**Harvard Medical School**

**Curriculum Vitae**

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| **Date Prepared:** | 09/13/2021 |
| **Name:** | **Zora Kikinis, PhD** |
| **Office Address:** | Brigham and Women's Hospital,  Psychiatry Neuroimaging Laboratory,  1249 Boylston Street, Boston, MA 02115 |
| **Work Phone:** | (617) 525-6116 |
| **Work Email:** | zora@bwh.harvard.edu |
| **Work FAX:** | 617-525-6170 |
| **Place of Birth:** | Jaromer, Czech Republic |
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Education

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| --- | --- | --- | --- |
| 1984 | M.S | Biochemistry  (Prof. Gutte) | University of Zurich, Switzerland |
| 1989-1991 | Visiting Ph.D. student | Cell biology  (Prof. Munro) | MIT, Cambridge, MA |
| 1991-1992 | Visiting Ph.D. student | Cell biology  (Prof. Munro) | Tufts University, Boston, MA |
| 1992 | PhD | Cell biology/Gene regulation  (Prof. Schatz) | University of Basel, Switzerland |
| 2015-2016 | Certificate in Applied Biostatistics | Harvard Catalyst | HMS, Boston, MA |
| 2017 | Imaging Methods for Clinical and Translational Research | Harvard Catalyst | HMS, Boston, MA |
| 2020 | Funding Your Research: NIH | Harvard Catalyst | HMS, Boston, MA |
| 2020 | Funding Your Research: Industry | Harvard Catalyst | HMS, Boston, MA |
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Postdoctoral Training

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| Year(s) | | Title | Specialty/Discipline  (Lab PI for postdoctoral research) | | | Institution | |
| 1992-1995 | Postdoctoral Fellow | | | Nutrition Research Center on Aging, Diabetes and Obesity (Dr. Paulson) | Tufts University, Boston, MA | |
| 2006-2007 | Postdoctoral Fellow | | | Psychiatry  (Prof. Shenton) | Harvard Medical School | |

Faculty Academic Appointments

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| --- | --- | --- |
| 1986-1989 | Research Associate | Friedrich Miescher-Institute, Basel, Switzerland |
| 1998-2000 | Visiting Scientist | Center for Genome Research, MIT, Cambridge |
| 2007-2016 | Instructor | Department of Psychiatry, Harvard Medical School |
| 2016 - | Assistant Professor | Department of Psychiatry, Harvard Medical School |

Appointments at Hospitals/Affiliated Institutions

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| Year(s) | Position Title | | | Department (Division, if applicable) | | Institution | |
| 04/2006- | | Research Associate | Psychiatry | | BWH | |

Major Administrative Leadership Positions

Local

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| Year(s) | Position Title | Institution (note if specific department) |

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| 2008- | Director of Neuroimaging and Neurobiology Seminars Series at the Psychiatry Neuroimaging Laboratory | BWH |

Committee Service

Local

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| Year(s) of  Membership | Name of Committee | Institution/Organization |
| Dates of Role(s) | Title of Role(s) |

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| --- | --- | --- | --- |
| 2013 | Committee on Improving Diffusion Tensor Imaging Pipeline | | HMS |
|  | 01/2013 – 09/2013 | Chair | |

Professional Societies

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| Year(s) of  Membership | Society Name |  |
| Dates of Role(s) | Title of Role(s) |

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| --- | --- | --- |
| 2012-2013 | The International 22q11.2 Syndrome Foundation | Member |
| 2013-2015 | International Society of Psychiatric Genetics (ISPG) | Member |
| 2013-2020 | American Society of Human Genetics (ASHG)    2014, 2015, 2020  Judge, Annual DNA Day Essay Contest | Member |
| 2015- | Society of Biological Psychiatry (SOBP) | Member |
|  | 2016, 2017 Mentor |  |
| 2016- | Organization of Human Brain Mapping (OHBM) | Member |
|  | 2017 Reviewer, conference abstracts |  |
| 2020- | Schizophrenia International Research Society (SIRS) | Member |
|  | 2020- Mentor |  |

Editorial Activities

* **Ad Hoc Reviewer:**

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| Journals for which you serve as a reviewer |

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| *American Journal of Medical Genetics*  *Neuropsychiatric Genetics*  *Psychiatry Research: Neuroimaging*  *Schizophrenia Research*  *The Cerebellum*  *Cerebral Cortex*  *Biological Psychiatry*  *The World Journal of Biological Psychiatry*  *NeuroImage: Clinical*  *Schizophrenia Bulletin*  *JAMA Psychiatry*  *American Journal of Psychiatry*  *Brain Connectivity*  *Molecular Psychiatry, Nature Publishing Group*  *European Journal of Medical Genetics, Elsevier*  *Frontiers in Neuroscience*  *Scientific Reports-Nature* |

