

Curriculum Vitae
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Career Summary Statement

To establish and develop a robust translational technology initiative for facilitating pacing the next generation epilepsy treatment center with the following objectives.

- 1) **Clinical Diagnostic Goal:** To further develop innovative diagnostic functional imaging techniques for identifying epileptic circuits.
- 2) **Treatment Goal:** To develop nano-control neural interfaces for stabilizing refractory epileptic circuits.
- 3) **Clinical Presence Goal:** To implement transformational rural epilepsy care utilizing novel communication connectivity strategies.

Education

1989-2004 Rush University Graduate College
Molecular Biophysics & Physiology
Chicago, IL
Degree: PhD

1987-1996 Rush Medical College
Chicago, IL
Degree: MD

1982-1987 Beloit College/Rush University
Beloit, WI and Chicago, IL
Degree: BA/BS

Appointments & Training

2015- Associate Professor, RUMC Depts. Neurological Sciences, Diagnostic Radiology and Nuclear Medicine
2015- Co-Director, Multi-modality Neuroimaging & Neuroengineering Laboratory, Rush Epilepsy Center
2015- Associate Director, Translational Research, Rush Epilepsy Center, RUMC
2015- Adjunct Professor, Illinois Institute of Technology (IIT), Dept. Bioengineering, Chicago, IL
2012-2015 Assistant Professor, Diagnostic Radiology & Nuclear Medicine, RUMC
2011- Adjunct Assistant Professor, University of Illinois at Chicago, Dept. of Bioengineering
2003-2015 Assistant Professor & Senior Attending, Rush Epilepsy Center, RUMC
2001-2002 Advanced Epilepsy Fellowship (Pediatric & Adult), Rush Epilepsy Center, RUMC
2000-2001 Clinical Neurophysiology Fellowship, University of Chicago Hospitals
1997-2000 Neurology Residency, University of Chicago Hospitals
1996-1997 Postgraduate Medicine Preliminary Year, Rush Presbyterian St. Lukes Medical Center, Chicago, IL

Professional Certifications & Licenses

2014-2016 American Board Psychiatry & Neurology (ABPN) MOC Requirement Certificate (Up-to-Date)
2015- ABPN MOC Certification: Diplomat in Psychiatry & Neurology
2013- ABPN Certification: Diplomate in Epilepsy (Inaugural examination #371)
2003-2013 ABPN Certification: Diplomate in Psychiatry & Neurology
1996- Illinois Licensed Physician

Patents

- 4/2016- (U.S. Patent 9,302,114). Energy-Releasing Carbon Nanotube Transponders.
- 7/2014- (U.S. Patent 8,788,033). Energy-Releasing Carbon Nanotube Transponders. Published by World Intellectual Property Org, 4/25/11. U.S. Patent granted 7/24/14.
<https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2011034939>
- 2014 (Application submitted: PCT/US2014/62/088,170) Carbon Nano-Electrode Augmented Direct Stimulation Therapy & Electrode Placement Planning System.

