

2023 Biomedical Engineering Publications, Conferences and Book Chapters

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BZDOK, Danilo

- Kopal J, Uddin L, **Bzdok D**, “The end game: Respecting major sources of population diversity”, *Nature Methods*. 2023 Mar 3. doi: [10.1038/s41592-023-01812-3](https://doi.org/10.1038/s41592-023-01812-3)
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- Shafiqhi K, Villeneuve S, ..., Glahn D, **Bzdok D**, “Social isolation is linked to classical risk factors of Alzheimer’s disease-related dementias”, *PLOS One*, 2023 Feb 1;18(2):e0280471. doi: [10.1371/journal.pone.0280471](https://doi.org/10.1371/journal.pone.0280471)
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- Kopal J, **Bzdok D**, “Endorsing complexity through diversity: computational psychiatry meets big-data analytics”, *Biological Psychiatry*, 2023 Apr 15;93(8):655-657. doi: [10.1016/j.biopsych.2022.07.023](https://doi.org/10.1016/j.biopsych.2022.07.023)
- Wei X, **Bzdok D**, Li Y., “Orientation and Context Entangled Network for Retina Vessel Segmentation”, *Expert Systems with Applications*. 2023, Vol 17, 119443. doi: [10.1016/j.eswa.2022.119443](https://doi.org/10.1016/j.eswa.2022.119443)
- Mwilambwe-Tshilobo L, Setton R, **Bzdok D**, Turner GR, Spreng RN., “Age differences in functional brain networks associated with loneliness and empathy”, *Network Neuroscience*. 2023, 1–26. doi: [10.1162/netn_a_00293](https://doi.org/10.1162/netn_a_00293)
- Chen J, ..., **Bzdok D**, Holmes AJ, Yeo BTT., “Relationship between prediction accuracy and feature importance reliability: an empirical and theoretical study”, *NeuroImage*, 2023 Jul 1:274:120115. doi: [10.1016/j.neuroimage.2023.120115](https://doi.org/10.1016/j.neuroimage.2023.120115)
- Yang E, Milisav F, Kopal J, Holmes, AJ, Mitsis GD, Mistic B, Finn ES, **Bzdok D**, “Bringing language to dynamic brain states: the default network dominates neural responses to evolving movie stories”, *Nature Communications*. 2023 Jul 14;14(1):4197. doi: [10.1038/s41467-023-39862-y](https://doi.org/10.1038/s41467-023-39862-y)
- Kernbach JM, ..., **Bzdok D**, “Bayesian stroke modeling details sex biases in the white matter substrates of aphasia”, *Nature Communications Biology*, 2023 Mar 31;6(1):354. doi: [10.1038/s42003-023-04733-1](https://doi.org/10.1038/s42003-023-04733-1)
- Bohmer J, ..., **Bzdok D**, ..., Walter H., “Aberrant functional brain network organization is associated with relapse during 1-year-follow-up in alcohol-dependent patients”, *Addiction Biology*. 2023 Nov;28(11):e13339. doi: [10.1111/adb.13339](https://doi.org/10.1111/adb.13339)
- Rabot J, ..., **Bzdok D**, ..., Mottron L., “Genesis, modelling and methodological remedies to autism heterogeneity”, *Neuroscience and Biobehavioral Reviews*. 2023 Jul:150:105201. doi: [10.1016/j.neubiorev.2023.105201](https://doi.org/10.1016/j.neubiorev.2023.105201)
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- Yan X, Kong R ..., **Bzdok D**, Yeo BTT., “Homotopic local-global parcellation of the human cerebral cortex from resting-state functional connectivity”, *NeuroImage*. 2023 Jun:273:120010. doi: [10.1016/j.neuroimage.2023.120010](https://doi.org/10.1016/j.neuroimage.2023.120010)
- Tantchik W, ..., **Bzdok D**, ..., Walter H., “Investigating the neural correlates of affective mentalizing and their association with general intelligence in patients with schizophrenia”, *Schizophrenia Research*. 2023 Apr:254:190-198. doi: [10.1016/j.schres.2023.02.004](https://doi.org/10.1016/j.schres.2023.02.004)
- Durham EL, Ghanem K, ..., **Bzdok D***, Kaczurkin A*, “Multivariate analytical approaches for investigating brain-behavior relationships”, *Frontiers in Human Neuroscience*. 2023 Jul 31:17:1175690. doi: [10.3389/fnhins.2023.1175690](https://doi.org/10.3389/fnhins.2023.1175690) * equal contributions

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Presentation/Conferences

Bzdok, D. "Leveraging machine learning paradigms for single-subject prediction", *World AI Summit in the Americas*, Montreal, April 2023 (invited speaker)