Honors and Prizes

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| Year | Name of Honor/Prize | Awarding Organization | Achievement for which awarded  (if unclear from award title) |

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| 2008 | Young Investigator Award | National Alliance for Schizophrenia and Depression (NARSAD) | Research Funds |
| 2011 | Junior Investigator Laboratory Support Award | Harvard Catalyst Clinical Research Center (HCCRC) | Research Funds |
| 2016 | HMS Leadership Development for Physicians and Scientists | Harvard Medical School | Continuing Medical Education |

**Report of Funded and Unfunded Projects**

Funding Information

Past

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| --- | --- |
| 2006-2009 | Imaging and Genetics of Schizophrenia of the 22q11 Deletion Syndrome,  Career Reentry grant (NIH PA-04-126) Supplement to R01 by Dr. Shenton  PI ($92,460) |
|  | Major goal of the study was acquisition and analysis of brain white matter images from patients with 22q11Deletion Syndrome, a genetic model of schizophrenia. |
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| 2009-2011 | White Matter Changes in Subjects with Neuregulin 1 Haplotype HAP-ICE and ErbB4 Schizophrenia Risk Haplotypes  NARSAD Young Investigator Award 2008 by the Brain and Behavior Foundation |
|  | PI ($60,000) |
|  | Major goal was to collect and to genotype DNA in order to perform correlation between genotype and white matter tracts in controls and in schizophrenia patients. |
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| 2009-2011 | MR Brain Imaging of Frontal-Striatal-Thalamic Circuits in Schizophrenia  Veterans Administration Merit Award (Prof. Shenton) |
|  | Investigator |
|  | Major goal was to analyze the fiber tracts of the frontal-striatal-thalamic circuits in schizophrenia and control subjects using MR-DTI. |
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| 2010-2011 | Improving Imaging of Diffuse Axonal Injury in Traumatic Brain Injury  Center for Integration of Medicine and Innovative Technology (CIMIT) Project # 11-539 (Prof. Shenton) |
|  | Investigator |
|  | Major goal was to image brain white matter in an animal model of traumatic brain injury using MR-DTI |
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| 2013-2014 | Brain indices of risk for post-traumatic stress disorder after mild traumatic brain injury  DoD W81XWH-07-CC-CS (Prof. Shenton)  Investigator |
|  | Major goal was to design the imaging protocol and overseeing the processing of all images for the research study. |
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| 2009–2014 | MR Brain Diffusion Tensor Imaging in Schizophrenia  Veterans Administration Merit Award (Prof. Shenton) |
|  | Investigator |
|  | Major goal was the analysis of white matter tracts in schizophrenia and in control subjects. |
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| 2014-2015 | Computational Morphometry In Schizophrenia And Related Disorders  NIH 5R01MH082918-05 (Prof. Shenton) |
|  | Investigator |
| 2012-2016 | Major goal was to develop, evaluate and apply novel computational tools for the purpose of understanding morphometric changes in neuroanatomical structures.  Biomarkers for Psychosis in Velocardiofacial Syndrome  NIH/NIMH 5R01MH64824-11  Site PI ($192,000)  Major goal was to analyze white matter tracts in patients with Velocardiofacial Syndrome, their siblings and control subjects using tractography. |
| 2015-2018 | Structural Connectivity Biomarkers in Prodromes and 22q11.2 Deletion Syndrome NIH/NIMH 1R21MH106793-01A1  PI ($275,000)  Major goal was to detect inflammation-like processes in brain white matter and blood in subjects with 22q11DS and prodromal symptoms of schizophrenia. |
| 2012-2017 | Novel DT-MRI Analyses of White Matter in Schizophrenia   R01 MH074794 (Prof. Shenton)  Investigator  The main goal of this study was to develop and to apply novel Diffusion Tensor Magnetic Resonance Imaging (DT-MRI) group analysis methods, in order to detect and to localize white matter brain abnormalities in schizophrenia. |
| 2014-2018 | Development of MR Biomarkers of Brain Injury in Acute and Chronic mTBI  VA Merit Award (Prof. Shenton)  Investigator  The main goal of this study was to investigate biomarkers of brain injury in order to target future treatments. |
| 2015-2019 | MR Brain Diffusion Tensor Imaging in Schizophrenia VA Merit Award 101 CX000176 (Prof. Shenton) The main goal of this study is to investigate white matter abnormalities using advanced imaging techniques in both early and late schizophrenia. |