Translational Research Projects

- 2011- Co-founder & principal investigator of the ‘On-Call Video Visit Mobile Health Initiative of McHenry County’: This community outreach initiative establishes access to state-of-the-art epilepsy healthcare in rural northeast Illinois using ‘portable’ video conferencing technology and a Coordination Center through the Epilepsy Foundation of North Central Illinois. The initiative includes digitization of the patient care record and custom healthcare portal coordination system developed in our RUMC laboratory. The initiative facilitates formulating and delivering time-critical healthcare to epilepsy patients by interconnecting sub-specialist, primary care providers, school nurses, mental health providers, and ancillary resources using mobile health information technologies (mHIT).
<http://www.synapticom.net/outreach/>
- 2009- Founder of the ‘Multicenter Translational Nanotechnology Research Initiative for the Treatment of Epilepsy and Primary Brain Cancer’ in association with the University of Illinois at Chicago Department of Bioengineering.
http://lppd.bioe.uic.edu/RET/Research/Research%20profiles/Research_Nanotechnology_Rossi.pdf
- 2009- Co-development of novel dynamic SPECT neuroimaging using a high-res portable SPECT scanner (inSPira, NeuroLogica, Inc) for identifying the seizure-onset region in epileptic circuits of patients with medication-resistant focal-onset epilepsy. **Samsung-NeuroLogica, Inc.**
<http://www.synapticom.net/projects/>
- 2009- Synthesis of a technetium labeled carbon nanotube-interleukin-13 ligand complex for electric field-guided targeting of high-grade astrocytoma cells in a xenograft rat model: A precursor to therapeutic delivery of targeted ultra-high charge nano-ablative therapy. **Philanthropy/Institutional/Dept of Neurosurgery.** <http://www.synapticom.net/projects/>
- 2007-2013 Terminating the ictal onset: On-Demand nanobolused intracerebral delivery of RWJ-333369 with responsive neurostimulation. **Johnson & Johnson Pharma R&D.**
- 2006-2009 Evaluation of Interictal Epileptiform Density and Global Field Power in Localization-Related Epilepsy Following Administration of Intravenous and Oral Levetiracetam (Co-principal investigator). **UCB Pharma.**
- 2005- Noninvasive Presurgical Estimation of the Volume of Cortical Activation for Optimizing Intracranial Electrode Placement During Responsive Neurostimulation. **NeuroPace, Inc.**
- 2004- Rush primary programmer for the NeuroPace^R Responsive Neurostimular System for Epilepsy Multicenter Efficacy Project, and Medtronic^R SANTE Deep Brain Stimulator for Intractable Epilepsy Multicenter Feasibility and Efficacy Projects.
- 2002- Founder and Director of the Epilepsy SPECT Neuroimaging Laboratory (RUSH Epilepsy Center). Implementation of innovative blood flow & metabolic imaging is emphasized. Emphasis is placed on the augmentation of the presurgical epilepsy evaluation.
<http://www.synapticom.net/nucmedlab/>
- 1996-2005 Source Localization of the P300 using fMRI as an early marker of hippocampal dysfunction.

1989-2004 PhD. Dissertation: Signal transduction-related correlates of age dependent spatial memory ability in aged F344 rats: *In situ* changes of cholinergic muscarinic and PKC receptor subtypes.
Academic Advisors: Frank Morrell MD (deceased) & Leyla deToledo-Morrell PhD (deceased).
Outside Advisor: Deborah C. Mash PhD, University of Miami School of Medicine. Predoctoral work funded by grants from the National Institutes on Aging of the NIH, NSF and Rush University.

2001- Principal software developer, programmer and license owner of the 'EEG Report Composer, Relational Database and EEG Atlas. Distributed by SynaptiCOM, Inc.

1989-1996 Structural synaptic remodeling following the induction of long-term potentiation (LTP) in age-separated F344 rats. Paradigm used stereotactically freely moving young and aged F344 rats.

1992-2000 Founder & developer of the Interactive Computerized Neurocog Task Project. Development of integrated touch sensitive display, voice recognition computerized neurocognitive tasks for assessing: 1) hippocampal, 2) dorsolateral frontal neocortical, & 3) neocortical auditory neurocognitive function.

Funding (for Principal Investigator Initiated Projects)

2016-2019 Development of Novel Nano-transponders for Remodeling Injured Neural Networks in a Model of Traumatic Brain Injury & Self-Sustained Seizures **Award Amount: \$150,000**

2016-2017 McHenry County IL Traumatic Brain Injury Implementation Initiative **Award Amount: \$368,000**

2017-2018 Rural Mobile Health Educ.-Facilitated Comprehensive Epilepsy Care **Award Amount: \$257,500**
Competitive Funding Source: UCB Pharma

2014-2017 Interfacing a Mobile Health Delivery Model for Pediatric Patients with Refractory Epilepsy
Competitive Funding Source: Illinois Children's Healthcare Fund **Award Amount: \$404,171**

2015-2017 Investigator-Initiated Mobile Health Implementation Grant
Competitive Funding Source: Upsher-Smith Laboratories **Award Amount: \$168,649**

2013- Mary Caitlin Keane Epilepsy Research Fund
Rush Philanthropy **Award Amount: \$49,000**

2012-2015 Novel Nanotransponder Technology Development Startup Initiative
Rush Philanthropy **Award Amount: \$310,000**

2012- Dept of Diagnostic Radiology, Epilepsy Division for Metabolic Neuroimaging
Rush Diagnostic Radiology Philanthropy Fund **Award Amount: \$325,000**

