

Contact Information

E-mail: mbrown@bnac.net

Education

- 2013 - Ludwig-Maximilians Universität Munchen, Germany
Graduate School of Quantitative Biosciences Munich (QBM), PhD studies
Project: Early embryonic development and genome activation
- 2010 – 2013 *University of Turku*
Master's Degree in Bioinformatics, estimated graduation in fall 2013
Master's thesis in homology modeling for a novel protein complex in human embryonic stem cells. Graduated with the grade of excellent (5) and received laudatur (highest grade) for the Master's thesis.
- 2000 - 2004 *Helia, Helsinki Business Polytechnic*
BBA in International Business
Bachelor thesis on Portuguese Business culture
- 2002 *Towson University, Baltimore, MD, USA*
Exchange period during studies in Helia, studies in languages, international advertising and politics
- 1996-2000 Laurin lukio, Salo, Finland
High School

Professional Experience

Turku Centre for Biotechnology, Turku, Finland 2011 – 2013

- Master's Thesis Research Work
Protein complex modeling for a novel protein found in the human embryonic stem cells.

Kiinteistö- ja Rakennuspalvelu Helin Oy, Turku, Finland 06/2011 – 01/2012

- Accountant
Accounting duties for a construction company, started as a summer job, but continued for additional 6 months to help with new software installation and other seasonal duties on a "as needed"-basis.

Saipem S.p.A. 05/2011

- Project Assistant
One month vessel renovation project at the STX Europe shipyard for an Italian oil and shipping company. Project assistant duties at the planning office: report creation, schedule tracking and calculations.

Buffalo Neuroimaging Analysis Center (BNAC), Buffalo, NY 12/2007 – present

- SWI consultant, Graphic Designer (08/2010-present)
Continuing research assistant duties (as a consultant) with a concentration on the CCSVI/SWI trials. Maintaining the organization's website and designing posters/presentations for conferences.
- Clinical Trial Research Assistant (07/2008-08/2010)
Performing a variety of research, database and clerical duties in support of multi-center clinical trials by organizing, analyzing and compiling clinical research data as well as processing magnetic resonance imaging data for research and clinical purposes. Scan retrieval and analysis upload to various databases as well as sequence verification and coregistration. Training of new hires to basic resource duties such as Java Image Manipulation and database usage, T2- and T1-blackhole analysis and image verification. Main focus on research and studies in multiple sclerosis and other neurodegenerative diseases. Performing several automated and semi-automated analysis such as T2-analysis, T1-blackhole analysis, SIENA, SIENAX, MTR, Mfast, ALDO, MACC and SALAA. Using image manipulation and viewing tools such as Java Image Manipulation (Jim), BET and FSLView. Responsible for the analysis, evaluation, visual inspection, scanning parameter check and documentation of multi-center international clinical trial dummy runs.

- Senior Administrative Assistant (07/2008-08/2010)
Performing various administrative duties of the research center. Responsible of accounts payable and daily accounting tasks. Maintaining and updating the BNAC website. Responsible of the graphic design and creation of the BNAC posters to various scientific meetings and conferences. Assisting in the organization of the center's educational seminars and symposiums.
- Document Manager (02/2008 – 02/2009)
Recreation and maintenance of the BNAC intranet TWiki. Administration, editing and quality management of Standard Operating Procedures (SOP).
- Administrative/Research Assistant (12/2007 – 07-2008) Processing of magnetic resonance imaging data for research and clinical purposes by lesion calibration (T2 and T1 lesions). Assisting in magnetic resonance imaging data collection, verification and data entry. Performing clerical tasks such as accounting, website maintenance, travel and meeting arrangements as well as human resource duties.

Hyatt Hill Country Resort & Spa, San Antonio, Texas 05/2007 – 11/2007

- Front Desk Associate and Night Auditor
Front desk duties, customer relations, night auditing and reporting, some Assistant Manager duties.

Sports Management 2005 – 2007

Traveling in South America and Europe, learning the trade of sports management (contractual agreements, PR, negotiations etc.)