Current

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| 2017-2021 | Abbott Pharmaceutical (Dr. Koerte)  Investigator  The major goals are to detect and to characterize sex differences in brain structure and function immediately after concussion and during recovery and to understand the effects of sports-related brain trauma, including the possible development of biological markers, for diagnostic, therapeutic and preventive purposes. |
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| 2015-2021 | Chronic Traumatic Encephalopathy: Detection, Diagnosis, Course, and Risk Factors  U01NS093334 (Prof. Stern)  Investigator |
|  | Main goal of this study is to investigate white matter abnormalities using advanced imaging techniques and to develop accurate methods for detecting and diagnosing Chronic Traumatic Encephalopathy. |
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**Report of Local Teaching and Training**

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

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| 2006-2008 | Genetics Reading Group  Research Fellows | Psychiatry Neuroimaging Laboratory, BWH, Boston, MA  Monthly meetings, one hour |
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| 2006 | Nucleotide Repeat Diseases  Clinical Fellows | South Shore Residency Training Program, VA Medical Center, HMS, Brockton, MA  One hour lecture |
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| 2007 | The Human Genome Project and Beyond  Clinical Fellows | South Shore Residency Training Program, VA Medical Center, HMS, Brockton, MA  One hour lecture |
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| 2007 | Neuregulins and ErbB Receptors  Clinical Fellows and Research Fellows | Clinical Research Training Program, Judge Baker Center, HMS, Boston, MA  One hour lecture |
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| 2008 | Delineation of the DLPFC in MRI of Schizophrenia Patients  Research Fellows | Lunchtime Seminar series  Department of Psychiatry, BWH, Boston, MA,  One hour lecture |
| 2010 | Diffusion MRI of the Brain of Transgenic CNP-DN-ErbB4 Mouse, Research Fellows | Lunchtime Seminar series  Department of Psychiatry, BWH, Boston, MA,  One hour lecture |
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| 2011 | The role of Nrg1 and ErbB4 Pathway in Brain White Matter  Research Fellows | Lunchtime Seminar series  Department of Psychiatry, BWH, Boston, MA,  One hour lecture |
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| 2012 | Reduced Diffusivity in Fiber Tracts of the Ventral Visual Stream  in 22q11 Deletion Syndrome: A Tractography Study  Research Fellows | Lunchtime Seminar series  Department of Psychiatry, BWH, Boston, MA,  One hour lecture |
| 2014-2016 | Imaging and Genomics Reading Group  Research Fellows | Psychiatry Neuroimaging Laboratory, BWH, Boston, MA  Biweekly meetings, one hour |
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| 2015 | Diffusion Tensor Imaging:  a Method to Analyze  Brain White Matter  Clinical Fellows | Course on Research Methods VA Medical Center, HMS, Brockton, MA One hour lecture |

Laboratory and Other Research Supervisory and Training Responsibilities

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| 2008- | Supervision of 1 to 3 summer interns every year (high School or college level), who intend to pursue a career as M.D, Ph.D. or M.D./Ph.D. nationally or abroad. | Daily mentorship during 6 to 8 weeks each |
| 2014-2016 | Post-doctoral fellows | Two hours/monthly |
| 2018 | Master’s degree student | Four hours/weekly |
| 2019- | Postdoctoral fellows | Four hours/weekly |