2012-2015 'On-Call' Video Visit Telemedicine Initiative of McHenry County.
Competitive Funding Source: McHenry Cty. Mental Health Board **Award Amount: \$163,500**

2010-2012 Synthesis of a technetium labeled carbon nanotube-interleukin-13 ligand complex for electric field-guided targeting of high-grade astrocytoma cells in a xenograft rat model: A precursor to therapeutic delivery of targeted ultra-high charge nano-ablative therapy. Philanthropy/Institutional/Dept of Rush Brain Tumor Fund **Award Amount: \$50,000**

2007-2010 Terminating the ictal onset: On-Demand microbolused intracerebral delivery of RWJ-333369 with responsive neurostimulation. (Principal Investigator).
Competitive Funding Source: Johnson & Johnson R&D. **Award Amount: \$101,920**

- 2006-2009** Evaluation of Interictal Epileptiform Density and Global Field Power in Localization-Related Epilepsy Following Administration of Intravenous or Oral Levetiracetam.
Competitive Funding Source: UCB Pharma **Award Amount:** \$48,000
- 2005-** Noninvasive Presurgical Estimation of the Volume of Cortical Activation for Optimizing Intracranial Electrode Placement and Clinical Efficacy During Responsive Neurostimulation. Funded by NeuroPace, Inc. **Award Amount:** \$32,000
- 2001-2005** Vagal Nerve Stimulation: Material-Specificity, Memory/Attention in Intractable Multifocal Epilepsy. Funded by Cyberonics, Inc. **Award Amount:** \$50,000

Awards

- 2015** Highest 10th Percentile Nationally for Quality of Communication with Patients Recognition Award
2013 Outstanding Clinical Preceptor of the Year, Rush Dept of Neurological Sciences
- 2011** Danny Did Foundation Award of Excellence for Emerging Seizure Detection Technologies.
<http://www.facebook.com/pages/Emfit-Corp/276423057077>
- 2004** Mauryne Christensen Award. This award is given annually to a physician that goes beyond the "call of duty" in the treatment of children
- 1999-2000** Faculty elected chief resident: University of Chicago Neurology Residency Training Program
- 1995** Outstanding Student Award in Neuroscience Research. Awarded by the Department of Neurological Sciences, Rush Medical College
- 1995** Student Neuroscience Research Award presented at Chicago Chapter of Society for Neuroscience

Educational & Referee Responsibilities

- 2014** Invited Special Issue Guest Editor for the peer-reviewed journal, **Neurological Research**.
- 2015-** Pre-doctoral primary advisor for PhD candidate, Timothy Harris, IIT Dept Bioengineering
- 2015-** Pre-doctoral primary advisor for PhD candidate, Leopoldo Cendejas-Zaragoza, IIT Bioengineering
- 2014-2016** Pre-doctoral external advisor for PhD candidate, Spencer Brinker, UIC Dept Mech Engineering
- 2013-2015** Pre-doctoral external advisor for PhD candidate, Eric Leushen, UIC Dept Bioengineering
- 2007-2009** Pre-doctoral external advisor for MD, PhD candidate, Ananda Fine, UIC Dept Bioengineering
- 2012-** Contributing Editor for the journal, **Epilepsy Currents**.
- 2012-** Committee member: 1. Rush Univ Med Center Pharmacy Committee
- 2011-2013** National Science Foundation Research Experiences for Undergraduate (REU) Program Mentor in association with University of Illinois Dept of Bioengineering. NSF Grant EEC 0754590.
- 2011** Program board member and reviewer for The 4th International Congress on Image and Signal Processing & International Conference on Biomedical Engineering and Informatics. Shanghai, China.
- 2010-2011** NASA Tech Briefs "Create the Future" Design Contest Judge
<http://contest.techbriefs.com/component/content/article/1119>
- 2009-** *Ad Hoc* Reviewer for the following journals: 1. **Journal of Neurochemistry**
2. **Epilepsy Research**
- 2009-** Biophysics & Nanotech Translational Core Student Summer Curriculum (Founder & Organizer)
- 2008-2012** Weekly RUSH Epilepsy Group Research Meeting (Organizer & Facilitator)
- 2011-2014** Clinical Neurophysiology instructor for pediatric electroencephalography interpretation,
- 2005-2008** J.H. Stroger Cook County Hospital