Bzdok, D. "Leveraging machine learning paradigms for single-subject prediction", *Colombian Statistical Society, Workshop "Advances in statistical methods*, February 2023 (invited speaker)

Bzdok, D. "Machine-learning paradigms for single-subject prediction", *3rd Annual Conference on Precision Psychiatry*, MGH, Harvard Medical School, USA, September 2023 (invited speaker)

Bzdok, D. "Meta-analysis in human brain mapping", *Workshop, Organization for Human Brain Mapping 2023*, Montreal, Canada, July 2023 (invited speaker)

Bzdok, D. "Scaling behavior in big-data neuroscience towards precision medicine", *Sampling Theory and Applications Conference*, Yale University, CT, USA, July 2023 (invited speaker)

CHEN, Guojun

Hu, Y., Xu, Y., Mintz, R., Luo, X., Fang, Y., Lao, Y., Chan, H., Li, K., Lv, S., **Chen, G.**, Tao, Y., Luo, Y., Li, M.* "Self-intensified synergy of a versatile biomimetic nanozyme and doxorubicin on electrospun fibers to inhibit postsurgical tumor recurrence and metastasis", *Biomaterials*. 2023 Feb;293:121942. doi: [10.1016/j.biomaterials.2022.121942](https://doi.org/10.1016/j.biomaterials.2022.121942)

Wen, D., Liang, T., **Chen, G.**, Li, H., Wang, Z., Wang, J., Fu, R., Han, X., Ci, T., Zhang, Y., Abdou, P., Li, R., Bu, L., Dotti, G., Gu, Z.* "Adipocytes Encapsulating Telratolimod Recruit and Polarize Tumor-associated Macrophages for Cancer Immunotherapy", *Advanced Science*, 2023 Feb;10(5):e2206001. doi: [10.1002/advs.202206001](https://doi.org/10.1002/advs.202206001)

Tianxu Fang, Xiaona Cao, Li Wang, Yueyang Deng, Mo Chen, **Guojun Chen***, "Bioresponsive and Immunotherapeutic Nanomaterials to Remodel Tumor Microenvironment for Enhanced Immune Checkpoint Blockade", *Bioactive Materials*. 2023 Nov 3:32:530-542. doi: [10.1016/j.bioactmat.2023.10.023](https://doi.org/10.1016/j.bioactmat.2023.10.023)

Tianxu Fang, Xiaona Cao, Bingzheng Shen, Zhitong Chen*, **Guojun Chen*** "Injectable cold atmospheric plasma-activated immunotherapeutic hydrogel for enhanced cancer treatment", *Biomaterials*. 2023 Sep:300:122189. doi: [10.1016/j.biomaterials.2023.122189](https://doi.org/10.1016/j.biomaterials.2023.122189)

Yongwei Hua, Yanteng Xua, Rachel L. Mintz, Xing Luo, Youqiang Fang, Yeh-Hsing Lao, Hon Fai Chan, Kai Li, Shixian Lv, **Guojun Chen**, Yu Tao, Yun Luo, Mingqiang Li*, "Self-intensified synergy of a versatile biomimetic nanozyme and doxorubicin on electrospun fibers to inhibit postsurgical tumor recurrence and metastasis", *Biomaterials*, 2023 Feb:293:121942. doi: [10.1016/j.biomaterials.2022.121942](https://doi.org/10.1016/j.biomaterials.2022.121942)

Di Wen, Tingxizi Liang, **Guojun Chen**, Hongjun Li, Zejun Wang, Jinqiang Wang, Ruxing Fu, Xiao Han, Tianyuan Ci, Yuqi Zhang, Peter Abdou, Ruoxin Li, Linlin Bu, Gianpietro Dotti, Zhen Gu* "Adipocytes Encapsulating Telratolimod Recruit and Polarize Tumor-Associated Macrophages for Cancer Immunotherapy", *Advanced Science*, 2023 Feb;10(5):e2206001. doi: [10.1002/advs.202206001](https://doi.org/10.1002/advs.202206001)

Jundong Shao, Jing Zhang, Nicolo Antonio Villasis, Xingxing Li, Guojing Chen, **Guojun Chen**, Jicheng Yu, Yuqi Zhang, Jinqiang Wang, Yi Gao, Jing Lin, Peng Huang*, Zhen Gu* "Printable personalized drug delivery patch for the topical therapy of skin diseases", *Matter*, January 2023, Vol 6(1), 158-174 doi: [10.1016/j.matt.2022.09.018](https://doi.org/10.1016/j.matt.2022.09.018)

Bing Liu*, Jiannan Liu*, **Guojun Chen***, Chun Xu*, Lin-Lin Bu* "Editorial: Cuproptosis and Tumor", *Frontiers Cell and Developmental Biology*. 2023 Nov 24:11:1307501.