Formally Supervised Trainees

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| --- | --- |
| 2006-2008 | Charles Davidson, B.A. (continued to University of Nebraska-Lincoln, M.A. in Clinical Psychology 2010, Ph.D. program for Clinical Psychology ’15)  co-authored published manuscript |
| 2007-2010 | Laurel Bobrow, S.B. (continued to Yale, PhD program in Neuroscience) |
|  | co-authored published manuscript |
| 2008-2011 | Diandra Lucia, S.B. (continued to University of Massachusetts, Medical School, MD ‘15/ PhD program is Neuroscience/Neurobiology ’19) |
|  | co-authored published manuscript |
| 2008-2013 | Paula Pelavin, B.A. (continued to Tufts School of Medicine, program Physician Assistant, M.S. ’16) |
|  | co-authored published manuscript |
| 2009-2012 | Mai-Anh Vu, B.A. (continued to Duke, PhD program in Cognitive Neuroscience) |
|  | co-authored published manuscript, authored abstract to national meeting |
| 2009-2012 | Thomas Ballinger, B.A. (continued to University of Washington, MD program) |
|  | co-authored published manuscript |
| 2010-2014 | Tali Swisher, B.A. (continued to Tufts University, School of Medicine, Biomedical Sciences, M.S. ’14) |
|  | authored abstract to local meeting |
| 2012-2014 | Kathryn Green, B.A. |
|  | authored abstract to local meeting |
| 2012-2014 | Michelle Giwerc, B.S. (continued to Yale University School of Medicine, Physician Associate Program, M.S. ’19) |
|  | authored abstract to local meeting |
| 2012-2014 | Eli Fredman, B.A. (continued to George Washington University, School of Medicine and Health Sciences, M.D. ‘18) |
|  | authored abstract to local meeting |
| 2012 | Jitka Rehulova-Huttlova, M.D./Ph.D.‘14, University of Brno, Czech Republic. Project awarded with the Prize of the Czech Psychiatric Association.  Authored peer-reviewed manuscript. |
| 2013 | Caroline Loy, Cornell University ‘15 |
|  | co-authored abstract to national meeting |
| 2013 | Kevin Kang-Ikg Cho, PhD candidate ‘16, Seoul National University, South Korea |
|  | co-authored abstract to national meeting and a peer-reviewed manuscript |
| 2013-2014 | Halen Baker, Boston University ‘14 |
|  | co-authored abstract to national conference,  authored abstract to local meeting. |
| 2013-2015 | Anni Zhu, B.A. |
|  | Co-authored a peer-reviewed manuscript |
| 2014-2016 | Dominick Newell, B.A. |
|  | authored abstract to local meeting, co-authored a peer-reviewed manuscript. |
| 2014 | Analiese Fernandes, Brook School ’15 (continued to dual-degree program in Life Sciences and Management, University of Pennsylvania ’19) |
| 2015 | Trisha Bhatia, Boston University ‘19 |
| 2015-2016 | Xue (Lily) Gong, B.A. (continued to Neuroscience PhD program, UC Berkeley) |
|  | Co-authored abstract to a national meeting and peer-reviewed manuscript |
| 2015-2018 | Valerie J. Sydnor, B.S. (continued to Neuroscience PhD program, University of Pennsylvania) |
|  | authored abstract to local meeting, co-authored peer-reviewed manuscript |
| 2015-2018 | Sarina Karmacharya, B.S.(continued to Fast-track Ph.D. studies, LMU, München, Germany) |
|  | authored abstract to local meeting |
| 2016-2018 | Sophia Swago, B.E. (continued to Bioengineering PhD program, University of Pennsylvania)  Authored abstract to local meeting, co-authored peer-reviewed manuscript in submission |
| 2017 | Lily Charron, (continued to Hamilton College, majoring in Neuroscience, ‘21) |
| 2018- | Elizabeth Rizzoni, B.A. authored abstract to local meeting, co-authored two peer-reviewed manuscript |
| 2018- | Annelise Silva, B.S. authored abstract to local meeting, co-authored a peer-reviewed manuscript. |
| 2018-2019  2019- | Carina Heller, Master Thesis student, University of Jena, Germany,  graduated with the best grade;  continued to PhD program in Neuroscience and Medical School, University of Jena, Germany,  authored abstract to a local and several international meetings, first-authored two peer-reviewed manuscripts and co-authored two manuscripts. Co-advised on her Master Thesis, co-advising on her PhD thesis. |
| 2018-2019 | Saskia Steinmann, PhD, visiting scientist, University Medical Center Hamburg-Eppendorf, Hamburg, Germany. Co-authored a peer-reviewed manuscript. |
| 2018-2021 | Martin Jani, PhD candidate ‘21, University of Brno, Czech Republic,  First authored a peer-reviewed manuscript, co-authored a manuscript. Co-advised on his PhD thesis. |
| 2019-2021 | Maria Geisler, PhD candidate ‘21, University of Jena, Germany, continued to post doctoral fellow at University of Jena, Germany.  co-authored abstract to a local meeting, first-authored a peer-reviewed manuscript. |
| 2019-2020 | Sinead Kelly, PhD, Instructor at HMS,  mentoring on organization of seminars |
| 2019- | Johanna Seitz, B.Sc. MD, postdoctoral fellow,  first-authored a peer-reviewed a manuscript. |
| 2019-2020 | Magdalena Seethaler, MD, visiting fellow, (continued as clinical psychiatrist to University Hospital Charité,Berlin, Germany)**;** First-authored a manuscript, in preparation |
| 2021- | Maria Geisler, postdoctoral fellow, University of Jena, Germany, continues to collaborate  Manuscript in preparation. |