- 1999-2000** Co-organizer of the academic curriculum for the University of Chicago Neurology Residency (as faculty-elected chief resident).
- 1990-1994** Teaching Assistant, Medical Physiology 451 & 452, Rush Medical College
- 1989-1992** Rush Medical College Dean's Office Tutor program: Medical Pharmacology & Physiology

Selected Computer Languages

Proficient in: C/C++, COMSOL Multiphysics electromagnetics modeling platform, Unix (SGI), MATLAB, signal processing programming, OpenGL (3D Graphics modeling language/tool), SKED, (animal behavioral task design language), PL/1 (integrated language within RS/1 statistical software), Toolbook (multimedia rapid application development tool/language).

Selected Basic Laboratory Skills

Expert in: receptor binding autoradiography & receptor-ligand kinetics, nanoparticle zeta potential elucidation, nanotube conjugation chemistry, FTIR spectroscopy, colorimetric fluorescent immunohistochemistry, iontophoresis, 1D/2D polyacrylamide gel electrophoresis, Western blotting, affinity chromatography, cell culture, rodent stereotactic surgery using evoked potential guided high-density microelectrode placement, extracellular electrophysiology (long-term potentiation & kindling rodent models).

Selected Extramural Presentations/Lectures

- Mar 2016** Invited Lecturer: **Brain Stimulation Think Tank IV, University of Florida Center for Movement Disorders & Neurorestoration:** Should We Apply Techniques Used in Epilepsy to Other Neuromodulation Indications?
- Jan 2016** Invited Lecturer: **Northwestern University Epilepsy Lecture Series:** Enhancing Epileptic Circuit Targeting for Optimizing RNS Therapy?
- Aug 2015** Invited Lecturer: **University of Illinois at Chicago (NSF/RET Program):** Fundamentals of Mapping and Modulating 'Fragile Neural Networks'
- Mar 2015** Invited Lecturer: **Brain Stimulation Think Tank III, University of Florida Center for Movement Disorders & Neurorestoration:** Mapping, Modulating & Validating the Electro-Epileptic Circuit Interface: Evolution of a Depth Electrode Placement Planning System for Refractory Epilepsy
- Oct 2014** Invited Lecturer: **Tecnologico De Monterrey School of Engineering, Mexico City, Mexico:**
1. Neuroengineering/Medical Imaging & Bioinstrumentation Courses:
 2. Introduction to Bioengineering Course: Enhancing Epileptic Circuit Targeting for Optimizing Neurostimulation Therapy
 3. Optimizing Neuromodulation Therapy: A Case Study Emphasizing a Collaboration Between Bioengineers & Clinicians
 4. Faculty Lecture: Interfacing with Fragile Neural Networks: Developing Mapping & Modulating Technologies for Intractable Epilepsy
- Aug 2014** Invited Lecturer: **University of Illinois at Chicago (NSF/RET Program):** Brain Computer Interfaces and Nanotechnology: Bridging the Great Divide
- Aug 2013** Invited Lecturer: **University of Illinois at Chicago (NSF/RET Program):** Fundamentals of Cutting-Edge Metabolic Imaging in Epilepsy: Seeing the Circuit
- June 2012** Invited Lecturer: **University of Illinois at Chicago (NSF/REU Program):** Nanotechnology for Treating Epilepsy and Brain Cancer
- Jan 2012** Invited Lecturer as a Dartmouth Visiting Radiology Professor: **Dartmouth/Hitchcock Medical Center (Radiology Grand Rounds):** 1) Ictal SPECT: Improving Epileptic Circuit Targeting? 2) Detecting the Epileptic Circuit with DTI.

