

Jing Qian

Contact Information

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Education and Training

2009-2011	Postdoctoral Fellow	Harvard T.H. Chan School of Public Health, Boston, MA
2009	Ph.D. in Biostatistics	Emory University, Atlanta, GA <i>Advisor:</i> Yijian (Eugene) Huang
2002	B.S. in Statistics	Renmin University of China, Beijing, China

Professional Experience

2018-present	Associate Professor, Biostatistics and Epidemiology, UMASS Amherst
2011-2018	Assistant Professor, Department of Biostatistics and Epidemiology, UMASS Amherst
2009-2011	Research Fellow, Department of Biostatistics, Harvard University, Boston, MA
2004-2009	Research Assistant, Department of Biostatistics, Emory University, Atlanta, GA

Honors and Awards

2014	Travel Award, IMS Junior Researcher Conference
2013	Travel Award, NISS/ASA Writing Workshop for Junior Researchers
2013	Travel Award, ENAR Workshop for Junior Biostatisticians in Health Research
2013	Open Education Initiative Award, Provost's Office and the University Libraries, UMASS Amherst
2012	Dean's Professional Development Award, School of Public Health and Health Sciences, UMASS Amherst
2008	ENAR Distinguished Student Paper Award, International Biometric Society/ENAR
2003	Fei Xiaotong Scholarship, Fei Xiaotong Education Fund, China
2001	City University of Hong Kong President's Scholarship

Research Interests

Statistical Methodology: Survival analysis under complex sampling; Quantile regression; Treatment of censored covariates; Biomarker evaluation and risk prediction; Semiparametric and nonparametric inferences; Analytic methods for high-dimensional data.

Subject-matter Application: Alzheimer's disease studies; Cancer epidemiological studies; Clinical trials.

Research Funding

1. **Treatment of randomly censored covariates in Alzheimers disease studies.** PI, NIH (R21AG053695), 8/1/16 – 5/31/19
2. **Statistical methods for censored and dependently truncated data.** Subcontract PI, NIH (R01NS094610), 7/1/16 – 6/30/20
3. **Endogenous hormones and postmenopausal breast cancer: etiologic insights and improving risk prediction.** Co-I, NIH (R01CA207369), 6/15/17 – 03/31/22
4. **Statistical methods for analysis of failure time data.** Subcontract PI, NIH(R01CA075971), 9/1/11 – 08/31/13
5. **Biochemical markers in the nurses' health study cohort.** Co-I, NIH (R01CA075971), 9/1/11 – 8/31/16
6. **Translational Neurology Core.** Statistician, Harvard NeuroDiscovery Center, 9/1/11 – 6/30/17
7. **Alzheimer's prevention initiative APOE4 trial.** Subcontract PI, NIH (UF1AG046150), 11/1/14 – 10/31/16
8. **Methods for high-dimensional data in HIV/CVD research.** Subcontract PI, NIH (R01HL107196), 9/1/13 – 1/31/17
9. **Depression, antidepressant use and breast cancer risk.** Co-I, NIH (R03CA186228), 4/3/14 – 03/31/17
10. **Flexible regression methods for survival data subject to biased sampling.** PI, UMASS Faculty Research Grant, 1/1/16 – 6/30/17

Peer-reviewed Publications

(student or postdoc advisees are indicated by an underline)

1. Lu, D.Y., Qian, J., Easley, K.A., Waldrop, S.M. and Cohen, C. (2009). Automated in situ hybridization and immunohistochemistry for cytomegalovirus detection in paraffin-embedded tissue sections. *Applied Immunohistochemistry & Molecular Morphology* **17**, 158-164.
2. Cerwinka, W.H., Qian, J., Easley, K.A., Scherz, H.C. and Kirsch, A.J. (2009). Appearance of dextranomer/hyaluronic acid copolymer implants on computed tomography scan after endoscopic treatment of vesicoureteral reflux in children. *The Journal of Urology* **181**, 1324-1329.

