sensory sensitivity in people with and without autism spectrum disorders. INSAR, Rotterdam, The Netherlands 2018.

53. Lassalle A, Zürcher NR, Porro CA, Benuzzi F, Hippolyte L, Lemonnier E, Åsberg Johnels J, **Hadjikhani** N. Influence of anxiety and alexithymia on brain activation associated with the perception of others' pain in autism. INSAR, Rotterdam, The Netherlands 2018.

54. Kerem L, Plessow F, Holsen L, **Hadjikhani** N, Lawson L. Oxytocin significantly attenuates the functional connectivity between food motivation brain areas in overweights and obese men exposed to high caloric food images. ENDO 2019, New Orleans, USA.

55. Dinkler L, Taylor M, **Hadjikhani** N, Råstam M, Lichtenchtein P, Gillberg C, Lundström S. Association of genetic risk factors for eating disorders and eating disorder traits: evidence for an etiological continuum from a Swedish twin sample. Annual Meeting of the Behavior Genetics Association (BGA) 2019, Stockholm, Sweden.

56. Sarovic D., Schneiderman JF, **Hadjikhani** N, Riaz B, Orekhova EV, Gillberg C, Lundström S. The Clinical Feasibility of deconstructing autism in a pathogenetic triad. INSAR 2019, Montreal, Canada

57. Müller J, Sinnecker T, Wendebourg J, Schläger R, Kuhle J, Benkert P, Derfuss T, Cattin P, Andermatt S, Spiess F, Amann M, Lincke T, Barakovic M, Cagol A, Asseyer S. Duchow A, Brandt A, Ruprecht K, Paul F, **Hadjikhani** N, Kappos L, Wuerfel J, Granziera C, Yaldizli Ö. Brain choroid plexus volume in Multiple Sclerosis versus Neuromyelitis Optica Spectrum Disease. ECTRIM/ACTRIMS MS meeting 2020 ,Washington DC, USA.

58. Datko M, Schuman-Olivier Z, Brusaferri L, Housman H, Tohyama S, Round K, Garcia R, Gollub R, Edwards R, Rosen B, **Hadjikhani** N, Cheng H, Loggia M, Napadow V. Insula Response to Interoception Is Inversely Correlated with Trait Mindfulness, Self-compassion, and Migraine Frequency in Patients with Episodic Migraine, The Journal of Pain, Volume 23, Issue 5, Supplement, 2022, Page 45,ISSN 1526-5900.

59. Housman H, Brusaferri L, Datko M, Tohyama S, Round K, Garcia Gomez RG, Gollub RL, Edwards RR, Makary M, Rosen BR, Cheng HT, Schuman-Olivier Z, Napadow V, **Hadjikhani** N, Loggia M. In vivo molecular imaging of neuroinflammation in patients with migraine. The Journal of Pain, Volume 23, Issue 5, Supplement, 2022, Page 44, ISSN 1526-5900

60. Brusaferri L, Alshelh Z, Martins D, Kim M, Weerasekera A, Housman H, Morrissey EJ, Knight PC, Castro-Blanco KA, Albrecht DS, Tseng CE, Zürcher NR, Ratai EM, Akeju O, Makary MM, Catana C, Mercaldo ND, **Hadjikhani** N, Veronese M, Turkheimer F, Rosen BR, Hooker JM, Loggia ML Brain inflammation in non-infected individuals during the COVID-19 pandemic, OHBM 2022

61. Brusaferri L, Housman H, Datko M, Tohyama S, Round K, Garcia Gomez RG, Gollub RL, Edwards RL, Makary M, Rosen BR, Cheng HT, Schuman-Olivier Z, Napadow V, **Hadjikhani** N, Loggia M. Migraine and neuroinflammation: a [11C]PBR28 PET-MR study, IASP 2022

62. Brusaferri L, Alshelh Z, Martins D, Kim M, Weerasekera A, Housman H, Morrissey EJ, Knight PC, Castro-Blanco KA, Albrecht DS, Tseng CE, Zürcher NR, Ratai EM, Akeju O, Mercaldo ND, **Hadjikhani** N, Rosen BR, Hooker JM, Loggia ML. Brain inflammation induced by COVID-19 related disruptions in non-infected healthy individuals, as revealed by multimodal imaging, SfN 2022