- June 2011** Invited Lecturer: **University of Illinois at Chicago (NSF/REU Program):** Electric-Guided Nanocarrier-Drug Therapy for Refractory Epilepsy: Are We On the Right White Matter Track?
- May 2011** Invited Lecturer: **University of Wisconsin at Madison, Grand Rounds:** Electric Field-Guided Charged Nanocarrier-Drug Complexes for the Treatment of Refractory Epilepsy.
- Dec 2009** Invited Lecturer: **American Epilepsy Society Engineering Special Interest Group (Boston, MA):** Subtraction Ictal SPECT: Improving Epileptic Source Targeting?
- Dec 2008** Platform Presentation: **American Epilepsy Society (Seattle, WA):** Subtracted Activated SPECT Validates Depth Lead Placement in White Matter for Responsive Neurostimulation Therapy.
- May 2008** Invited Lecturer: **Center for Integrative Neuroscience and Neuroengineering (Chicago, IL):** Stabilizing the Epileptic Circuit: Targeting White Matter to Interface Direct Cortical Stim Therapy.
- Oct 1993** Invited Lecturer: **Bolt Beranek and Newman Worldwide Software Meeting (Cambridge, MA):** A user-friendly software application programmed in RPL (PL/1) to mathematically analyze brain region-specific receptor-ligand binding properties.
- Aug 1989** Invited Lecturer: **Baxter Pharma, Deerfield, IL.** The effects of branched chained amino acids on induction of glutamate dehydrogenase impeding glutamate toxicity in experimentally induced SE.
- Poster Presentations (as Principal Presenter)**
- Dec 2015** Poster Presentation, **American Epilepsy Society (Philadelphia, PA): Rossi MA, Monica N, Babiarz K, Cendejas Zaragoza L, Caicedo M, Endres J (2015).** A mobile health-intensive care delivery model for amplifying outreach for refractory epilepsy and co-morbid mood disorders (Part II).
- Dec 2014** Poster Presentation, **American Epilepsy Society (Seattle, WA): Rossi MA, Monica N, Babiarz K, Cendejas, L, Hanson R, Tshionyi M, Endres J, Jain M. (2014).** A mobile health-intensive comprehensive care delivery model for amplifying outreach for refractory epilepsy and co-morbid mood disorders.
- Dec 2013** Poster Presentation, **American Epilepsy Society (Washington, DC): Rossi MA, Ehrens D, Monica N.** Population health management (PHM) for refractory epilepsy and psychiatric co-morbidities: Deploying a PHM delivery model for amplifying patient outreach. **AES Abstr 2.281.**
- Dec 2012** Poster Presentation, **American Epilepsy Society (San Diego, CA): Rossi MA, Krug K.** Improved localization of extra-temporal ictal onset-associated blood flow changes using a 72-detector focused collimator ring SPECT scanner system. **AES Abstr. 1.182.**
- Dec 2011** Poster Presentation, **American Epilepsy Society: Rossi MA, Pylypyuk V, Krug K (2011).** Time-lapsed transient brain blood flow changes demonstrated during delivery of direct stimulation therapy through depth leads implanted at the hippocampal grey-white matter junction. **AES Abstr. 2.197.**
- Dec 2010** Poster Presentation, **American Epilepsy Society: Mangubat EZ, Rossi MA (2010).** On-demand pulsatile delivery of carisbamate concurrent with closed-loop direct neurostimulation therapy in a self-sustained limbic status epilepticus (SSLSE) rat model. **AES Abstr 3.064.**
- Dec 2009** Poster Presentation, **American Epilepsy Society: Rossi MA, Graf O, Hoepfner TJ, Stebbins G, Byrne RW, Stoub T, Stein MA, Bergen D, Balabanov A, Kanner AM, Smith MC (2009).** Subtracted activated SPECT (SAS) validates propagation of direct neurostimulation therapy in double band heterotopia white matter. **AES Abstr 3.001.**
- Dec 2007** Poster Presentation, **American Epilepsy Society (Philadelphia, PA):** Development of an intracranial lead placement planning system for strategically influencing the epileptic circuit. **AES Abstr**