3. Anderson, A.M., Mehta, A.K., Wang, Y.F., **Qian, J.**, Easley, K.A., and Nguyen, M.L. (2010). HIV-associated histoplasmosis in a nonendemic area of the United States during the HAART era: role of migration from endemic areas and lack of antiretroviral therapy. *Journal of the International Association of Physicians in AIDS Care*, **9**, 296-300.
4. Shah, N.S., Force, S.D., Mitchell, P.O., Lin, E., Lawrence, E.C., Easley, K.A., **Qian, J.**, Ramirez, A.M., Neujahr, D.C., Gal, A., Leeper, K.V., and Pelaez, A. (2010). Gastroesophageal reflux disease is associated with an increased rate of acute rejection in lung transplant allografts. *Transplantation Proceedings*, **42**, 2702-2706.
5. Saint-Elie, D.T., Patel, P., Healy, K.A., Solomon, T., Pattaras, J.G., **Qian, J.**, Master, V. and Ogan, K. (2010). The impact of income and education on dietary habits in stone formers. *Urology*, **76** (2), 307-313.
6. **Qian, J.** and Peng, L. (2010). Censored quantile regression model with partially functional effects. *Biometrika*, **97** (4), 839-850.
7. Clark, D.E., **Qian, J.**, Winchell, R.J. and Betensky, R.A. (2012) Hazard regression models of early mortality in trauma centers. *Journal of the American College of Surgeons*, **215** (6), 841-849.
8. Clark, D.E., **Qian, J.**, Sihler, K.C., Hallagan, L. D. and Betensky, R.A. (2012) The distribution of survival times after injury. *World Journal of Surgery*, **36** (7), 1562-1570.
9. Serrano-Pozo, A., **Qian, J.**, Monsell, S.E., Frosch, M.P., Betensky, R.A. and Hyman, B.T. (2013) Examination of the clinicopathologic continuum of Alzheimer disease in the autopsy cohort of the National Alzheimer Coordinating Centers. *Journal of Neuropathology & Experimental Neurology*, **72**(12), 1182-1192.
10. Ramachandran, K., Saikumar, J., Bijol, V., Koyner, J.L., **Qian, J.**, Betensky, R.A., Waikar, S.S. and Vaidya, V.S. (2013) Human miRNome profiling identifies differentially expressed urinary microRNAs in kidney injury. *Clinical Chemistry*, **59**(12), 1742-1752.
11. Kemmling, A., Lev, M.H., Payabvash, S., Betensky, R.A., **Qian, J.**, Masrur, S. and Schwamm, L.H. (2013) Hospital acquired pneumonia is linked to right hemispheric peri-insular stroke. *PLOS ONE*, **8**(8): e71141.
12. Tworoger, S.S., Eliassen, A.H., Zhang, X., **Qian, J.**, Sluss, P., Rosner, B.A. and Hankinson, S.E. (2013) A 20-year prospective study of plasma prolactin as a risk marker of breast cancer development. *Cancer Research*, **73**(15), 4810-4819.
13. Pellegrini, L., Rodriguez-Monguio, R. and **Qian, J.** (2014) The US healthcare workforce and the labor market effect on healthcare spending and health outcomes. *International Journal of Health Care Finance and Economics*, **14**, 127-141.
14. Serrano-Pozo, A., **Qian, J.**, Monsell, S.E., Blacker, D., Gómez-Isla, T., Betensky, R.A., Growdon, J.H., Johnson, K., Frosch, M.P., Sperling, R.A. and Hyman, B.T. (2014) Mild to moderate Alzheimer dementia with insufficient neuropathological changes. *Annals of Neurology*, **75**, 597-601.
15. **Qian, J.** and Betensky, R.A. (2014) Assumptions regarding right censoring in the presence of left truncation. *Statistics & Probability Letters*, **87**, 12-17.
16. **Qian, J.**, Payabvash, S., Kemmling, A., Lev, M.H., Schwamm, L.H., and Betensky, R.A. (2014) Variable selection and prediction using a nested, matched case-control study: Application to hospital acquired pneumonia in stroke patients. *Biometrics*, **70**, 153-163.
17. Tworoger, S.S., Zhang, X., Eliassen, A.H., **Qian, J.**, Colditz, G.A., Willett, W.C., Rosner, B.A., Kraft, P. and Hankinson, S.E. (2014) Inclusion of endogenous hormone levels in risk prediction models of postmenopausal breast cancer. *Journal of Clinical Oncology*, **32**, 3111-3117.
18. Jamison, R.N., Martel, M.O., Edwards, R.R., **Qian, J.**, Sheehan, K.A., and Ross, E.L. (2014) Validation of a brief Opioid compliance checklist for patients with chronic pain. *Journal of Pain*, **15**, 1069-1202.
19. Brown, S.B., Hankinson, S.E., Eliassen, A.H., Reeves, K.W., **Qian, J.**, Arcaro, K., Wegrzyn, L.R., Willett, W.C. and Schernhammer, E.S. (2015) Urinary melatonin and risk of breast cancer in the Nurses' Health Study II. *American Journal of Epidemiology*, **181**(3), 155-162.
20. Serrano-Pozo, A., **Qian, J.**, Monsell, S.E., Betensky, R.A. and Hyman, B.T. (2015) Apolipoprotein E ϵ 2 is associated with milder clinical and pathological Alzheimer's disease. *Annals of Neurology*, **77**(6), 917-929.
21. Wu, H., Reeves, K.W., **Qian, J.** and Sturgeon, S.R. (2015) Coffee, tea, and melanoma risk among postmenopausal Caucasian women. *European Journal of Cancer Prevention*, **24**(4), 347-352.
22. Reed, E., Nunez, S., Kulp, J., **Qian, J.**, Reilly, M.P. and Foulkes, A.S. (2015) A guide to genome-wide association analysis and post-analytic interrogation. *Statistics in Medicine*, **34**(28), 3769-3792.
23. Brown, S.B., Hankinson, S.E., Arcaro, K.F., **Qian, J.**, and Reeves, K.W. (2016) Depression, Antidepressant Use and Postmenopausal Breast Cancer Risk. *Cancer Epidemiology, Biomarkers & Prevention*, **25**(1), 158-164.
24. **Qian, J.**, Reed, E., Nunez, S., Reilly, M.P. and Foulkes, A.S. (2016) A simple test of class-level genetic association can reveal novel cardiometabolic trait loci. *PLOS ONE*, **11**(2): e0148218
25. Serrano-Pozo, A., **Qian, J.**, Muzikansky, A., Monsell, S.E., Montine, T.J., Frosch, M.P., Betensky, R.A. and Hyman, B.T. (2016) Thal amyloid stages do not significantly impact the correlation between neuropathological change and cognition in the Alzheimer disease continuum. *Journal of Neuropathology & Experimental Neurology*, **75**(6), 516-526.