Local Invited Presentations

*No presentations below were sponsored by outside entities*

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| 2008 | White Matter Changes in Subjects with Neuregulin 1 and ErbB4 Schizophrenia Risk Haplotypes / Speaker Series  Department of Psychiatry, MGH, Boston, MA |
| 2014 | 22q11Deletion Syndrome: a model of schizophrenia / Speaker Series  Department of Radiology, BWH, Boston, MA |
| 2014 | 22q11Deletion Syndrome: a disease model for understanding schizophrenia / Brain Mapping Seminar,  Martinos Center for Biomedical Imaging, MGH, Charlestown, MA |

**Report of Regional, National and International Invited Teaching and Presentations**

*No presentations below were sponsored by outside entities*

Regional

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| --- | --- |
| 1992 | Iron-dependent Translation of Ferritin / Speaker Series  University of New Hampshire, Durham, NH. |
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National

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| 2013 | Brain White Matter Analysis in Subjects with 22q11DS using the TBSS Method /  Lunch Speaker Series  SUNY Syracuse, NY. |
| 2014 | Brain White Matter Analysis in Subjects with 22q11DS and those with and without  Psychotic Symptoms / Lunch Speaker Series  SUNY Syracuse, NY |
| 2017 | Changes in Thalamo-frontal Connectivity are Associated with Prodromal  Psychosis in Young Adults with 22q11.2 Deletion Syndrome  Invited oral presentation  International Conference on Schizophrenia Research (ICOSR), San Diego, CA. |
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International

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| 1992 | Search for the Iron Responsive Element (IRE) Consensus Sequence /  Speaker Series  European Molecular Biology Laboratory, Heidelberg, Germany. |
| 1992 | Iron-Responsive Element of the Ferritin mRNA / Speaker Series  Swiss Institute of Experimental Cancer Research (ISREC), Lausanne, Switzerland. |
| 1992 | Regulation of Translation of the Ferritin mRNA / Speaker Series  University of Zurich, Zurich, Switzerland |
| 2012 | Reduced Diffusivity in Fiber Tracts of the Ventral Visual Stream in 22q11DS /  Oral presentation based on selected abstract  Annual meeting of the Velo-Cardio-Facial Syndrome Educational Foundation,  Toronto, Canada |
| 2013 | Diffusion Weighted Imaging: a Noninvasive Probe into Normal and Abnormal Brain  White Matter / invited speaker to a workshop  Central European Institute of Technology (CEITEC), Brno, Czech Republic. |
| 2013 | 3D Slicer software, a Hands-on Tutorial / Speaker Series  Central European Institute of Technology (CEITEC), Brno, Czech Republic. |
| 2015 | Investigation of 22q11 Deletion Syndrome using dMRI / invited speaker  Central European Institute of Technology (CEITEC), Brno, Czech Republic |
| 2017 | Investigation of Heterogeneity in Cortical Microstructure in Individuals with 22q11 Deletion Syndrome: a Diffusion MRI study  Invited speaker to a symposium  European Society for Child and Adolescent Psychiatry, Geneva, Switzerland |
| 2019 | Imaging Individuals with the 22q11 Deletion Syndrome. Are Rare Disorders Helpful in Research?  Invited speaker University Medical Center Hamburg-Eppendorf, Hamburg, Germany |
| 2019 | 22q11 Deletion Syndrome, a Model for Psychosis Using Imaging as a Non-invasive Probe  Invited speaker in a workshop  Beihang University, Beijing, China |
| 2019 | 22q11 Deletion Syndrome, a Model for Epilepsy and Psychosis  Using Imaging as a Non-invasive Probe  Invited speaker University of Western Australia, Perth, Australia |
| 2020 | MRI: a non-invasive probe to investigate psychiatric disorders  Invited speaker at the Université de Nouakchott Al Aasryia, Faculté  de Médicine de Nouakchott, Nouakchott, Mauritanie,  Train the Trainer Program |
| 2020 | Diffusion Tensor Imaging: a Non-invasive Probe into Analysis of Brain White and Brain Gray Matter  Invited speaker at the Jornada de Neuro-Ingeniería, Universidad de La Laguna, Tenerife, Spain |
| 2020 | dMRI: a Non-invasive Probe to Investigate White and Gray Matter of the Brain Invited speaker at the Department of Psychiatry, BWH, HMS, Boston |
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**Report of Scholarship**

#shared first authorship, \*trainee

**Peer reviewed publications in print or other media**

**Research Investigations:**

<http://www.ncbi.nlm.nih.gov/sites/myncbi/zora.kikinis.1/bibliography/41388213/public/?sort=date&direction=descending>