Nokia Learning Center, Espoo, Finland 08/2005 – 10/2005

- Learning Solutions Coordinator
Adminstrating internal technical training sessions in Europe and Asia.

Ferro Carril Oeste, Buenos Aires, Argentina 12/2004 – 04/2005

- Translator
Communicational and document translation (Spanish – English –Spanish) and clerical work.

Sokos (Maxi) Hakaniemi, Finland 07/2001 – 12/2001 and 09/2003 – 09/2004

- Customer Service Specialist
Customer Service, sales and clerical work of major Finnish department store.

Algarven Suomi-Seura r.y. Portimão, Portugal 10/2002 – 04/2003

- Administrative Assistant
Secretarial and clerical work such as billing, event and trip organization, publishing, editing and designing the layout of the Algarven Aviisi – magazine, and writing articles for the magazine. Managing and operating the association's office and library.

Projects

- Organizer and a Scientific Content Team member of 2015 <interact> conference in Munich, Germany.
- Organizer of the 1st Annual QBM Student Retreat, Chiemsee, Germany.
- Clinical Trial Research Assistant for several national and international Clinical Trials.
- Reconstruction of Twiki web environment and managing/administrating Standard Operation Procedures development for audit purposes in BNAC.
- Managing exhibition booth and other PR duties for BNAC in the annual AAN conference in Seattle, WA 2009.
- Preparing posters and other graphical design elements for neurological conferences: American Academy of Neurology (AAN, International Society for Magnetic Resonance in Medicine (ISMRM) and the World Congress on Treatment and Research in Multiple Sclerosis (ECTRIMS, ACTRIMS and LACTRIMS) from 2008 – present.
- Involvement in a virtual group work project during fall 2003 involving Helsinki Business Polytechnic and Alicante University, Spain. Sponsored by Nokia, Kone and Helsinki Economic School. Project involved studies in Spanish and Finnish business cultures as well as the techniques for virtual group work.
- Involvement in a project of Finnish Association of Algarve by being an active member of the group responsible for creating, marketing and distributing a new product for the association for sale.
- Translating a book called Driving in Portugal by AFPOP, a British real estate company, from English to Finnish during spring 2003.

During the year 2001 involvement in school projects for different companies such as

- Czech Airlines (creating a marketing plan for transient and b-to-b markets in Finland, assisted by Ladislav Bednar, Director of Finland CSA)
- KESKO (creating partnership between the Finnish retailer and potential Spanish suppliers for organic food, co-operated with Juho Massinen, KESKO)
- Goldwell Oy (analyzing the inventory bookkeeping computer system of the company)