doi: [10.3389/fcell.2023.1307501](https://doi.org/10.3389/fcell.2023.1307501)

Nansha Gao, Xiaowei Zeng, Hongzhong Chen, Guoqing Pan, **Guojun Chen***, Zhongjian Xie* "Editorial: Responsive biomaterials for controlled release and cancer theranostics", *Frontiers in Bioengineering and Biotechnology*, 2023 Jul 19:11:1255293.

doi: [10.3389/fbioe.2023.1255293](https://doi.org/10.3389/fbioe.2023.1255293)

Presentation/Conferences

Guojun Chen "Cold atmospheric plasma-mediated cancer treatment", *CCRC 2023*, Halifax, November 13, 2023

Guojun Chen "Stable nanoformulations for drug delivery", *2023 CSPS/CC-CRS Annual Symposium*, Canada, May 23, 2023.

Fang, T., **Chen, G.**, "Bioresponsive and Immunotherapeutic Nanomaterials to Remodel Tumor Microenvironment for Enhanced Immune Checkpoint Blockade". *GCI Research Day*, McGill Canada, December 6, 2023.

Cao, X., **Chen, G.**, "Trehalose enhanced Cold Atmospheric Plasma-mediated cancer treatment". *GCI Research Day*, McGill Canada, December 6, 2023.

Cao, X., **Chen, G.**, "Trehalose Sensitizes Tumor to Cold Atmospheric Plasma Therapy through Disturbing Stress Granule Formation". *Science POP*, McGill, Canada, 2023

Cao, X., **Chen, G.**, "Trehalose Sensitizes Tumor to Cold Atmospheric Plasma therapy through Disturbing Stress Granule Formation". *The 7th Biological & Biomedical Engineering Symposium*, McGill, Canada, 2023

Fang, T., **Chen, G.**, "Injectable Cold Atmospheric Plasma-Activated Immunotherapeutic Hydrogel for Enhanced Cancer Treatment". *BBME Symposium*, McGill University, Canada, 2023.

Fang, T., **Chen, G.**, "Injectable Cold Atmospheric Plasma-Activated Immunotherapeutic Hydrogel for Enhanced Cancer Treatment". *Science POP*, McGill, Canada, 2023

Chen, G. "Engineering nanoformulations and microdevices for drug delivery", *Cancer Research Program – Seminar Series*, RI-MUHC, Sept 26, 2023

Chen, G. "Engineering nanoformulations and microdevices for drug delivery", *Department of Materials Science, Southern University of Science and Technology*, China, July 11, 2023.

Chen, G. "Engineering nanoformulations and microdevices for drug delivery", *Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences*, China, July 12, 2023.

Patents

Guojun Chen, Tianxu Fang, "Injectable cold atmospheric plasma-activated immunotherapeutic hydrogel for enhanced cancer treatment", Invention disclosure submitted, 2023

COLLINS, D. Louis

Morrison Cassandra, Dadar Mahsa, Manera Ana L, **Collins D Louis**, "Racial differences in white matter hyperintensity burden in older adults", *Neurobiology of aging*, 2023 Feb;122:112-119.

doi: [10.1016/j.neurobiolaging.2022.11.012](https://doi.org/10.1016/j.neurobiolaging.2022.11.012)

Morrison Cassandra, Dadar Mahsa, Villeneuve Sylvia, Ducharme Simon, **Collins D Louis**, "White matter hyperintensity load varies depending on subjective cognitive decline criteria", *GeroScience*, 2023 Feb;45(1):17-28. doi: [10.1007/s11357-022-00684-3](https://doi.org/10.1007/s11357-022-00684-3)