1. Hofstetter P, **Kikinis Z**, Altus MS, Pearson D, Nagamine Y. [A New Genetic Approach for Studying Hormonal Regulation of Urokinase-type plasminogen Activator Gene Expression in LLC-PK1 Cells](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC368138/pdf/molcellb00084-0395.pdf). *Mol. Cell. Biol.* 1987; 7:4535-4541. PMC368138
2. **Kikinis Z**, Eisenstein RS, Bettany AJE, Munro HN. [Role of RNA Secondary Structure of the Iron-responsive Element in Translational Regulation of Ferritin Synthesis](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC307361/pdf/nar00020-0186.pdf). *NAR* 1995; 23:4190-4195. PMC307361
3. Cochary EF, **Kikinis Z**, Paulson KE. [Positional and Temporal Regulation of Lipogenic Gene Expression in Mouse Liver](http://www.ncbi.nlm.nih.gov/pubmed/8019127). *Gene Expression* 1993; 3:265-278. PMID8019127
4. **Kikinis Z**, Fallon J, Niznikiewicz M, Kubicki M, Nestor P, \*Davidson C, \*Bobrow L, \*Pelavin P, Fischl B, McCarley RW, Kikinis R, Shenton ME. [Gray Matter Volume Reduction in Rostral Middle Frontal Gyrus in Patients with Chronic Schizophrenia](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2975427/pdf/nihms229895.pdf). *Schizophr. Res.* 2010; 123(2-3):153-9. PMC2975427. PMC2975427
5. **Kikinis Z**, Asami T, Bouix S, Finn CT, \*Ballinger T, Tworog-Dube E, Kucherlapati R, Kikinis R, Shenton ME, Kubicki M. [Reduced Fractional Anisotropy and Axial Diffusivity in White Matter in 22q11.2 Deletion Syndrome: A Pilot Study](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3462006/pdf/nihms-399711.pdf). *Schizophr Res*. 2012; 141(1):35-9. PMC3462006
6. Quan M, Lee SH, Kubicki M, **Kikinis Z**, Rathi Y, Seidman LJ, Mesholam-Gately RI, Goldstein JM, McCarley RW, Shenton ME, Levitt JJ. [White Matter Tract Abnormalities between Rostral Middle Frontal Gyrus, Inferior Frontal Gyrus and Striatum in First-Episode Schizophrenia](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4110910/). *Schizophr Res* 2013; 145(1-3):1-10. PMC4110910
7. **Kikinis** Z, Makris N, Finn CT, Bouix S, \*Lucia D, Coleman MJ, Tworog-Dube E, Kikinis R, Kucherlapati R, Shenton ME, Kubicki M. [Genetic contributions to changes of fiber tracts of ventral visual stream in 22q11.2 deletion syndrome](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3796180/?tool=myncbi).*Brain Imaging Behav.* 2013; 7(3):316-25. PMC3796180
8. Perlstein MD, Chohan MD, Coman IL, Antshel KM, Fremont WP, Gnirke MH, **Kikinis Z**, Middleton FA, Radoeva PD, Shenton ME, Kates W. [White Matter Abnormalities in 22q11.2 Deletion Syndrome: PreliminaryAssociations with the Nogo-66 Receptor Gene and Symptoms of Psychosis](http://www.ncbi.nlm.nih.gov/pubmed/24321711).*Schizophrenia Research* 2014; 152(1):117-23. PMC3909835
9. #\*Hüttlova J, **#Kikinis Z**, KerkovskyM, BouixS, \*VuM, Makris N, ShentonME, Kasparek T. [Abnormalities in Myelination of Superior Cerebellar Peduncle in Patients with Schizophrenia and Deficits in Movement Sequencing](http://www.ncbi.nlm.nih.gov/pubmed/24550129). *Cerebellum* 2014; 13(4):415-24. PMID:24550129
10. Kates, WR, Olszewski AK, Gnirke MH, **Kikinis Z**, Nelson J, Antshel KM, Fremont W, Radoeva PD, Middleton FA, Shenton ME, Coman IL. [White Matter Microstructural Abnormalities of the Cingulum Bundle in Youth with 22q11.2 Deletion Syndrome:  Associations with Medication, Neuropsychological Function, and Prodromal Symptoms of Psychosis](http://www.ncbi.nlm.nih.gov/pubmed/25066496). *Schizophrenia Research* 2015;161(1):76-84. PMC4277733
11. Bareš M, Apps R, **KikinisZ**, Timmann D, Oz G, Ashe JJ, Loft M, Koutsikou S, Cerminara N, Bushara KO, Kašpárek T.[Proceedings of the workshop on Cerebellum, Basal Ganglia and Cortical Connections Unmasked in Health and Disorder](file:///Users/zora/Dropbox%20(Partners%20HealthCare)/Documents-on-Dropbox/2018/CV-biosketch-Certificates/CV_HMS/.ncbi.nlm.nih.gov/pubmed/25205331). *Cerebellum* 2015; (2):142-50. PMID 25205331
12. **Kikinis Z**, Fitzsimmons J, \*Dunn C, \*Vu MA, Makris N, Bouix S, Goldstein JM, Mesholam-Gately RI, Petryshen T, Del Re EC, Wojcik J, Seidman LJ, Kubicki M. [Anterior Commissural White Matter Fiber Abnormalities in First-episode Psychosis: A Tractography Study](http://www.ncbi.nlm.nih.gov/pubmed/25667192) *Schizophrenia Research* 2015;(162):29-34. PMID:25667192
13. Kulkarni P, Kenkel W, Finklestein SP, Barchet TM, Ren J, Davenport M, Shenton ME, **Kikinis Z**, Nedelman M, Ferris CF. [Use of Anisotropy, 3D Segmented Atlas, and Computational Analysis to Identify Gray Matter Subcortical Lesions Common to Concussive Injury from Different Sites on the Cortex](http://www.ncbi.nlm.nih.gov/pubmed/25955025). *PlosOne* 2015;(5). PMC4425537
14. Seitz J, Zuo JX, Lyall AE, Makris N, **Kikinis Z**, Bouix S, Pasternak O, Fredman E, Duskin J, Goldstein JM, Petryshen TL, Mesholam-Gately RI, Wojcik J, McCarley RW, Seidman LJ, Shenton ME, Koerte, Kubicki M. [Tractography Analysis of 5 White Matter Bundles and Their Clinical and Cognitive Correlates in Early-Course Schizophrenia](http://www.ncbi.nlm.nih.gov/pubmed/27009248). *Schizophr Bull.* 2016; 42(3):762-71. PMID:27009248
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Non-peer reviewed scientific or medical publications/materials in print or other media