Journals

- Zivadinov R, Dwyer M, Markovic-Plese S, Hayward B, Bergsland N, Heininen-Brown M, Carl E, Kennedy C, Dangond F, Weinstock-Guttman B. A pilot, longitudinal, 24-week study to evaluate the effect of interferon beta-1a subcutaneous on changes in susceptibility-weighted imaging-filtered phase assessment of lesions and subcortical deep-gray matter in relapsing-remitting multiple sclerosis. *Ther Adv Neurol Disord.* 2015 Mar;8(2):59-70.
- Dwyer MG, Zivadinov R, Markovic-Plese S, Bergsland N, Heininen-Brown M, Carl E, Kennedy C, Weinstock-Guttman B, Hayward B, Dangond F. Associations between changes in ferritin levels and susceptibility-weighted imaging filtered phase in patients with relapsing-remitting multiple sclerosis over 24 weeks of therapy with subcutaneous interferon beta-1a three times weekly. *J Neuroimmunol* 2015;281:44-50.
- Graf A, Krebs S, Heininen-Brown M, Zakhartchenko V, Blum H, Wolf E. Genome activation in bovine embryos: review of the literature and new insights from RNA sequencing experiments. *Anim Reprod Sci.* 2014 Sep;149(1-2):46-58.
- Hagemeyer J, Heininen-Brown M, Gabelic T, Guttuso T, Silvestri N, Lichter D, Fugoso LE, Bergsland N, Carl E, Geurts JJG, Weinstock-Guttman B, Zivadinov R. Phase and T2 white matter lesions in patients with clinically isolated syndrome and other neurological disorders. *AJNR* 2014; 35:1916-23.
- Hagemeyer J, Dwyer MG, Bergsland N, Schweser F, Magnano CR, Heininen-Brown M, Ramasamy DP, Carl E, Kennedy C, Melia R, Polak P, Deistung A, Geurts JJ, Reichenbach JR, Zivadinov R. Effect of age on MRI phase behavior in the subcortical deep gray matter of healthy individuals. *AJNR* 2013; 34:2144-2151.
- Hagemeyer J, Yeh EA, Heininen Brown M, Bergsland N, Dwyer MG, Carl E, Weinstock-Guttman B, Zivadinov R. Iron content of the pulvinar nucleus of thalamus is increased in adolescent multiple sclerosis. *Mult Scler* 2013; 19:567-76.
- Hagemeyer J, Weinstock-Guttman B, Heininen Brown M, Poloni G, Bergsland N, Schirda C, Magnano CR, Kennedy C, Carl E, Dwyer MG, Zivadinov R. Gray matter SWI-filtered phase and atrophy are linked to disability in MS. *Front Biosci* 2013;E5:525-532.
- Zivadinov R, Dwyer MG, Hussein S, Carl E, Kennedy C, Andrews M, Hojnacki D, Heininen-Brown M, Willis L, Cherneva M, Bergsland N, Weinstock-Guttman B. Voxel-wise magnetization transfer imaging study of effects of natalizumab and IFN-beta 1-a in MS. *Mult Scler* 2012;18:1125-134.
- Hagemeyer J, Weinstock-Guttman B, Bergsland N, Heininen-Brown M, Carl E, Kennedy C, Magnano C, Hojnacki D, Dwyer MG, Zivadinov R. Iron deposition on SWI filtered phase in the subcortical deep gray matter of clinically isolated syndrome patients may precede structurespecific atrophy. *Am J Neuroradiol* 2012;33:1596-601.
- Hagemeyer J, Heininen-Brown M, Poloni GU, Bergsland N, Magnano CR, Durfee J, Kennedy C, Carl E, Weinstock-Guttman B, Dwyer MG, Zivadinov R. Iron deposition in multiple sclerosis lesions measured by susceptibility-weighted imaging. A case control study. *JMRI* 2012;36:73-83.
- Hagemeyer J, Weinstock-Guttman B, Heininen Brown M, Poloni G, Bergsland N, Schirda C, Magnano CR, Kennedy C, Carl E, Dwyer MG, Zivadinov R. Subcortical deep gray matter SWI-filtered phase and atrophy are associated with disability in MS. *Front Biosci (CC; PBM)*. In press
- Batista S, Zivadinov R, Hoogs M, Bergsland N, Heininen-Brown M, Dwyer MG, Weinstock-Guttman B. Independent associations of basal ganglia, thalamus and neocortical volume with slowed mental processing in multiple sclerosis. *J Neurol* 2012;259:139-46. (CC; PBM)
- Weinstock-Guttman B, Zivadinov R, Qu J, Cookfair D, Duan X, Bang E, Bergsland N, Hussein S, Cherneva, M, Willis L, Heininen-Brown M, Ramanathan M. Vitamin D metabolites are associated with clinical and MRI outcomes in multiple sclerosis patients. *JNNP* 2011;82:189-95. (CC; PBM)
- Zivadinov R, Haacke ME, Menegatti E, Weinstock-Guttman B, Schirda C, Malagoni AM, Hojnacki D, Kennedy C, Carl E, Bergsland N, Hussein S, Heininen-Brown M, Bartolomei I, Salvi F, Zamboni P. Chronic cerebrospinal venous insufficiency and iron deposition on susceptibility-weighted imaging in patients with multiple sclerosis: a pilot case-control study. *Int Angiol* 2010;2:158-75.