26. Reeves, K.W., Okereke, O., **Qian, J.**, Tworoger, S., Rice, M.S. and Hankinson, S.E. (2016) Antidepressant use and circulating prolactin levels. *Cancer Causes and Control*, 27(7):835-861.
27. Atem, F., **Qian, J.**, Maye J.E., Johnson, K.A. and Betensky, R.A. (2016) Multiple imputation of a randomly censored covariate improves logistic regression analysis. *Journal of Applied Statistics*, 43(15):2886-2896.
28. Atem, F., **Qian, J.**, Maye J.E., Johnson, K.A. and Betensky, R.A. (2017) Linear regression with a randomly censored covariate: Application to an Alzheimer's study. *Journal of the Royal Statistical Society: Series C*, 66(2):313-328.
29. **Qian, J.**, Wolters, F., Beiser, A., Hann, M., Ikram, A., Karlawish, J., Langbaum, J.B., Neuhaus, J.M., Reiman, E.M., Seshadri, S., Tariot, P.N., Woods, B.M., Betensky, R.A. and Blacker, D. (2017) APOE-related risk of mild cognitive impairment and dementia for prevention trials: an analysis of four cohorts. *PLOS Medicine*, 14(3): e1002254.
30. **Qian, J.**, Hyman, B.T. and Betensky, R.A. (2017) Neurofibrillary tangle stage and the rate of progression of Alzheimer symptoms: Modeling using an autopsy cohort and application to clinical trial design. *JAMA Neurology*, 74(5):540-548.
31. **Qian, J.**, Nunez, S., Kim, S., Reilly, M.P., and Foulkes, A.S. (2017) A score test for class-level association with non-linear biomarker trajectories. *Statistics in Medicine*, 36(19):3075-3091.
32. Reeves, K.W., Okereke, O., **Qian, J.**, Tamimi, R., Eliassen, H. and Hankinson, S.E. (2018) Depression, antidepressant use and breast cancer risk in pre- and postmenopausal women: a prospective cohort study. *Cancer Epidemiology, Biomarkers & Prevention*, 27(3): 306-314.
33. Farrell, J.A., Cordeiro, L., **Qian, J.**, Sullivan-Werner, L. and Peterman, J.N. (2018) Food affordability, food security, and the expanded food and nutrition education program. *Journal of Hunger and the Environment*, 13(2): 180-191.
34. Doughty, K.N., Ronnenberg, A., Reeves, K., **Qian, J.**, and Sibeko, L. (2018) Barriers to Exclusive Breastfeeding Among Women With Gestational Diabetes Mellitus in the United States. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 47(3): 301-315.
35. Zhang, X., Rice, M., Tworoger, S.S., Rosner, B.A., Eliassen, A.H., Tamimi, R.M., Joshi, A.D., Lindstrom, S., **Qian, J.**, Colditz, G.A., Willett, W.C., Kraft, P. and Hankinson, S. (2018) Improving breast cancer risk prediction models: The addition of a polygenic risk score, mammographic density, and endogenous hormones. *Plos Medicine*, 15(9):e1002644.
36. Chiou, S., **Qian, J.**, Mormino, E. and Betensky, R.A. (2018) Permutation testing for general dependent truncation. *Computational Statistics & Data Analysis*, 128: 308-324.
37. **Qian, J.**, Chiou, S., Maye, J. E., Atem, F., Johnson, K.A. and Betensky, R.A. (2018+) Threshold regression to accommodate a censored covariate. (In press, *Biometrics*).
38. Xu, H.[†], **Qian, J.**[†], Zhang, X., Whitcomb, B.W., Paynter, N.P., Rexrode, K.M., Tworoger, S.S., Hankinson, S.E. and Balasubramanian, R. (2018+) Estimating the receiver operating characteristic curve in matched case-control studies. (In press, *Statistics in Medicine*).[†]*equal contribution.*
39. **Qian, J.**, Ray, E., Brecha, R., Reilly, M.P. and Foulkes, A.S. (2018+) A likelihood-based approach to transcriptome association analysis. (In press, *Statistics in Medicine*).
40. Chiou, S., Austin, M.D., **Qian, J.** and Betensky, R.A. (2018+) Transformation model estimation of survival under dependent truncation and independent censoring. (In press, *Statistics Methods in Medical Research*).