1. Munro HN, **Kikinis Z**, Eisenstein RS. Iron-dependent Regulation of Ferritin Synthesis. In: Nutrition and Gene Expression, editors Carolyn D. Berdanier and James L. Hargrove: CRC Press, Boca Raton, FL; 1993, pp 525-545. *ISBN 0849326648*

Thesis

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| Kikinis, Zora (1992) Iron-dependent Regulation of Ferritin Synthesis.  Dissertation, University of Basel, Basel, Switzerland. |

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

(last 3 years only)

#shared first authorship, \*trainee

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| List abstracts published and exhibits presented at meetings during the last 3 years which have not already been published as full length manuscripts. May also list all abstracts or exhibits, regardless of date or publication as full-length manuscript, which received special recognition at a meeting (e.g., juried poster presentation, meeting commendation). |

1. Heller C\*., Z. Kikinis, S. Steinmann\*, N. Makris, L. Charron\*, K. M. Antshel, W. Fremont, I. L. Coman, S. R. Schweinberger, T. Weiss, S. Bouix, M. R. Kubicki, W. R. Kates, M. E. Shenton, J. J. Levitt. Abnormalities in White Matter Tracts in the Fronto-Striatal-Thalamic Circuit and Cognition in a High-Risk Schizophrenia Population. Poster presented at the meeting of the Organization of Human Brain Mapping (OHBM), June 9-13, 2019, Rome, Italy
2. RizzoniE.\*, S. C. Karayumak, T. Billah, N. Makris, I. L. Coman, K. M. Antshel, W.Fremont, W. R. Kates, M. E. Shenton, Y. Rathi, Z. Kikinis. Analysis of Myeloarchitecture in Gray Matter in Individuals with 22q11 Deletion Syndrome. Poster. presented at Harvard Psychiatry Day, April 3rd, 2019, HMS, Boston.
3. SilvaA. M.\*, S. Steinmann\*, E. A. Rizzoni\*, N.Makris, Y. Rathi, O. Pasternak, S. Bouix, I. L. Coman, K. M. Antshel, W. Fremont, M. R. Kubicki, W. R. Kates, M. E. Shenton, Z. Kikinis. Abnormalities in White Matter Tracts of the Visuospatial Working Memory Circuit in 22q11 Deletion Syndrome. Poster. presented at Harvard Psychiatry Day, April 3rd, 2019, HMS, Boston.
4. Elizabeth Rizzoni\*, Maria Geisler\*, Nikos Makris, Ofer Pasternak, Yogesh Rathi, Sylvain Bouix, Martha E. Shenton, Marco Herbsleb, Karl-Jürgen Bär, Thomas Weiss, Zora Kikinis. Pain Sensitivity and Structural Properties of the Medial Forebrain Bundle. Poster presented virtually at Discover Brigham, November 12th,2020, HMS, Boston
5. Heller C\*, Weiss T, Del Re EC, Swago S\*, Coman IL, Antshel KM, Fremont W, Bouix S, Kates WR, Kubicki MR, Kikinis Z. Smaller Subcortical Volumes and Enlarged Lateral Ventricles are Associated with Higher Global Functioning in Young Adults with 22q11.2 Deletion Syndrome with Prodromal Symptoms of Schizophrenia. Poster presented at Schizophrenia International Research Society (SIRS), virtual, 17-21 April 2021.
6. Heller C\*, Weiss T, Del Re EC, Swago S, Coman IL, Antshel KM, Fremont W, Bouix S, Kates WR, Kubicki MR, Kikinis Z. Enlarged Lateral Ventricles and Smaller Subcortical Volumes are Associated with Better Premorbid Adjustment in Young Adults With 22q11.2 Deletion Syndrome with Prodromal Symptoms of Schizophrenia. Poster presented at Society of Biological Psychiatry (SOBP), virtual, April 28-May 1, 2021.

