

## Publications in 2021 (12)

1. Tabbassum S, Cheng P, Yanko FM, Balachandran RC, Bowman AB, **Nie LH\*** (2021). Whole Body Potassium as a Biomarker for Potassium Uptake Using a Mouse Model. *Scientific Report*, 11(1):6385. Doi: 10.1038/s41589-021-85233-2
2. Balachandran RC, Yanko FM, Cheng P, Prince LM, Ricers CN, Morcillo P, Akinyemi AJ, Tabbassum S, Pfalzer AC, **Nie LH**, Aschner M, Bowman AB. (2021). Rodent Hair is a Poor Biomarker for Internal Manganese Exposure. *Food Chem Toxicol.* 157:112555
3. Specht AJ, Zhang X, Young A, Nguyen VT, Christiani DC, Ceballos DM, Allen JG, Weuve J\*, **Nie LH\***, Weisskopf MG\* (2021). Validation of In Vivo Toenail Measurements of Manganese and Mercury using a Portable X-ray Fluorescence Device. *J Expo Sci Environ Epidemiol.* Doi: 10.1038/s41370-021-00358, Epub ahead of print
4. Zhang X, Specht AJ, Wells E, Weisskopf MG, Weuve J, **Nie LH\*** (2021). Evaluation of a Portable XRF Device for In Vivo Quantification of Lead in Bone among a US Population. *Sci Total Environ.* 753: 142351
5. Alhulail AA, Xia P, Shen X, Nichols M, Volety S, Farley N, Thomas MA, Nagel AM, **Dydak U**, **Emir UE\***. Fast in vivo 23 Na imaging and T2\* mapping using accelerated 2D-FID UTE magnetic resonance spectroscopic imaging at 3 T: Proof of concept and reliability study. *Magn Reson Med.* 2021 Apr;85(4):1783-1794. PubMed PMID: 33166096.
6. Alhulail AA, Patterson DA, Xia P, Zhou X, Lin C, Thomas MA, **Dydak U**, **Emir UE\***. Fat-water separation by fast metabolite cycling magnetic resonance spectroscopic imaging at 3 T: A method to generate separate quantitative distribution maps of musculoskeletal lipid components. *Magn Reson Med.* 2020 Sep;84(3):1126–1139. PubMed PMID: 32103549.
7. Shen X, Ozen AC, Ilbey S, Sunjar A, Shi R, Chiew M, **Emir UE\***. Myelin Imaging Using Dual-echo 3D Ultra-short Echo Time MRI with Rosette k-Space Pattern, bioRxiv, 2021.
8. Alhulail, A.A.; Servati, M.; Ooms, N.; Akin, O.; Dincer, A.; Thomas, M.A.; **Dydak, U.**; **Emir, U.E.** In Vivo Renal Lipid Quantification by Accelerated Magnetic Resonance Spectroscopic Imaging at 3 T: Feasibility and Reliability Study. Preprints 2022.
9. Miles D, Cao N, Sandison G, Stewart RD, Moffitt G, Pulliam T, Parvathaneni U, Nghiem P, **Stantz K\***. Differential effects of high versus low linear energy transfer (LET) radiation on type-I interferon (IFN $\beta$ ) and TREX1 responses. bioRxiv 2021.07.07.451516; doi:<https://doi.org/10.1101/2021.07.07.451516>.
10. Ma, Ruoyun E ; Murdoch, James B ; Bogner, Wolfgang ; Andronesi, Ovidiu; **Dydak, Ulrike**. Atlas-based GABA mapping with 3D MEGA-MRSI: Cross-correlation to single-voxel MRS. *NMR in biomedicine*, 2021-05, Vol.34 (5), p.e4275-n/a
11. Lotz, Anne ; Pesch, Beate ; Casjens, Swaantje ; Lehnert, Martin ; Zschiesche, Wolfgang ; Taeger, Dirk ; Yeh, Chien-Lin ; Weiss, Tobias ; Schmidt-Wilcke, Tobias ; Quetscher, Clara ; Gabriel, Stefan ; Zella, Maria Angela Samis ; Woitalla, Dirk ; **Dydak, Ulrike** ; van Thriel, Christoph ; Brüning, Thomas ; Behrens, Thomas. Association of exposure to manganese and fine motor skills in welders - Results from the WELDOX II study. *Neurotoxicology (Park Forest South)*, 2021-01, Vol.82, p.137-145
12. Athanasiadi I, Perez WD, Plantenga JM, Jones-Hall Y, **Perez-Torres CJ**. Feasibility of a mini-pig model of radiation-induced brain injury to one cerebral hemisphere. *Radiation Oncology* 16(1). DOI:10.1186/s13014-021-01753-01

## Abstracts/Presentations (12)

1. Webb A, Spiers K, Falkenberg G, Gu H, Du Y, Zheng W, **Nie LH\***. *Lead (Pb) and selenium deposition in brain of Pb exposed mice using synchrotron x-ray fluorescence*. Abstract published and work presented at the annual Society of Toxicology (SOT) meeting, March 12-26, 2021; Virtual meeting.