- Dec 2006 Rossi MA**, Hoepfner T.J., Kanner A.M., Byrne R., Balabanov A., Palac S., Smith M.C. (2006). Preoperative depth lead placement planning to activate distant cortex replicates visual aura semiology during responsive neurostimulation. **AES Abstr 1.103.**
- Dec 2006** Poster Presentation, **American Epilepsy Society (San Diego, CA):** Preoperative depth lead placement planning to activate distant cortex replicates visual aura semiology during responsive neurostimulation. **AES Abstr 1.103.**
- Dec 2005** Poster Presentation, **American Epilepsy Society (Washington, DC):** **Rossi, MA**, Hoepfner, T.J., Kanner, A.M., Byrne, R., Balabanov, A., Palac, S., Smith, M.C. Noninvasive presurgical estimation of cortical activation for optimizing intracranial electrode placement for responsive neurostimulation in refractory epilepsy. **Abstr 3.169. Epilepsia s8:335.**
- Dec 2005** Poster Presentation, **American Epilepsy Society (Washington, DC):** **Rossi, MA**, Stoub, T., Hoepfner, T.J., Kanner, A.M., Byrne, R., Balabanov, A., Palac, S., Bergen, D., Smith, M.C. Solving the forward solution for pediatric frontal lobe epileptic sources by seeding the source localization algorithm with coordinates derived from SISCOM data. **American Epilepsy Society, AES Abstr 2.475.**
- Dec 2004** Poster Presentation, **American Epilepsy Society (New Orleans, LA):** **Rossi, MA**, Kanner, A.M., Hoepfner, T.J., Bergen, D., Palac, S., Smith, M.C. Localization of the ictal onset zone utilizing sphenoidal versus inferior scalp electrodes and dipole source localization analyses. **AES Abstr 1.169.**
- Dec 2002** Poster Presentation, **American Epilepsy Society (Seattle, WA):** **Rossi, MA**, Hoepfner, T.J., Bergen, D., Kanner, A.M., Smith, M.C. Methohexital suppression augments scalp dipole source localization modeling of complex interictal epileptiform discharges. **AES Abstr 1.131.**
- Nov 1998** Poster Presentation, **Society for Neuroscience (Los Angeles, CA):** **Rossi, MA**, deToledo-Morrell, L., Mash, D.C., Morrell, F. Spatial memory-impaired aged F344 rats show a deficit in the distribution of PKC-gamma as it relates to G-protein coupling of the M1 receptor.
- Nov 1996** Poster Presentation, **Society for Neuroscience (Washington, DC):** Morrell, F., **Rossi, MA**, deToledo-Morrell, L. (1996) A deficit in the redistribution of protein kinase C (PKC) in aged F344 rats is related to an impairment in spatial working memory.
- Nov 1994** Poster Presentation, **Society for Neuroscience (Washington, DC):** **Rossi, M.**, deToledo-Morrell, L., Morrell, F., Mash, D.C. (1994). Age-associated uncoupling of G-protein dependent high affinity M1 muscarinic receptors in F344 rats. **Soc. Neurosci. Abstr 20(1):393.**
- Nov 1993** Poster Presentaton, **Society for Neuroscience (Washington, DC):** **Rossi, M.**, deToledo-Morrell, L., Morrell, F. A novel method to relate optical density of PKC isoform antibody staining of hippocampal sections to known PKC epitope concentrations using avidin-biotin-peroxidase (ABP) immunohistochemistry on nitrocellulose film slides. National Poster Presentation.

Bibliography (Trainee Underlined)

Book Chapters

- 1. Rossi MA.** Evolution of neurostimulation therapy in epilepsy. In: *Modulating Epileptic Circuits*. **MA Rossi (ed.)**. Springer Publishing (submitted).
- 2. Cendejas L, Rossi MA.** Predicting epileptogenic pathways for interfacing direct brain stimulation therapy. In: *Modulating Epileptic Circuits*. **MA Rossi (ed.)**. Springer Publishing (in preparation).
- 3. Rossi MA, Krug K, Pylypyuk V.** Novel ictal SPECT techniques for neuromodulation therapy. In: *Modulating Epileptic Circuits*. **MA Rossi (ed.)**. Springer Publishing (in preparation).

4. **Rossi MA**. The economics of neuromodulation in the era of healthcare reform In: *Modulating Epileptic Circuits*. **MA Rossi (ed.)**. Springer Publishing (in preparation).

5. **Rossi MA**. Evolution of telehealth and population health management: Efficient community-based care? In: *Mobile Health in Epilepsy: Outreach Strategies for Regional and Global Healthcare*. **MA Rossi (ed.)** Springer Publishing (in preparation).

6. **Rossi MA**. Mobile monitoring from implantable EEG to ‘ambulatory avatar monitoring’ In: *Mobile Health in Epilepsy: Outreach Strategies for Regional and Global Healthcare*. **MA Rossi (ed.)**. Springer Publishing (in preparation).

7. Kanner AM, **Rossi MA**, Smith MC. (2008). LKS case studies. In, *Epilepsy Surgery* H. Luders (ed.). Elsevier Publishing.