Abstracts

- Dwyer MG, Zivadinov R, Markovic-Plese S, Bergsland N, Heininen-Brown M, Carl E, Weinstock-Guttman B, Hayward B, Dangond F. Associations between changes in ferritin levels and susceptibility-weighted imaging filtered phase in patients with relapsing-remitting multiple sclerosis over six months therapy with interferon beta-1a. 66th Annual Meeting of American Academy of Neurology, Philadelphia, PA, May 1, 2014:P6.115.
- Hagemeyer J, Guttuso T, Bergsland N, Heininen-Brown M, Carl E, Lichter D, Zivadinov R. Parkinson's disease patients with mild cognitive impairment do not have increased brain iron concentrations as compared to patients without cognitive impairment. 66th Annual Meeting of American Academy of Neurology, Philadelphia, PA, April 30, 2014:P5.261.
- Hagemeyer J, Heininen-Brown M, Gabelic T, Guttuso T, Silvestri N, Lichter D, Fugoso L, Bergsland N, Carl E, Geurts J, Weinstock-Guttman B, Zivadinov R. Phase and T2 white matter lesions in patients with clinically isolated syndrome and other neurological disorders. 29th European Committee for Treatment and Research in Multiple Sclerosis, Copenhagen, Denmark, October 2-5, 2013:P934.
- Hagemeyer J, Dwyer MG, Bergsland N, Schweser F, Magnano C, Heininen-Brown M, Ramasamy DP, Carl E, Kennedy C, Cherneva M, Melia R, Polak P, Deistung A, Reichenbach JR, Zivadinov R. Establishing MRI phase, abnormal MRI phase, and volume behavior in the subcortical deep gray matter of healthy individuals. 21st Annual ISMRM Meeting, Salt Lake City, Utah, April 20-26, 2013, P1003.
- Foster T, Weinstock-Guttman B, Hagemeyer J, Carl E, Hojnacki D, Dwyer MG, Bergsland N, Magnano CR, Heininen-Brown M, Cherneva M, Zivadinov R. Iron content in benign and non-benign patients with relapsing-remitting multiple sclerosis. 65th Annual Meeting of American Academy of Neurology, San Diego, CA, March 21, 2013:P06.108.
- Zivadinov R, Hagemeyer J, MS, Heininen Brown M, Poloni GU, Bergsland N, Schirda C, Magnano CR, Kennedy C, Carl E, Dwyer M, Weinstock-Guttman B. *Subcortical deep gray matter SWI-filtered phase and atrophy are associated with disability in MS.* 64th Annual Meeting of American Academy of Neurology, New Orleans, LA, USA, April 2012.
- Hagemeyer J, Yeh EA, Heininen Brown M, Bergsland N, Dwyer MG, Carl E, Weinstock-Guttman B, Zivadinov R. *Iron deposition in the subcortical deep-gray matter of pediatric multiple sclerosis patients.* 64th Annual Meeting of American Academy of Neurology, New Orleans, LA, USA, April 2012.
- Hagemeyer J, Weinstock-Guttman B, Bergsland N, Heininen Brown M, Carl M, Kennedy C, Magnano CR, Hojnacki D, Dwyer MG, Zivadinov R. *Iron deposition on SWI filtered phase in the subcortical deep gray matter of clinically isolated syndrome patients may precede structure-specific atrophy.* 64th Annual Meeting of American Academy of Neurology, New Orleans, LA, USA, April 2012.
- Dwyer MG, Hagemeyer J, MS, Heininen Brown M, Poloni GU, Bergsland N, Magnano CR, Durfee J, Kennedy C, Carl E, Weinstock-Guttman B, Zivadinov R. *Iron deposition in multiple sclerosis lesions measured by susceptibility-weighted imaging filtered phase. A case control study.* 64th Annual Meeting of American Academy of Neurology, New Orleans, LA, USA, April 2012.
- Zivadinov R, Hagemeyer J, Heininen Brown M, Poloni GU, Bergsland N, Magnano CR, Kennedy C, Carl E, Dwyer MG, Weinstock-Guttman B. *Iron deposition and disability in MS.* 2nd Annual ISNVD Scientific Meeting, Orlando FL, 2012:A143.
- Hagemeyer J, Weinstock-Guttman B, Bergsland N, Heininen Brown M, Carl E, Kennedy C, Magnano C, Hojnacki D, Dwyer MG, Zivadinov R. *Iron deposition in clinically isolated syndrome.* 2nd Annual ISNVD Scientific Meeting, Orlando FL, 2012:A139.
- Hagemeyer J, Yeh EA, Heininen Brown M, Bergsland N, Dwyer MG, Carl E, Weinstock-Guttman B, Zivadinov R. *Iron deposition in pediatric multiple sclerosis patients.* 2nd Annual ISNVD Scientific Meeting, Orlando FL, 2012:A140.
- Hagemeyer J, Heininen-Brown M, BA, Dwyer MG, Poloni GU, Bergsland N, Magnano CR, Kennedy C, Carl E, Weinstock-Guttman B, Zivadinov R. *Iron deposition in multiple sclerosis lesions.* 2nd Annual ISNVD Scientific Meeting, Orlando FL, 2012:A142.
- Batista S, Zivadinov R, Hoogs M, Bergsland N, Heininen-Brown M, Dwyer MG, Weinstock-Guttman B, Benedict RHB. *Independent associations of basal ganglia, thalamus and neocortical atrophy with slowed cognitive processing in multiple sclerosis.* (Platform, 63rd Annual Meeting of American Academy of Neurology, Hawaii, USA, April 2011)
- Zivadinov R, Dwyer MG, Hussein S, Carl E, Kennedy C, Andrews M, Hojnacki D, Heininen-Brown M, Willis L, Cherneva M, Bergsland N, Weinstock-Guttman B. *Effects of natalizumab (Tysabri®) on gray matter pathology in patients with relapsing multiple sclerosis: A 2-year follow-up brain atrophy study.* (63rd Annual Meeting of American Academy of Neurology, Hawaii, USA, April 2011)