- Shafiei Golia, Bazinet Vincent, Dadar Mahsa, Manera Ana L, **Collins D Louis**, Dagher Alain, Borroni Barbara, Sanchez-Valle Raquel, Moreno Fermin, Laforce Robert, Graff Caroline, Synofzik Matthis, Galimberti Daniela, Rowe James B, Masellis Mario, Tartaglia Maria Carmela, Finger Elizabeth, Vandenberghe Rik, de Mendonça Alexandre, Tagliavini Fabrizio, Santana Isabel, Butler Chris, Gerhard Alex, Danek Adrian, Levin Johannes, Otto Markus, Sorbi Sandro, Jiskoot Lize C, Seelaar Harro, van Swieten John C, Rohrer Jonathan D, Mistic Bratislav, Ducharme Simon, "Network structure and transcriptomic vulnerability shape atrophy in frontotemporal dementia", *Brain: a journal of neurology*, 2023 Jan 5;146(1):321-336. doi: [10.1093/brain/awac069](https://doi.org/10.1093/brain/awac069)
- Acosta, H., Kantojarvi, K., Tuulari, J.J., Lewis, J.D., Hashempour, N., Scheinin, N.M., Lehtola, S.J., Nolvi, S., Fonov, V.S., **Collins, D.L.**, Evans, A.C., Parkkola, R., Lahdesmaki, T., Saunavaara, J., Merisaari, H., Karlsson, L., Paunio, T., and Karlsson, H., "Association of cumulative prenatal adversity with infant subcortical structure volumes and child problem behavior and its moderation by a coexpression polygenic risk score of the serotonin system", *Dev Psychopathol.* 2023 Apr 3:1-16. doi: [10.1017/S0954579423000275](https://doi.org/10.1017/S0954579423000275)
- Bierbrier, J., Eskandari, M., Giovanni, D.A.D., and **Collins, D.L.**, "Toward Estimating MRI-Ultrasound Registration Error in Image-Guided Neurosurgery", *IEEE Trans Ultrason Ferroelectr Freq Control.* 2023 Sep;70(9):999-1015. doi: [10.1109/TUFFC.2023.3239320](https://doi.org/10.1109/TUFFC.2023.3239320)
- Di Giovanni, D.A., and **Collins, D.L.**, "A state-of-the-art review on deep learning for estimating eloquent cortex from resting-state fMRI", *Neurosurg Rev.* 2023 Sep 19;46(1):249. doi: [10.1007/s10143-023-02154-6](https://doi.org/10.1007/s10143-023-02154-6)
- Fadda, G., Cardenas de la Parra, A., O'Mahony, J., Waters, P., Yeh, E.A., Bar-Or, A., Marrie, R.A., Narayanan, S., Arnold, D.L., **Collins, D.L.**, Banwell, B., and Canadian Pediatric Demyelinating Disease, N., "Deviation From Normative Whole Brain and Deep Gray Matter Growth in Children With MOGAD, MS, and Monophasic Seronegative Demyelination", *Neurology.* 2023 Jul 25;101(4):e425-e437. doi: [10.1212/WNL.0000000000207429](https://doi.org/10.1212/WNL.0000000000207429)
- Hashempour, N., Tuulari, J.J., Merisaari, H., Acosta, H., Lewis, J.D., Pelto, J., Scheinin, N.M., Fonov, V.S., **Collins, D.L.**, Lehtola, S.J., Saunavaara, J., Lahdesmaki, T., Parkkola, R., Karlsson, L., and Karlsson, H., "Prenatal maternal depressive symptoms are associated with neonatal left amygdala microstructure in a sex-dependent way", *The European journal of neuroscience.* 2023 May;57(10):1671-1688. doi: [10.1111/ejn.15989](https://doi.org/10.1111/ejn.15989)
- Lewis, J.D., Fonov, V.S., and **Collins, D.L.**, "Bloody noise: The impact of blood-flow artifacts on Registration", *Hum Brain Mapp.* 2023 Oct 1;44(14):4914-4926. doi: [10.1002/hbm.26426](https://doi.org/10.1002/hbm.26426)
- Madge, V., Fonov, V.S., Xiao, Y., Zou, L., Jackson, C., Postuma, R.B., Dagher, A., Fon, E.A., and **Collins, D.L.**, "A dataset of multi-contrast unbiased average MRI templates of a Parkinson's disease population", *Data Brief.* 2023 Apr 12;48:109141. doi: [10.1016/j.dib.2023.109141](https://doi.org/10.1016/j.dib.2023.109141)
- Morrison, C., Dadar, M., Kamal, F., **Collins, D.L.**, and Alzheimer's Disease Neuroimaging, I., "Differences in AD-related pathology profiles across APOE groups", *medRxiv*, 2023 Apr 26:2023.04.25.23289108. doi: [10.1101/2023.04.25.23289108](https://doi.org/10.1101/2023.04.25.23289108)
- Morrison, C., Dadar, M., Manera, A.L., and **Collins, D.L.**, "Racial differences in white matter hyperintensity burden in older adults", *Neurobiol Aging.* 2023 Feb;122:112-119. doi: [10.1016/j.neurobiolaging.2022.11.012](https://doi.org/10.1016/j.neurobiolaging.2022.11.012)
- Morrison, C., Dadar, M., Shafiee, N., **Collins, D.L.**, and for Alzheimer's Disease Neuroimaging, I., "Hippocampal grading provides higher classification accuracy for those in the AD trajectory than hippocampal volume", *Hum Brain Mapp.* 2023 Aug 15;44(12):4623-4633. doi: [10.1002/hbm.26407](https://doi.org/10.1002/hbm.26407)
- Morrison, C., Dadar, M., Shafiee, N., **Collins, D.L.**, and For Alzheimer's Disease Neuroimaging, I., "The use of hippocampal grading as a biomarker for preclinical and prodromal Alzheimer's disease", *Hum Brain Mapp.* 2023 Jun 1;44(8):3147-3157. doi: [10.1002/hbm.26269](https://doi.org/10.1002/hbm.26269)