2. Balachandran RC, Yanko FM, Cheng PJ, Morcillo P, Tabassum S, Rivers CN, Thomas MG, Akinyemi A, Pfalzer AC, **Nie LH**, Aschner M, Bowman AB. Rodent Hair is a Poor Biomarker for Internal Manganese Exposure. Abstract published and work presented at the annual Society of Toxicology (SOT) meeting, March 12-26, 2021; Virtual meeting.
3. Tabassum S, Cheng PJ, Yanko FM, Balachandran R, Aschner M, Bowman AB, and **Nie LH\***. Total Body Potassium in Rats Determined by Compact In Vivo Neutron Activation Analysis Assembly. Abstract published and work presented in the annual American Association of Physicist in Medicine (AAPM) meeting, July 25-29, 2021; Virtual meeting
4. Mostafaei F, Al-Basheer A, Barrett J, **Nie LH**, Bosomtwi A, Arbab A. The Feasibility Study of In-vivo Detection of Retained Gadolinium in Brain and Bone Using MRI and XRF Systems. Abstract published and work presented in the annual American Association of Physicist in Medicine (AAPM) meeting, July 25-29, 2021; Virtual meeting
5. Zhang X, Specht AJ, Wells EM, Weisskopf MG, Weuve J, **Nie LH\***. In Vivo Quantification of Bone Lead and Strontium Using Portable X-ray Fluorescence (XRF). Abstract published and work presented in the annual International Society for Environmental Epidemiology (ISEE) meeting, Aug.23-26, 2021; Virtual meeting
6. Webb A, Spiers K, Falkenberg G, Gu H, Du Y, Zheng W, **Nie LH\***. Lead (Pb) and Selenium (Se) Deposition in Brain of Pb Exposed Mice Using Synchrotron X-ray Fluorescence. Abstract published and work presented in the annual American Association of Physicist in Medicine (AAPM) meeting, July 12-16, 2020; Virtual meeting
7. Almomen F, Xia P, Zhou X, **Dydak U**, **Emir UE\***. Simultaneous mapping of T2\* and major neurotransmitters using MRSI at 3T, Human Brain Mapping Conference, 2020. Oral presentation.
8. Alhulail A, Xia P, Shen X, Nichols M, Volety S, Farley N, Nagel A, **Dydak U**, **Emir UE\***. Fast In Vivo <sup>23</sup>Na Imaging and T2\* Mapping Using Non-Localized 2D FID Magnetic Resonance Spectroscopic Imaging at 3 T. Proceedings 28th Scientific Meeting, International Society for Magnetic Resonance in Medicine, 2020. Oral presentation.
9. Xia P, Shen X, Zhou X, Chiew M, **Dydak U**, **Emir UE\***. Density-Weighted Concentric Ring Trajectory using simultaneous multi-slice (SMS) acceleration: 3D Metabolite-cycled Magnetic Resonance Spectroscopy Imaging at 3 T. AAPM Conference, 2020. Oral presentation.
10. Farley N, Sood J, Susjnar A, Lane S, Chiew M, Thomas MA, **Emir UE\***. Towards a Probabilistic Neurochemical atlas via parcellated approach using ZOOM MRSI. Proceedings 29th Scientific Meeting, International Society for Magnetic Resonance in Medicine, 2021. Poster Presentation.
11. Miles D, Cao N, Sandison G, Stewart RD, Moffitt G, Pulliam T, Parvathaneni U, Goff P, Nghiem P, **Stantz K\***. PTCNA-0071 - Effects of particle LET on IFN $\beta$  and TREX1 expression. Seventh Annual Conference PTCOG North America (Sept, 2021; Seattle, WA, USA). (Oral Presentation)
12. Hatch E, Miles D, Cao N, Goff P, Stewart RD, Nghiem P, **Stantz K**, Sandison GA. Comparison of Micronuclei Formation by High LET Fast Neutrons and Low LET X-rays. Seventh Annual Conference PTCOG North America (Sept, 2021; Seattle, WA, USA). (Oral Presentation)