Invited Presentations

1. Department of Statistics, University of Kentucky, Lexington, KY, April 2009.
2. Neurostatistics Working Group, Department of Biostatistics, Harvard School of Public Health, December 2009.
3. Neurostatistics Working Group, Department of Biostatistics, Harvard School of Public Health, September 2010.
4. Division of Biostatistics and Epidemiology, University of Massachusetts, Amherst, MA, March 2011.
5. Department for Epidemiology and Biostatistics, University of South Carolina, Columbia, SC, March 2011.
6. Department of Biostatistics, MD Anderson Cancer Center, Houston, TX, April 2011.
7. International Chinese Statistical Association (ICSA) 2012 Applied Statistics Symposium, Boston, MA, June 2012.
8. Second Joint Biostatistics Symposium, Beijing, China, July 2012.
9. The 27th New England Statistical Symposium, Storrs, CT, April 2013.
10. Neurostatistics Working Group, Department of Biostatistics, Harvard University, Boston, MA, May 2013.
11. Department of Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA, November 2013.
12. Division of Cardiac and Thoracic Anesthesia, Brigham and Womens Hospital, Boston, MA, December 2013.
13. Emerging Information and Technology Association Conference on Biomedical Research, Cambridge, MA, July 2014.
14. Department of Statistics, University of Connecticut, Storrs, CT, October 2014.
15. Neurostatistics Working Group, Department of Biostatistics, Harvard University, Boston, MA, November 2014.
16. Symposium on Statistical Issues in the Analysis of Neurological Studies, Boston, MA, November 2014.
17. The 29th New England Statistical Symposium, Storrs, CT, April 2015.