- Morrison, C., Dadar, M., Villeneuve, S., Ducharme, S., and **Collins, D.L.**, “White matter hyperintensity load varies depending on subjective cognitive decline criteria”, *Geroscience*. 2023 Feb;45(1):17-28. doi: [10.1007/s11357-022-00684-3](https://doi.org/10.1007/s11357-022-00684-3)
- Shafiei, G., Bazinet, V., Dadar, M., Manera, A.L., **Collins, D.L.**, Dagher, A., Borroni, B., Sanchez-Valle, R., Moreno, F., Laforce, R., Graff, C., Synofzik, M., Galimberti, D., Rowe, J.B., Masellis, M., Tartaglia, M.C., Finger, E., Vandenberghe, R., de Mendonca, A., Tagliavini, F., Santana, I., Butler, C., Gerhard, A., Danek, A., Levin, J., Otto, M., Sorbi, S., Jiskoot, L.C., Seelaar, H., van Swieten, J.C., Rohrer, J.D., Misic, B., Ducharme, S., Frontotemporal Lobar Degeneration Neuroimaging, I., and Initiative, G.E.F.d., “Network structure and transcriptomic vulnerability shape atrophy in frontotemporal dementia”, *Brain*. 2023 Jan 5;146(1):321-336. doi: [10.1093/brain/awac069](https://doi.org/10.1093/brain/awac069)
- Wearn, A., Raket, L.L., **Collins, D.L.**, Spreng, R.N., and Alzheimer’s Disease Neuroimaging, I., “Longitudinal changes in hippocampal texture from healthy aging to Alzheimer’s disease”, *Brain Commun*, 2023 Jul 5;5(4):fcad195. doi: [10.1093/braincomms/fcad195](https://doi.org/10.1093/braincomms/fcad195)
- Zelmann, R., Frauscher, B., Aro, R.P., Gueziri, H.E., and **Collins, D.L.**, “SEEGAtlas: A framework for the identification and classification of depth electrodes using clinical images”, *J Neural Eng*, 2023 May 31;20(3). doi: [10.1088/1741-2552/acd6bd](https://doi.org/10.1088/1741-2552/acd6bd)

Presentations/Conferences

- Almansouri, A., Hamdan, N. A., Yilmaz, R., Tee, T., Pachchigar, P., Eskandari, M., **Collins, D.L.**, Del Maestro, R. F., “Cerebral corticectomy in ex-vivo calf brain model: face and content validation”, *The Canadian Journal of Surgery*, Ottawa, 2023 (poster presentation)
- Andrews, D., Arnold, D. L., Bzdok, D., Ducharme, S., Chertkow, H., **Collins, D. L.**, & Initiative, A. s. D. N., “Simulation-based effect size analysis in the absence of drug effects to inform the design of clinical trials in Alzheimer’s disease”, *Alzheimer’s Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Di Giovanni, D. A., Coupe, P., Bzdok, D., & **Collins, D. L.**, “Image Entropy and Numeric Representation for MRI Semantic Segmentation”, *Medical Imaging with Deep Learning*, Nashville, USA, 10-12 July 2023 (short paper track)
- Fernandez-Lozano, S., Fonov, V. S., Dadar, M., **Collins, D. L.**, & Alzheimer’s Disease Neuroimaging, I., “Hippocampal-to-ventricle ratio (HVR) is better related to age and cognition than Hippocampal Volume”, *Alzheimer’s Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Fernandez-Lozano, S., Fonov, V. S., Dadar, M., **Collins, D. L.**, & Initiative, A. s. D. N., “Do we really need to normalize Hippocampal volume?”, *Alzheimer’s Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Fonov, V., & **Collins, D. L.**, “How many brain scans are enough?”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)
- Fonov, V. S., Nazneen, T., Rosa-Neto, P., & **Collins, D. L.**, “In vivo data-driven patterns of Tau accumulation associated with AD progression using 18F-MK-6240 PET”, *Alzheimer’s Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Madge, V., Fonov, V., Bailey, A., Dagher, A., Ron, E., Postuma, R. B., & **Collins, D. L.**, “Towards an automatic longitudinal neuromelanin pipeline for Parkinson’s Disease”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)
- Morrison, C., Dadar, M., & **Collins, D. L.**, “The Influence of Sex on White Matter Hyperintensity Burden”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)