63. Goldstein AM, Datko M, Tohyama S, Hyman M, Round K, Linder LD, Brusaferri L, Housman H, Le V, Gollub RL, Edwards RR, Rosen BR, Hadjikhani N, Cheng HT, Schuman-Oliver Z, Loggia ML, Chan STK, Garcia RG, Napadow V. Breath-Hold Induced Cerebrovascular Reactivity in Episodic Migraine: a 7T MRI Study

64. Brusaferri L, Alshelh Z, Morrissey M, Kim M, Knight P, Zhang Y, Torrado Carjaval A, Johnson-Akeju S, Datko M, Toyama S, Housman H, Kinder LD, Round K, Wu O, Garcia Gomez R, Gollub RL, Edwards RR, Rosen BR, Cheng HT, Schuman-Oliver Z, Napadov V, Hadjikhani N, Loggia M. The impact of COVID-19 pandemic on brain inflammation and age in non-infected chronic pain patients. USASP 2023.

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Narrative Report

My **main activity** is centered **research**, and mentoring students and post-doctoral fellows in my lab centered on our projects.

My **area of Excellence** is **Investigation**. I have published 140 peer-reviewed papers, and 17 of them have been cited more than 300 times. My h-index (on scholarometer) is currently 61, and I have 17,880 cites.

Since 1993, I have employed neuroanatomy, histology, Positron Emission Tomography (PET), functional Magnetic Resonance Imaging (fMRI), Diffusion Tensor Imaging (DTI), electroencephalography (EEG), magnetoencephalography (MEG) as well as behavioral methods including eye-tracking to study the normal and the diseased brain.

I was only 34 years old when I got my first RO1 to study social cognition in autism, and shortly thereafter I became the principal investigator of a project in a PPG grant aimed at investigating migraine, henceforth my two domains of interest are migraine and autism. They originally stemmed from my interest and expertise in the visual system, and now are converging in the fields of neuroinflammation, and of Excitatory/Inhibitory (E/I) balance.

My main contributions to science have been (1) the *mapping of the visual system in humans*, including the discovery of the brain area responsible for color vision, published in Nature Neuroscience in 1998; (2) advancing our understanding of *migraine pathophysiology*, including a landmark paper on visual aura published in PNAS in 2001 that has been cited more than 1600 times; (3) doing innovative research on emotion processing, going beyond face perception and developing new paradigms to study body expression of emotion; (4) debunking false assumptions and trying to better understand *emotion and social cognition in autism*, including demonstrating that individuals with autism do have a normally-functioning face processing area in their brain of one cares to ensure that they look at the stimuli, that contrary to what a lot of scientists thought (but a lot of parents knew was wrong) individuals with autism do not lack emotional empathy, but are rather oversensitive, and showing the stressful effect of eye contact in autism; (5) using different MRI imaging techniques to *investigate alteration of brain structure in pathological conditions*, including in migraine, autism, and most recently Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infection (PANDAS).

More recently I was the principal investigator of a NIH R21 grant examining whether minute anatomical changes that have been described in histological samples in autism can be observed using quantitative MRI at ultra-high field with very high special resolution. The results of this study show that differences can be observed in the prefrontal cortex and the amygdala of autistic individuals at the individual level using this technique, opening the possibility of a diagnosis biomarker for this condition.

After being the principal investigator of a NIH R21 grant on neuroinflammation in migraine using PET-MRI, that resulted in two papers published in *Neurology* and in *Annals of Neurology*, I am now the co-leader of a project in a NIH PPG aimed at further examining neuroinflammation in migraine, and the effect of mind-body therapy on neuroinflammation; I have also been examining the effect of vagal nerve stimulation in migraine. Based on recent very exciting results showing inflammation in the meninges and the skull in migraine with aura, I am currently collaborating with Michael Moskowitz to further the study of the significance of the calvarium bone marrow to cortical meningeal inflammatory events in migraine,

and possibly in other meningeal disorders, through newly explored vascular microchannels draining the meninges and possibly the superficial cortex.