- Morrow SA, Zivadinov R, Hoogs M, Heininen-Brown M, Hunt K, Hussein S, Ramasamy DP, Durfee J, Dwyer MG, Carl E, Bergsland N, Benedict RHB. Cognitive reserve does not protect against atrophy in deep gray matter structures in MS patients. (63rd Annual Meeting of American Academy of Neurology, Hawaii, USA, April 2011)
- Zivadinov R, Dwyer M, Hussein S, Carl E, Durfee J, Kennedy C, Andrews MA, Hojnacki D, Heininen-Brown M, Willis L, Cherneva M, Bergsland N, Weinstock-Guttman B. Evolution of voxel-wise magnetisation transfer ratio in natalizumab and interferon beta treated patients with multiple sclerosis A case-control, 2-year follow-up study. *Mult Scler* 2010;16 (Suppl 10); P319,S100.
- Zivadinov R, Heininen-Brown M, Schirda C, Bergsland N, Magnano C, Hojnacki D, Ramasamy DP, Kennedy C, Carl E, Dwyer M, Weinstock-Guttman B. Increased iron concentration and decreased volume of deep-grey matter are associated with increased disability in patients with multiple sclerosis. *Mult Scler* 2010;16 (Suppl 10); P320,S100.
- Zivadinov R, Schirda C, Heininen-Brown M, Bergsland N, Magnano C, Durfee J, Kennedy C, Carl E, Hojnacki D, Weinstock-Guttman B, Dwyer M. Increased iron concentration on susceptibility-weighted imaging is associated with decreased deep-grey matter volumes in patients with multiple sclerosis. *Mult Scler* 2010;16 (Suppl 10); P772,S267.
- Zivadinov R, Heininen-Brown M, Schirda C, Magnano C, Hojnacki D, Kennedy C, Carl E, Bergsland N, Hussein S, Cherneva M, Willis L, Dwyer M, Weinstock-Guttman B. Multiple sclerosis patients with chronic cerebrospinal venous insufficiency present with increased iron concentration on susceptibility-weighted imaging in deep-grey matter. *Mult Scler* 2010;16 (Suppl 10); P774,S268.
- Zivadinov R, Zamboni P, Haacke EM, Menegatti E, Weinstock-Guttman B, Schirda C, Malagoni AM, Hojnacki D, Kennedy C, Carl E, Bergsland N, Hussein S, Heininen-Brown M, Bartolomei I, Salvi F, Dwyer MG. Chronic cerebrospinal venous insufficiency and iron deposition on susceptibility-weighted imaging in patients with multiple sclerosis. *Proc Soc Magn Reson Med* 2010; P2111
- Dwyer MG, Bergsland N, Schirda C, Heininen-Brown M, Carl E, Wack D, Poloni GU, Zivadinov R. A semi-automated analysis pipeline for reproducible SWI analysis of multiple sclerosis pathology. *Proc Soc Magn Reson Med* 2010; P2110
- Dwyer MG, Zamboni P, Haacke EM, Menegatti E, Weinstock-Guttman B, Schirda C, Malagoni AM, Hojnacki D, Kennedy C, Carl E, Bergsland N, Hussein S, Heininen-Brown M, Bartolomei I, Salvi F, Zivadinov R. Chronic cerebrospinal venous insufficiency and iron deposition on susceptibility-weighted imaging in patients with multiple sclerosis. *Neurology* 2010;74 (Suppl 2): P03.126, A239.
- Zivadinov R, Dwyer MG, Bergsland N, Hussein S, Cox JL, Durfee J, Nayyar N, Hojnacki D, Hashmi K, Heininen-Brown M, Chouhfeh L, Carl E, Weinstock-Guttman B. Evolution of voxelwise magnetization transfer ratio in natalizumab and interferon beta-1a I.M. treated patients with multiple sclerosis. A case-control study. *Mult Scler* 2009;15 (Suppl 2):P721:S217.
- Zivadinov R, Dwyer MG, Bergsland N, Hussein S, Cox JL, Durfee J, Nayyar NS, Hojnacki D, Hashmi K, Heininen-Brown M, Chouhfeh L, Carl E, Weinstock-Guttman B. Natalizumab (Tysabri®) promotes remyelination in patients with multiple sclerosis. A voxel-wise magnetization transfer imaging case-control study. *Neurology* 2009;72 (Suppl 3):P03.071, A140.