- Morrison, C., Dadar, M., Kamal, F., & **Collins, D. L.**, “Differences in pathology, brain atrophy, and WMHs across APOE subtypes”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)
- Rajabli, R., Fonov, V., & **Collins, D. L.**, “Brain Age Prediction with Scarce Age Labels: A Semi-supervised Approach”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)
- Shafiee, N., & **Collins, D. L.**, “Using subject-specific disease progression as an estimation of the disease time to model longitudinal neurodegeneration in AD”. *Alzheimer's Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Shafiee, N., Dadar, M., Spreng, R. N., & **Collins, D. L.**, “Nucleus basalis of Meynert degeneration starts in the earliest stages of Alzheimer’s disease: A deformation-based morphometry analysis”, *Alzheimer's Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Shafiee, N., Fonov, V. S., & **Collins, D. L.**, “Visualizing Braak stages with deformation-based morphometry in super-sampled MRI”, *Alzheimer's Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- Shafiee, N., Morrison, C., Dadar, M., Fonov, V. S., Spreng, R. N., & **Collins, D. L.**, “Deformation-based morphometry analysis shows early degeneration in Nucleus basalis of Meynert in Subjective Cognitive Decline”, *Alzheimer's Association International Conference*, Amsterdam, Netherland, July 16-20, 2023 (poster presentation)
- St-Onge, E., & **Collins, D. L.**, “TractoSearch: group, register and segment tractography streamlines”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)
- St-Onge, E., Madge, V., Shafiee, N., Fonov, V., Sharp, M., & **Collins, D. L.**, “Investigating diffusion-based measures in Parkinson's Disease”, *Organization for Human Brain Mapping (OHBM)*, Montreal, July 22-26, 2023 (poster presentation)

FUNNELL, W. Robert J.

- Golabbakhsh M, Wang X, MacDougall D, Farrell J, Landry T, **Funnell WRJ** & Adamson R, “Finite-element modelling based on optical coherence tomography and corresponding X-ray microCT data for three human middle ears”, *JARO*. 2023 Jun;24(3):339-363. doi: [10.1007/s10162-023-00899-x](https://doi.org/10.1007/s10162-023-00899-x)
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Haidar, Ahmad

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Ahmad Haidar, "Closed-loop with adjunct therapies", *16th International Conference on Advanced Technologies & Treatments for Diabetes*, February 22-25, 2023, Berlin, Germany (Invited Speaker).

Ahmad Haidar, "Improving the Performance of an AID system with SGLT2i", *2023 Virtual Diabetes Technology Meeting (VDTM)*, November 2-4, 2023, Virtual, United States of America (Invited speaker).

Ahmad Haidar, "Insulin-and-Pramlintide Fully Closed-Loop System", *Fifth Artificial Pancreas Workshop: Enabling fully automation, access, and adoption*, May 1-2, 2023, Bethesda, MD, United States of America (Invited speaker).

Ahmad Haidar, "Diabetes technologies, insulin dosing algorithms, and adjunctive therapies for type 1 diabetes", *The MUHC Medical Grand Rounds*, October 2023, Montreal, Canada.