Peer-Reviewed Journal Articles

8. Cendejas Zaragoza L, Byrne RW, **Rossi MA** (2017). Pre-implant modeling of depth lead placement in white matter for maximizing the extent of cortical activation during direct neurostimulation therapy. *Neurological Res* (in press). <http://dx.doi.org/10.1080/01616412.2016.1266429>.

9. Wissam Deeb, James J Giordano, Peter Justin Rossi, Alon Mogilner, Aysegul Gunduz, Jack William Judy, Bryan T. Klassen, Christopher R. Butson, Craig van Horne, Damiaan Denys, Darin D Dougherty, David Rowell, Greg A Gerhardt, Gwenn S. Smith, Harrison C. Walker, Helen M Bronte-Stewart, Helen S. Mayberg, Howard J. Chizeck, Jean-Philippe Langevin, Jens Volkmann, Jill Ostrem, Jonathan B Shute, Joohee Jimenez-Shahed, Kelly Douglas Foote, **Marvin A Rossi**, et al. (2016). Proceedings of the Fourth Annual Deep Brain Stimulation Think Tank - A Review of Emerging Issues and Technologies. *Frontiers in Integrative Neuroscience* **10**(38):1-21. <https://doi.org/10.3389/fnint.2016.00038>

10. **Rossi MA** (2016). Planning Resective Surgery Using Structural Connectivity Modeling: The Next-Generation Presurgical Evaluation. *Epilepsy Currents* **16**(3):150-151. <http://dx.doi.org/10.5698/1535-7511-16.3.150>

11. Rossi J, Gunduz A, Judy J, Wilson L, Machado A, Giordano JJ, Elias WJ, Alterman RL, **Rossi MA** et al (2016). The Third Annual Deep Brain Stimulation Think Tank: A Review of Emerging Issues and Technologies. *Frontiers in Neuroscience, Section Neuroprosthetics* **10**:119-125. <http://dx.doi.org/10.3389/fnins.2016.00119>

12. Jalota A, **Rossi MA**, Pylypyuk V, et al (2016). Resecting Critical Nodes in an Epileptogenic Circuit in Refractory Focal-Onset Epilepsy Using Subtraction Ictal SPECT Co-registered to MRI (SISCOM). *J Neurosurgery* (in press) <http://thejns.org/doi/abs/10.3171/2015.6.JNS141719>

13. **Rossi MA** (2015). Post-resective outcome nomograms: An assessment tool for the presurgical clinic visit? *Epilepsy Currents* **15**(5):257-259. <http://dx.doi.org/10.5698/1535-7511-15.5.257>

14. **Rossi MA** (2015). Where have all of the Temporal Lobe Surgeries Gone? *Epilepsy Currents* **15**(3):126-128. <http://dx.doi.org/10.5698/1535-7597-15.3.126>

15. Mangubat EZ, Kellogg R, Harris T, **Rossi MA** (2015). On-demand pulsatile delivery of carisbamate concurrent with closed-loop direct neurostimulation therapy in a focal-Onset Epilepsy Rat Model. *J Neurosurgery* **122**(6):1283-92. <http://dx.doi.org/10.3171/2015.1.JNS14946>

16. King-Stephens D, Mirro E, Weber PB, Laxer KD, Van Ness PC, Salanova V, Spencer DC, Heck CN, Goldman A, Jobst B, Shields DC, Bergey GK, Eisenschenk S, Worrell GA, **Rossi MA** et al. (2015). Lateralization of mesial temporal lobe epilepsy with chronic ambulatory electrocorticography. *Epilepsia* **56**(6):959-967. <http://dx.doi.org/10.1111/epi.13010>