18. International Chinese Statistical Association (ICSA) 2015 Applied Statistics Symposium, Fort Collins, CO, June 2015.
19. School of Statistics, Renmin University of China, Beijing, China, June 2015.
20. International Chinese Statistical Association (ICSA) Statistics Conference, Shanghai, China, July 2015.
21. Joint Statistical Meetings, Seattle, WA, August 2015.
22. Neurostatistics Working Group, Department of Biostatistics, Harvard University, Boston, MA, February 2016.
23. Center for Quality of Care Research, Baystate Medical Center, Springfield, MA, April, 2016.
24. The 30th New England Statistical Symposium, New Haven, CT, April 2016.
25. International Chinese Statistical Association (ICSA) 2016 Applied Statistics Symposium, Atlanta, GA, June 2016.
26. Symposium on Parkinson's and Alzheimer's Diseases, University of Massachusetts, Amherst, MA, October 2016.
27. Statistical Methods in Epidemiology Working Group, Department of Biostatistics, Harvard University, January 2017.
28. The 31st New England Statistical Symposium, Storrs, CT, April 2017.
29. Conference on Lifetime Data Science, Storrs, CT, May 2017.
30. International Chinese Statistical Association (ICSA) 2017 Applied Statistics Symposium, Chicago, IL, June 2017.
31. Division of Biostatistics and Bioinformatics, Penn State College of Medicine, Hershey, PA, November 2017.
32. Division of Biostatistics, University of Minnesota, Minneapolis, MN, March 2018.
33. The 32nd New England Statistical Symposium, Amherst, MA, April 2018.
34. the 4th International Workshop on the Statistical Analysis of Multi-outcome Data, St. Louis, MO, June 2018.
35. Department of Statistics, Beijing Technology and Business University, Beijing, China, June 2018.
36. 8th International Statistics Symposium, Beijing, China, July 2018.
37. International Chinese Statistical Association (ICSA) Statistics Conference, Qingdao, China, July 2018.
38. Global Health Institute, Xi'an Jiaotong University, Xi'an, Shaanxi, China, July 2018.
39. School of Public Health, Tongji Medical College, Huazhong U of Science and Technology, Wuhan, China, August 2018.

Teaching

Course Instructor (UMASS):

BIOSTATS 540	Introduction to Biostatistics	Fall 2011, 2012
BIOSTATS 640	Intermediate Biostatistics	Spring 2012, 2013
BIOSTATS 690JQ	Methods III: Modern Applied Statistical Methods	Fall 2013; Spring 2015, 2016, 2017, 2018
BIOSTATS 892A	Statistical Methods for Biomarkers Discovery	Spring 2017
BIOSTATS 896	Independent Study	Spring 2013, 2016, 2017; Fall 2015

Teaching Assistant (Emory University):

BIOS 500	Statistical Methods I	Fall 2005	BIOS 501	Statistical Methods II	Spring 2006
BIOS 510	Probability I	Fall 2006	BIOS 591P	Statistical Methods II	Spring 2007

Guest Lecturer

- “Extension of multiple linear regression” for BIOS 501, Statistical Methods II, Emory University (04/04/2006)
- “The Principle of maximum likelihood” for BIOS 501, Statistical Methods II, Emory University (04/06/2006)
- “Variable selection and prediction using a nested matched case-control study” for BIOSTATS 892D, UMASS (04/09/2014)

Mentoring and Advising

Post-doctoral Research Fellow:

Steven Chiou 2015 – 2017 Biostatistics
Co-advised with Rebecca Betensky at Harvard
Current Position: Assistant Professor, Department of Mathematical Sciences, U Texas at Dallas

Ph.D. Dissertation Advisor:

Boqin Sun 2013 – 2018 Math & Statistics
Current Position: Predictive modeling associate at Homesite Insurance
 Yiding Zhang 2015 – present Biostatistics
 Jingyao Hou 2016 – present Biostatistics

Ph.D. Dissertation Committee Member:

Susan Brown (2012 – 2014, Epidemiology), Jing Hao (2013 – 2015, Health Policy and Management), Kimberly Doughty (2013 – 2015, Nutrition), Lawrence Pellegrini, (2014 – 2017, Health Policy and Management), Hui Xu (2014 – 2017, Biostatistics), Maysa

Alzaim (2015 – 2018, Nutrition), Minming Li (2015 – present, Biostatistics), Xi Meng (2017 – present, Biostatistics), Jean Cody (2018 – present, Nursing), Jinchao Li (2018 – present, Nutrition), Yubing Yao (2018 – present, Biostatistics), Yared Gurmu (2013 – 2016, Biostatistics, at *Harvard University*).