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- G. Kim, A. Ng, and **D. Juncker**, "Multiphase reservoir subcircuit for microfluidic chain reaction of immiscible and miscible multiphase liquids in capillary circuits", *The 27th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS) 2023* Katowice, Poland. Oct 15-19, 2023
- Houda Shafique, Vahid Karamzadeh, Yonatan Morocz, Andy Ng and **David Juncker**, "Digital manufacturing of microfluidic systems using ultralow-cost LCD photopolymerization 3D printers for widespread adoption", *The 27th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS) 2023*, Katowice, Poland, Oct 15-19, 2023
- Byeong-Ui Moon, Lidija Malic, Dillon Da Fonte, Liviu Clime, Felix Lussier, Luke Lukic, **David Juncker** and Teodor Veres, "On chip sheath flow induced microparticle encapsulation in spiral channels", *The 27th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS) 2023*, Katowice, Poland, Oct 15-19, 2023
- V. Kharamzadeh, A Sohrabi, Y. Morocz, H. Shafique, M. Shen, **D. Juncker**, "Fabrication of Functional Microfluidics and Capillaries Using DLP and LCD 3D Printing", *Gordon Research Conference: The Physics and Chemistry of Microfluidics*, June 2023, Il Ciocco, Italy (poster presentation)
- Félix Lussier, Fabian Svahn, Eliana Muszynski, Andy Ng and **David Juncker**, "GelPlex: Beads-in-Hydrogels for Single Cell Secretomic Assay", *Gordon Research Conference (GRC) on Physics and Chemistry of Microfluidics*, Lucca, Italy, Jun. 4-9, 2023
- R. Martel, M. Shen, A. Wallucks, A. Ng, M. Tsamchoe, A. Lazaris, P. Metrakos and **D. Juncker**, "Multiplexed inner and outer protein analysis of metastatic colorectal cancer patient plasma EVs on antibody microarrays", *Annual Meeting of the International Society of Extracellular Vesicles 2023*, Seattle, Washington, USA. May 19, 2023
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- Juncker D.**, "Digital Manufacturing of Functional Microfluidic Systems: Autonomous Capillary Circuit", *SelectBIO, Lab-on-a-Chip and Microfluidics Europe 2023*, Rotterdam, The Netherlands, June 19 – 20, 2023 (keynote presentation)
- Juncker D.**, "Structurally programmable, digitally manufacturable capillary microfluidic processors", *1st Barbados THINK (Technology, Humanity, Innovation, Knowledge) Symposium on Diagnostics and Microfluidics*, Bellairs, Barbados, February 3-10, 2023 (Chair & Organizer)
- Juncker D.**, "Sugar molded and sugar coated ultrasoft brain implants", *Experimental Surgery/Injury Repair and Recovery Research Day*, McGill University, May 17, 2023 (keynote speaker)
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- E. Sobhani Tehrani and **R. E. Kearney**, "Non-Parametric Nonlinear Parameter-Varying Parallel-Cascade Identification of Dynamic Joint Stiffness," *IEEE Transactions on Biomedical Engineering*. 2023 Apr;70(4):1368-1379, doi: [10.1109/TBME.2022.3217143](https://doi.org/10.1109/TBME.2022.3217143).
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- Hannah Lee, Dmitry Kireev, Zane Johnson, Spencer Denton, Deji Akinwande, **Emily Porter**, "Wearable Graphene Tattoo Impedance Tomography for Skin Lesion Differentiation", *IEEE Biomedical Circuits and Systems (BioCAS) Conference*, Oct. 2023. (poster presentation)
- S Denton, **E Porter**, "The Impact of Cold Storage on the Microwave Dielectric Properties of Normal Human Urine", *IEEE MTT-S International Microwave Biomedical Conference (IMBioC)*, Sept. 2023.
- S Denton, **E Porter**, "Importance of Antenna Array Positions in Classification of Microwave Bladder Fullness", *IEEE MTT-S International Microwave Biomedical Conference (IMBioC)*, Sept. 2023.
- Emily Porter**, "Microwave Medical Devices: An Introduction to Emerging Technologies", *BBME Seminar*, Nov. 2023
- Emily Porter**, "Microwave Medical Technologies: Foundations & Emerging Applications", *International Day of Medical Physics*, Nov. 2023

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- Islam P., Schaly S. and **Prakash S.**, “Next Generation of Stent: Nanotechnology & Gene Therapy”, *15th annual NanoFlorida*, 2023. (abstract)
- Boyajian JL, Westfall S, Schaly S, Arora K, **Prakash S.**, “Novel microbiome formulation for use in Alzheimer's and aging”, *International Conference on BioTechnology and BioMedicines (ICBTBM)*, (abstract)
- Boyajian JL, Thareja R, Abosalha A, Islam P, Schaly S, Arora K, **Prakash S.**, “Targeting the gut microbiota with probiotics for the treatment and/or management of obesity”, *MPUS*, San Diego, CA., Oct 2023 (abstract)
- Boyajian JL, Westfall S, Thareja R, Abosalha A, Islam P, Schaly S, Arora K, **Prakash S.**, “The use of bioactive probiotics as a novel strategy for cardiovascular disease and metabolic syndrome”, *JNHPR.*, Montreal, QC, Jun 2023 (abstract)
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- Schaly, S. & **Prakash, S.**, “Gene-eluting alginate-chitosan hydrogels for peripheral artery disease chronic wound treatment”, *Fellow Summit, International Association of Advanced Materials*, Orlando, Florida (abstract)
- Boyajian JL, Schaly S, **Prakash S.**, “The use of bioactive probiotics and prebiotics in healthy aging: A novel synbiotic formulation may extend lifespan up to 120 years”, *Integrative Wellness, Lifestyle and Diagnostics Meeting 2023* (abstract)
- Schaly, S., & **Prakash, S.**, “A gene- and drug-eluting peripheral stent using a baculovirus-eluting PVA hydrogel coating”, *American Heart Association Scientific Sessions 2023*.
- Prakash, S.**, “Topic-Gene-eluting alginate-chitosan hydrogels for chronic wound treatment”, *Advanced Material congress*, Florida, USA. (abstract)
- Prakash, S.**, *6th International Forum on Theory and Practice of Cancer Prevention and Control*, Shijiazhuang, China, October 27-29, 2023 (keynote speaker)
- Prakash, S.**, *International Forum on Active Polysaccharide Science and Modern Chinese Medicine Development*, Ningde City, Fujian Province, China, October 12, 2023 (keynote speaker)
- Prakash, S.**, “The use of bioactive probiotics and prebiotics in healthy aging: A novel synbiotic formulation may extend lifespan up to 120 years”, *C4 Integrative Medicine Meeting*, Mumbai, India (online) (keynote speaker)
- Prakash, S.**, *Fifteenth NanoFlorida Conference*, March 3-5, 2023, USA (Plenary Lecture)
- Prakash, S.**, “Novel stents and microbiome engineering in chronic diseases and healthy aging”, *Department of Molecular Pharmaceutics, University of Utah*, January 23, 2023, USA (invited speaker)
- Prakash, S.**, *21st Ritossa Global Family Office Investment Summit*, March 19-21, 2023 in Dubai (keynote speaker)