In addition to these studies, I am working on several other projects: examining a hypothesis that autism is related to an E/I imbalance, and planning to also address this question in migraine; collaborating with the Neuroendocrine Unit at MGH to study specific eating disorders that are associated with neurodevelopmental disorders (ARFID), as well as on the role of the microbiome on mother-infant bonding; and developing a way to examine neuroinflammation in a non-invasive manner in conditions such as PANDAS, in collaboration with K. Williams, director of the PANDAS clinic in Psychiatry at MGH; and using MEG and other behavioral markers to understand sensory disorders and pain perception in autism with Tal Kennet. I have also been collaborating with Pawan Sinha at MIT on a project related to prediction impairment in autism. Finally, I have several collaborations in Sweden at the University of Gothenburg where I am a now a full professor, centered on the study of autism.

In terms of teaching and education, since I was promoted Associate Professor in 2006, I supervised and mentored 11 post-doctoral fellows, 3 PhD students, 8 Master students, and was also the mentor for a K award. I strongly believe in mentoring young women researchers, and have been doing so with a graduate student from Wellesley, who just got her Master at Kings College, and is currently doing her PhD in Oxford, with a bachelor student from the Swiss Federal Institute of Technology who came to the Martinos as a research assistant and obtained her Master at MIT, as well as with a student from Scripps College who is going to enter in a major in Cognitive Science; I am currently supervising 4 PhD students. My first PhD student, Nicole Zurcher, just got promoted to Assistant Professor at Harvard Medical School.

Since my promotion to Associate Professor in 2006, I have published 106 papers, 41 conference abstracts and 6 book chapters; I have given more than 50 invited lectures, 2 grand rounds, and participated to several scientific documentaries and TV programs. I was recently one of the eight researchers invited to give a special seminar to celebrate the Lundbeck Brain Prize, which is the world's largest brain research prize, that was shared between four recipients including one of my mentor, Dr Mike Moskowitz. I am regularly participating as an ad-hoc reviewer in NIH panels, and for other US and European grant agencies. I have several fruitful collaborations ongoing within our institution, and with several other groups locally, nationally and internationally. I am an editor for two journals, PLoS and the Journal of Headache and Pain. I am in the advisory board of the Harvard Brain Science Initiative MIND project. I have been sharing my knowledge with my peers, and also with lay audiences including in TV programs or in public events, and there have been multiple instances of press coverage regarding my publication, in all my fields of research, namely migraine, emotion/social processing, and autism. I intend to pursue my career developing these areas of research, and hope to be able to continue to contribute to the community by helping to understand and help those affected by the two very common pathologies that are autism and migraine.

Ten most noteworthy papers (out of 140, h-index=61, 17,880 cites)

1. **Hadjikhani** N, Sanchez Del Rio M, Wu O, Schwartz D, Bakker D, Fischl B, Kwong KK, Cutrer FM, Rosen BR, Tootell RB, Sorensen AG, Moskowitz MA. Mechanisms of migraine aura revealed by functional MRI in human visual cortex. Proc Natl Acad Sci USA. 2001;98(8):4687-92. PMID: 11287655

This paper is the first to demonstrate that cortical spreading depression is the neural substrate of migaine aura. This paper has become a 'classic' and has been cited 1633 to this day.

2. **Hadjikhani** N, Liu AK, Dale AM, Cavanagh P, Tootell RB. Retinotopy and color sensitivity in human visual cortical area V8. Nature Neuroscience. 1998;1(3):235-41. PMID: 10195149

This study used fMRI and retinotopic mapping and described for the first time a new retinotopic area involved in color processing in humans. It has been cited 694 times.

3. de Gelder B, Snyder J, Greve D, Gerard G, **Hadjikhani** N. Fear fosters flight: A mechanism for fear contagion when perceiving emotion expressed by a whole body. Proc Natl Acad Sci U S A. 2004;101(47):16701-6. PMID: 15546983

Emotion processing had been concentrating on facial expression, and in this paper, we demonstrated the importance of extending these studies by introducing a new type of stimuli consisting of expressive body movements, showing the importance of body expression of emotion in the understanding of emotional behavior. Cited 588 times

4. **Hadjikhani** N, Joseph RM, Snyder J, Chabris CF, Clark J, Steele S, McGrath L, Vangel M, Aharon I, Feczko E, Harris GJ, Tager-Flusberg H. Activation of the fusiform gyrus when individuals with autism spectrum disorder view faces. NeuroImage. 2004;22(3):1141-50. PMID: 15219586

Prior imaging studies had reported a lack of "fusiform face area (FFA)" in autism, but they had failed to control for gaze. In this study, we demonstrated that when participants with autism are nudged to attend to the eye region of faces, their activation in the FFA is similar to the one of typical controls. This paper underlined the importance of controlling for gaze during brain imaging investigations in autism. Cited 423 times.

