

APPENDIX IX.

PUBLICATIONS

by members of the Medical Physics Unit : 2023 calendar year (x 38)
(names of MPU staff members are underlined, students are indicated by †)

1. H.M. Patrick†, E. Poon, J. Kildea, *Experimental validation of a novel method of dose accumulation for the rectum*, Acta Oncol., publ. online July 28, 2023, doi: 10.1080/0284186X.2023.2238556.
2. R.B. Richardson, R.J. Mailloux, *Mitochondria need their sleep: Redox, bioenergetics and temperature regulation of circadian rhythms and the role of cysteine-mediated redox signaling, uncoupling proteins and substrate cycles*, Antioxidants **12**(3), 674 (2023). <https://doi.org/10.3390/antiox12030674>.
3. K. O’Sullivan-Stebent†, L. Galarneau, S. Judd, A.M. Laizner, T. Williams, J. Kildea, *Design and implementation of a prototype radiotherapy menu in a patient portal*, J. Appl. Clin. Med. Phys., October 2023, e14201. <https://doi.org/10.1002/acm2.14201>
4. L. Rafiee Sevyeri†, I. Sheth, F. Farahnak†, S.E. Kahou, S.A. Enger, *Transparent anomaly detection via concept-based explanations*, arXiv – Machine Learning, 2023 November 01. Doi: <https://arxiv.org/abs/2310.10702>
5. G. Shafiel, V. Bazinet, M. Dadar, A.L. Manera, D.L. Collins, et al, *Network structure and transcriptomic vulnerability shape atrophy in frontotemporal dementia*, Brain **146**(1), 321-326 (2023).
6. A. Wearn, L.L. Raket, D.L. Collins, R.N. Spreng, Alzheimer’s Disease Neuroimaging Initiative, *Longitudinal changes in hippocampal texture from healthy aging to Alzheimer’s disease*, Brain Commun. **5**(4), pp. fcad195 (2023).
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9. H. Acosta, K. Kantojarvi, J.J. Tuulari, J.D. Lewis, N. Hashempour, N.M. Scheinin, S.J. Lehtola, S. Nolvi, V.S. Fonov, D.L. Collins, A.C. Evans, R. Parkkola, T. Kahdesmaki, J. Saunavaara, H. Merisaari, L. Karlsson, T. Paunio, H. Karlsson, *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).
10. C. Morrison, M. Dadar, S. Villeneuve, S. Ducharme, D.L. Collins, *White matter hyperintensity load varies depending on subjective cognitive decline criteria*, Geroscience **45**(1), 17-28 (2023).
11. C. Morrison, M. Dadar, F. Kamal, D.L. Collins, Alzheimer’s Disease Neuroimaging Initiative, *Differences in Alzheimer’s Disease-related Pathology Profiles across Apolipoprotein Groups*, J. Gerontol. A. Biol. Sci. Med. Sci. **79**(2), (2023). Doi: 10.1093/Gerona/glad254.
12. L. Carroll†, S.A. Enger, *M-TAG: A modular teaching aid for Geant4*, Heliyon **9**(10), 1-11 (2023). doi: [10.1016/j.heliyon.2023.e20229](https://doi.org/10.1016/j.heliyon.2023.e20229)
13. C. Morrison, M. Dadar, N. Shafiee, D.L. Collins, Alzheimer’s Disease Neuroimaging Initiative, *The use of hippocampal grading as a biomarker for preclinical and prodromal Alzheimer’s disease*, Hum. Brain Mapp. **44**(8), 3147-3157 (2023).
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21. J. Mégrourèche, H. Bekerat, J. Bian†, A. Bui†, J. Sankey, L. Childress, S.A. Enger, *Development of a Hydrated Electron Dosimeter for Radiotherapy Applications: A Proof of Concept*, Med. Phys. **50**(11), 7245-7251 (2023).
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23. C. Morrison, M. Dadar, A.L. Manera, D.L. Collins, *Racial differences in white matter hyperintensity burden in older adults*, Neurobiol. Aging **122**, 112-119 (2023).
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25. G. Fadda, A. Cardenas de la Parra, J. O'Mahony, P. Waters, E.A. Yeh, A. Bar-Or, R.A. Marrie, S. Narayanan, D.L. Arnold, D.L. Collins, B. Banwell, Canadian Pediatric Demyelinating Disease, N., *Deviation from Normative Whole Brain and Deep Gray Matter Growth in Children with MOCAD, MS, and Monophasic Seronegative Demyelination*, Neurol. **101**(4), e425-e437 (2023).
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29. J. Manalad†, L. Montgomery, J. Kildea, *A study of indirect action's impact on simulated neutron-induced DNA damage*, Phys. Med. Biol. **68**(7), (2023). <https://doi.org/10.1088/1361-6560/acc237>.
30. Y. Daoud†, L. Carroll†, S.A. Enger, *A graphical user interface for calculating the arterial input function during dynamic positron emission tomography*, Phys. Med. Biol. **68**(11) (2023). doi: 10.1088/1361-6560/acd430. PMID: 37164022.
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32. L.M. Wang, R. Yadav†, M. Serban, O. Arias, J. Seuntjens, N. Ybarra, *Validation of an orthotopic non-small cell lung cancer mouse model with left or right tumor growths to use in conformal radiotherapy studies*, PLoS One **18**(4), e0284282 (2023).
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34. D.S. Ayala Alvarez†, P.G.F. Watson, M. Popovic, V.J. Heng†, M.D.C. Evans, V. Panet-Raymond, J. Seuntjens, *Evaluation of dosimetry formalisms in intraoperative radiation therapy of glioblastoma*, Int. J. Radiat. Oncol. Biol. Phys. **117**, 763-773 (2023).
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36. F. Mathew†, J. Manalad†, J. Yeo, L. Galarneau, N. Ybarra, Y.C. Wang, P.N. Tonin, I. Ragoussis, J. Kildea, *Single-cell DNA sequencing: A potential dosimetric tool*, Radiat. Prot. Dosim. **199**(15-16), 2047-2052 (2023). <https://academic.oup.com/rpd/article-abstract/199/15-16/2047/7306575>.
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39.