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- Rudko D.A.**, "High Field MRI of Myelin Microstructure: Applications in a Myelin Basic Protein Knockout Mouse Model and in Multiple Sclerosis," *Krembil Neuroimaging Rounds*, March, 2023 (invited speaker).
- Der Hovagimian J., Yazdanbakhsh P., Couch M.J., **Rudko D.A.**, "An Optimized 31P Radiofrequency Coil for Sensitive 31P Magnetic Resonance Spectroscopic Imaging of the Human Brain and Cerebellum at 7 T", *International Society for Magnetic Resonance in Medicine 2023 Annual Meeting*. June, 2023 (refereed oral presentation).
- Thevakumaran R., Couch M.J., Narayanan S., Arnold D.L., **Rudko D.A.**, "Optimized 7T Cortical Magnetization Transfer Saturation Imaging: Application to Cortical Myelin Imaging in Multiple Sclerosis", *International Society for Magnetic Resonance in Medicine 2023 Annual Meeting*, June, 2023 (refereed oral presentation).
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- Yazdanbakhsh P., Sprang C., Couch M.J., Hoge R., Tardif C.L., **Rudko D.A.**, "Evaluation of 8-Channel Transmit Dipoles and 8-Channel Transmit Loops for Pediatric Visual Cortex Imaging at 7T," *International Society for Magnetic Resonance in Medicine 2023 Annual Meeting*, June, 2023 (refereed poster presentation).
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- Grouza V., Bagheri H., Liu H., Tuznik M., Peterson A.A., **Rudko D.A.**, "Histological validation of rPCAbased myelin water imaging in a panel of variably hypomyelinating mice", *Quantitative Magnetic Resonance Imaging Conference 2023*, November, 2023 (refereed oral presentation).
- Bernstein H., Grouza V., Gati J.S., Morrow S., Menon R.S., Narayanan S., Arnold D.L., **Rudko D.A.**, "Imaging the Effects of Lesion Load on Normal-Appearing White Matter Damage in Patients with Multiple Sclerosis using NODDI", *2023 International end MS Conference*, December 2023 (refereed poster presentation, Won Best Poster Award).
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- M. Tabrizian**, "High Throughput Synthesis of Tailored Nanoparticles Using Microfluidic Chips", Canadian Chemistry Society, Vancouver, Canada, June 4-8, 2023 (Keynote speaker)
- C. R. Moya-Garcia+, **M. Tabrizian**, N. Sadeghi, N. Y. K. Li-Jessen, "Induce and Evaluate a Docetaxel-resistant Response in Laryngeal Cancer Cells Using a Drug Escalation Method", *AHNS 11th International Conference on Head and Neck Cancer*, Montreal, Canada, July 8-12, 2023
- R. A. Paun+, D. C. Dumut, D. Radzioch, **M. Tabrizian**, "Development of lipid-polymer hybrid nanoparticles for the co-encapsulation of 6-bromo-indirubin-3'-oxime and copper diethyldithiocarbamate for synergistic cancer therapy", *Society for Biomaterials 2023 Annual Meeting*, San Diego, USA, April 19-22, 2023.
- N. Van Der Sanden+, **M. Tabrizian**, "Investigation of the Protein Corona's Impact on Nanoliposome Drug Delivery Systems in Cancer Cells Using QCM-D", *Society for Biomaterials 2023 Annual Meeting*, San Diego, USA, April 19-22, 2023.
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- Tardif CL**, *Kremblin Neuroimaging Virtual Rounds*, University Health Network, Toronto. 2023-04-25
- Tardif CL**, *Healthy Brains for Healthy Lives, Annual symposium*, McGill University, 2023-05-04 (invited speaker),

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