Narrative Report

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| In general, we suggest the following structure for the narrative:   * An opening paragraph that provides an overall summary of your major activities and achievements. Include an estimate of the proportion of your effort dedicated to teaching, research, clinical service, administrative activities and other relevant professional roles * Description of achievements in your **Area of Excellence** (Investigation, Teaching and Educational Leadership, or Clinical Expertise and Innovation); may include a description of work in progress such as pending grants or manuscripts in preparation * Description of contributions to **Teaching and Education** (if not your area of excellence). This may include a description of mentorship activities not discussed elsewhere in the CV * Description of contributions in **Significant Supporting Activities**, if any * A final paragraph that integrates and summarizes the contributions described above |
| Initially I trained as a biologist; however, I cross-trained in medical image computing, focusing on the investigation of schizophrenia in patients with 22q11 Deletion Syndrome (22q11DS). This syndrome is a unique genetic model of schizophrenia in which a known genetic defect is associated with increased incidence (40%) of psychosis. Using quantitative analysis of diffusion magnetic resonance images (dMRI) of the brain, I reported differences between the white matter of subjects with 22q11DS and healthy subjects suggestive of abnormal brain development. These changes are present prior to the clinical manifestation of symptoms of psychosis. Interestingly, antipsychotic medications given early in the course of the disease might be beneficial, such as white matter in people with 22q11DS that were treated with low dosage antipsychotic medication did not had abnormalities in brain white matter and, accordingly, did not differ from healthy controls. I devote 90% of my time to research. The remainder of my time is divided equally between mentoring and administrative responsibilities.  I was able to finance my research through several grants. I have reentered my career via Career Reentry grant (NIH PA-04-126), a Supplement to R01 by Dr. Shenton, which focused on imaging and genetics of schizophrenia of the 22q11Deletion Syndrome. I then followed up to explore changes in the white matter of the brain in schizophrenia patients carrying schizophrenia-associated variations of two genes, Neuregulin 1 and ErbB4. This research was supported by a NARSAD young investigator award in 2008 and has received additional funding from the Harvard Catalyst center in 2011. The DNA samples of this study are now included in the ongoing multi-site study for the Genetics of Endophenotypes of Neurofunction to Understand Schizophrenia (GENUS). Further, I was the site PI in an NIH-funded national project to explore biomarkers and psychosis in adolescents with 22q11DS over time (subaward from 2012-2016, MH64824). In 2015 I was awarded an R21 grant by the National Institute of Mental Health (NIMH) to fund a project to explore the presence of inflammatory–like processes in the brain white matter in subjects with 22q11DS at the time of schizophrenia onset.  Educating the next generation of scientists is an essential component of my work. Every summer since 2008, I have supervised interns at the BWH Psychiatry Neuroimaging Laboratory (PNL). Most importantly, I am also training students at the master’s and postdoctoral level. I enjoy teaching them the practice of research and guide them to publish their work.  I also derive great satisfaction from working with my peers and since 2008 I have organized a monthly seminar to which I invite outside speakers to present their research. Through this activity I have met some of the best scientists in the Boston area and beyond.  In summary, the goal of my research is to continue to expand the use of dMRI as a non-invasive diagnostic tool. I believe that the combination of medical image computing and genetics will improve our understanding and early detection of schizophrenia. Such early detection will open the door to prevent damage to the brain in these patients. I plan to achieve this goal through excellence in research as well as in educating a new generation of scientists. | | |