5. **Hadjikhani** N, Kveraga K, Naik P, Ahlfors S. Early activation of face-specific cortex by face-like objects. NeuroReport. 2009; 20:403-407. PMID: 19218867

Pareidolia is the tendency to perceive faces in random patterns exhibiting configural properties of faces, and in this study we examined whether this was due to an early process happening at the same time as real face perception, i.e. around 170ms as opposed to a later cognitive signal. This paper has attracted a lot of attention from the public, many articles in the press have reported these findings, and the Swedish Television even did a whole documentary around this. Cited 201 times.

6. **Hadjikhani** N, Zürcher NR, Rogier O, Hippolyte L, Lemonnier E, Ruest T, Ward N, Lassalle A, Gillberg N, Billstedt E, Helles A, Gillberg C, Solomon P, Pkrachin K, Gillberg C. Emotional contagion for pain is intact in Autism Spectrum Disorders. Translational Psychiatry. 2014; Jan 14;4:e343. PMID: 24424389

Some have been considering autism as a disorder of empathy, but in this study we demonstrated that while cognitive empathy is indeed affected in autism, affective empathy is in fact normal, or even elevated, and that they do show strong emotional responses to the viewing of other individuals in pain – which corresponds to what many parents have been reported over times. This paper was selected as Must Read by the Faculty of 1000, and cited 134 times.

7. Guillon Q, **Hadjikhani** N, Baduel S, Rogé B. Visual social attention in Autism Spectrum Disorder: insights from eye tracking studies. Neuroscience & Biobehavioral Reviews. 2014 ;(42):279-297. PMID: 24694721

This review was written together with my then PhD student Quentin Guillon, and is a thorough examination of the ample literature on eye-tracking studies. It has been cited 442 times.

8. **Hadjikhani** N, Åsberg Johnels J, Zürcher NR, Lassalle A, Guillon Q, Hippolyte L, Billstedt E, Ward N, Lemonnier E, Gillberg C. Look me in the eyes: constraining gaze in the eye region provokes abnormally high subcortical activation in autism. Scientific Reports. 2017;Jun 9;7(1):3163. PMID: 28600558

There is increasing evidence for an abnormality of the subcortical system in autism, which may be the substrate of their avoidance to engate in eye contact. Here we showed that constraining the gaze in the eye region in autism provokes abnormally high activation of the subcortical system, including the amygdala. This has consequences on how to help individuals with autism to engage with eye contact, which should be done progressively and by habituation. Cited 141 times

Hadjikhani N, Åsberg Johnels J, Lassalle A, Zürcher NR, Hippolyte L, Gillberg C, Lemonnier E, Ben-Ari Y. Bumetanide for Autism: more eye-contact, less amygdala activation. Scientific Reports. 2018; 8:3602. PMID: 29483603

In this proof-of-concept pilot study, we demonstrate that administration of bumetanide (a NKCC1 chloride importer antagonist that restores GABAergic inhibition) normalizes the level of amygdala activation during constrained eye contact with dynamic emotional face stimuli in autism. In addition, eye-tracking data reveal that bumetanide administration increases the time spent in spontaneous eye gaze during in a free-viewing mode of the same face stimuli.
Article in the Top 100 Scientific Reports neuroscience papers in 2018. Cited 75 times

Hadjikhani N, Albrecht DS, Mainero C, Ichijo E, Ward N, Granziera C, Zurcher NR, Akeju O, Bonnier G, Price J, Hooker J, Napadow V, Nahrendorf M, Loggia ML, Moskowitz MA. Extra-axial inflammatory signal in parameninges in migraine with visual aura. Annals of Neurology, 2020, Jun;87(6):939-949 PMID 32932342

This is the first paper to demonstrate evidence of the meninges and the bone marrow involvement in neuroinflammatory processes in the brain, opening new hypotheses and approaches to the imaging of neuroinflammatory disorders, beyond migraine.