Master Thesis Advisor:

Elizabeth Austin, MS 2017 – 2018 Biostatistics

Award: *David Hosmer Outstanding second-year Biostatistics MS student award, UMass Amherst, 2018*

Master Thesis Committee Member:

Haotian Wu (2012 – 2013, Epidemiology), Jamie Farrell (2012 – 2013, Nutrition), Abigail Santos (2013 – 2014, Epidemiology), Sophie O'Brien, (2013 – 2014, Biostatistics), Xi Meng (2015 – 2016, Biostatistics).

Undergraduate Honor Thesis Committee Member: Anusha Kothapalli (2015 – 2016, Biostatistics).

Academic Advisor for Biostatistics Students:

MS/MPH students: Matthew Valko, Sophie O'Brien, Tianhui Nan, Yiding Zhang, Xi Meng, Xuelian Li, Lin Chen, Jonathan Chiang, Mark Fulginiti, Elizabeth Austin, Sirui Qin. **Ph.D. students:** Sara Nuñez, Heather Weaver, Aruna Priya, Yukun Li.

Editorial and Referee Activities

Editorial Service

Associate Editor, *Annals of Applied Statistics*, 2015 – present

Statistical Reviewer, *Journal of Alzheimer's Disease*, 2017 – present

Ad hoc Reviewer for Journals: *Annals of Applied Statistics*, *Biometrics*, *Biostatistics*, *BMC Cancer*, *BMC Medical Research Methodology*, *Electronic Journal of Statistics*, *Journal of Alzheimer's Disease*, *Journal of Applied Statistics*, *Journal of the American Statistical Association*, *Journal of Experimental Psychology*, *Lifetime Data Analysis*, *Statistics in Medicine*, *Computational Statistics and Data Analysis*, *Health and Quality of Life Outcomes*.

Book Review: "An Introduction to Statistical Methods and Data Analysis" by Ott/Longnecker (Publisher: *Brooks/Cole*)

Grant Review: Faculty Research Grant/Healey Endowment Grant (FRG/HEG) at UMASS, Amherst.

Professional Services

Data and Safety Monitoring Board (DSMB): a phase II randomized, placebo-controlled trial of Tocilizumab in amyotrophic lateral sclerosis (ALS) (funded by ALS Association, *ClinicalTrials.gov Identifier:* NCT02469896). 2015 – 2018

Session Organizers and Chairs: Organizer of an invited sessions at JSM 2015, ICSA 2016, ISF 2018. Chair of an invited session at ICSA 2016, ENAR 2017. Chair of contributed sessions at ENAR Meeting 2007, 2013, 2017, JSM 2012, 2014, 2016.

School of Public Health and Health Sciences, University of Massachusetts

Member, School Curriculum Committee, 2013–2014

Member, Information Technology Manager Search Committee, 2013–2014

Judge, Student Poster Award on SPHHS Research Day, 2015

Department of Biostatistics and Epidemiology, School of Public Health and Health Sciences, UMASS

Member, Department Curriculum Committee, 2011–2013

Member, Epidemiology Post-doc Search Committee, 2012–2013

Member, Environment Health Tenure-Track Faculty Search Committee, 2012–2013

Member, Biostatistics Research Faculty Search Committee, 2012–2013

Co-Chair, Biostatistics Tenure-Track Faculty Search Committee, 2012–2013

Member, Biostatistics Curriculum Committee, 2012–2013

Chair, Biostatistics Curriculum Committee, 2013–2014

Chair, Biostatistics Lecturer Search Committee, 2014

Member, Biostatistics Tenure-Track Faculty Search Committee, 2014–2016

Member, PhD Qualify Exam Committee, 2014–2015

Chair, Biostatistics Admission Committee, 2015–2016, 2017–2018

Co-Chair, MS/PhD Qualify Exam Committee, 2016–2019

Organizer, Biostatistics Seminar Series, 2016–2018

Department of Biostatistics, Harvard School of Public Health: Organizer, neurostatistics seminar series, 2010 – 2011

Membership

American Statistical Association

Institute of Mathematical Statistics

International Chinese Statistical Association (ICSA)

UMass Center for Clinical and Translational Science