17. Rossi MA (2015). Regaining white matter integrity and neurocognitive development in rolandic epilepsy after the storm. **Epilepsy Currents** 15(1):20-23. <http://dx.doi.org/10.5698/1535-7597-15.1.20>
18. Rossi MA, Krug K, Pylypyuk V (2015). Elucidating intractable epileptic circuits using spiral focused collimator SPECT and Relative Ictal SPECT Co-registered to MRI (RISCOM). (submitted).
19. Rossi MA (2014). Focal cortical dysplasia-associated tumors: Resecting beyond the lesion to disconnect refractory epileptic circuits. **Epilepsy Curr** 14(5):259-260. <http://dx.doi.org/10.5698/1535-7597-14.5.264>
20. Rossi MA (2014). SCN1A and febrile seizures in mesial temporal epilepsy: An early signal to guide prognosis and treatment? **Epilepsy Curr** 14(4):189-190. <http://dx.doi.org/10.5698/1535-7597-14.4.189>
21. DiLorenzo DJ, Mangubat EZ, Rossi MA, Byrne RW (2014). Chronic recording electrocorticography guided resective epilepsy surgery: Overview and future directions. **Molecular & Cellular Epilepsy** (in press).
22. DiLorenzo DJ, Mangubat EZ, Rossi MA, Byrne RW (2014). Chronic unlimited recording electrocorticography-guided resective epilepsy surgery: Technology-enabled enhanced fidelity in seizure focus localization with improved surgical efficacy. **J Neurosurg** 120(6):1402-1414. <http://dx.doi.org/10.3171/2014.1.JNS131592>
23. Rossi MA (2014). Improving patient-centered care coordination for children with refractory epilepsy: Version 2.0 Upgrade Required. **Epilepsy Curr** 14(3):145-146. <http://dx.doi.org/10.5698/1535-7597-14.3.145>
24. Rossi MA (2013). Juvenile myoclonic epilepsy: When will it end? **Epilepsy Curr** 13:148-149. <http://dx.doi.org/10.5698/1535-7511-13.3.148>
25. Cendejas Zaragoza L, Hondorp B, Rossi MA (2013). Comparing isotropic and anisotropic brain conductivity modeling: Planning optimal depth-electrode placement in white matter for direct stimulation therapy in an epileptic circuit. **Proc COMSOL Conf 2013**:1-13.
26. Vannemreddy PS, Kanner AM, Smith MC, Rossi M, Wallace D, Vannemreddy SN, Byrne RW (2013). Chronic epilepsy due to low grade temporal lobe tumors and due to hippocampal sclerosis: Do they differ in post-surgical outcome? **J Neurooncol** 115:225-231. <http://dx.doi.org/10.3171/2009.5.FOCUS0998>
27. Falowski SM, Wallace D, Kanner A, Smith M, Rossi M, Balabanov A, Ouyang B, Byrne RW (2012). Tailored temporal lobectomy for medically intractable epilepsy: Evaluation of pathology and predictors of outcome. **Neurosurg** 71(3):703-709. <http://dx.doi.org/10.1227/NEU.0b013e318262161d>
28. Rossi MA (2012). Deep white matter track record of functional integrity in childhood absence epilepsy. **Epilepsy Currents** 12(6):1-2. <http://dx.doi.org/10.5698/1535-7511-12.6.234>
29. Rossi MA (2012). Targeting anti-epileptic drug therapy without collateral damage: Nanocarrier-Based Drug delivery. **Epilepsy Currents** 12(5):199-200. <http://dx.doi.org/10.5698/1535-7511-12.5.199>
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Professional Organizations

- 2015 Organization for Human Brain Mapping
 2015 American Neurological Association
 2010- American Chemical Society, full member
 2002- American Epilepsy Society, full member
 1999- American Academy of Neurology
 1994- Illinois State Medical Society
 1994- Chicago Medical Society
 1994- IEEE Computer Society
 1994- New York Academy of Sciences
 1992- International Brain Research Organization (IBRO)

Non-Profit Organizations/Foundation

- 2017- Appointed Member of the Board of Directors, ROW Foundation
 2016- Co-founder & Medical Director: Brain Injury Health Management of McHenry County
 2015- Co-founder: Epilepsy Health Management (EHM), 501c3 Organization
 2014- Co-founder: the Northern Illinois Epilepsy Outreach Collaborative: Epilepsy Foundation of North Central Illinois & McHenry County Mental Health Board & Rush University Medical Center
 2011- Elected Professional Advisory Board Member, Epilepsy Foundation of Greater Chicago
 2010- Inaugural Medical Advisor for the Danny Did Foundation. <http://www.dannydid.org/>

Industry

- 2007- Medical Director, Sleepmed Digitrace EEG, State of Illinois
 1994- Founder & President, SynapticOM, Inc <http://www.synapticom.net>