Responsible positions

05/2014 -	Student Representative of the QBM Promotion of 2013
05/2012 – 12/2013	Board member of the Finnish Society for Bioinformatics
04/2011 – 12/2013	Board member of the Steering Group for Bioinformatics Master's Degree program in University of Turku and University of Tampere
08/2008 – present	Responsible Clinical Trial Research Assistant for multi-center international clinical trial.
04/2001 – 05/2004	Tutor of Helia's student union TALKO (student body organization; elective, decision-making member of the official school board)
08/2000 – 05/2004	Active member of Helia's International Student Organization, KANTO (provides orientation and assistance for international students)

Nationality: Finland/USA

Language Skills

Finnish: native
English: excellent
German: satisfactory
Swedish: good
Spanish: satisfactory

Computer Skills

Operating systems: Windows, Linux and Unix
Programming: Python, BioPython, Java
R, SPSS
Microsoft Office: Windows, Word, Excel and Power Point
Outlook, Adobe InDesign, Adobe Designer, Publisher and VMWare
Jim (Java Image Manipulation) 3.0 and 4.0, Matlab, ALDO, MACC, Pymol, Bodil, Sybyl
SQL
Databases Bluesky and Hydra.
Lotus Notes, Internet, Wiki and Twiki
Hotel Management programs (PMS, Reserve, Guest Base, Matrix)
JydaCom, Lemonsoft, OpusCapita