

Publications

- 1) Chandrasekharan P, Fung KLB, Zhou XY, Cui W, Colson C, Mai D, Jeffris K, Huynh Q, Saayujya C, Kabuli L, Fellows B, Lu Y, Yu E, **Tay ZW**, Zheng B, Fong L, Conolly SM. Non-radioactive and sensitive tracking of neutrophils towards inflammation using antibody functionalized magnetic particle imaging tracer. *Nanotheranostics*. 2021 Feb. 12;5(2):240–255.
- 2) Lu Y, Rivera-Rodriguez A, **Tay ZW**, Hensley D, Fung KLB, Colson C, Saayujya C, Huynh Q, Kabuli L, Fellows B, Chandrasekharan P, Rinaldi C, Conolly S. Combining magnetic particle imaging and magnetic fluid hyperthermia for localized and image-guided treatment. *International Journal of Hyperthermia*. 2020 Dec; 37(3):141–154.
- 3) Charles CJ, Lee P, Li RR, Yeung T, Ibrahim Mazlan SM, **Tay ZW**, Abdurrachim D, Teo XQ, Wang W-H, de Kleijn DPV, Cozzzone PJ, Lam CSP, Richards AM. A porcine model of heart failure with preserved ejection fraction: magnetic resonance imaging and metabolic energetics. *ESC Heart Failure*. 2020 Feb;7(1):92–102.
- 4) Chandrasekharan P, **Tay ZW**, Hensley D, Zhou XY, Fung BK, Colson C, Lu Y, Fellows BD, Huynh Q, Saayujya C, Yu E, Orendorff R, Zheng B, Goodwill P, Rinaldi C, Conolly S. Using magnetic particle imaging systems to localize and guide magnetic hyperthermia treatment: tracers, hardware, and future medical applications. *Theranostics*. 2020 Feb 10;10(7):2965–2981.
- 5) **Tay ZW***, Hensley DW, Chandrasekharan P, Zheng B, Conolly SM. Optimization of Drive Parameters for Resolution, Sensitivity and Safety in Magnetic Particle Imaging. *IEEE Transactions on Medical Imaging*. 2020 May;39(5):1724–1734
- 6) **Tay ZW***, Hensley D, Ma J, Chandrasekharan P, Zheng B, Goodwill P, Conolly S. Pulsed Excitation in Magnetic Particle Imaging. *IEEE Transactions on Medical Imaging*. 2019 Oct;38(10):2389–2399.
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- 8) Zhou XY, **Tay ZW**, Chandrasekharan P, Yu EY, Hensley DW, Orendorff R, Jeffris KE, Mai D, Zheng B, Goodwill PW, Conolly SM. Magnetic particle imaging for radiation-free, sensitive and high-contrast vascular imaging and cell tracking. *Current Opinion in Chemical Biology*; 2018 Aug;45:131–138.
- 9) **Tay ZW***, Chandrasekharan P, Chiu-Lam A, Hensley DW, Dhavalikar R, Zhou XY, Yu EY, Goodwill PW, Zheng B, Rinaldi C, Conolly SM. Magnetic Particle Imaging-Guided Heating in vivo Using Gradient Fields for Arbitrary Localization of Magnetic Hyperthermia Therapy. *ACS Nano*. 2018 Apr 24;12(4):3699–3713.
- 10) **Tay ZW***, Chandrasekharan P, Zhou XY, Yu E, Zheng B, Conolly S. In vivo tracking and quantification of inhaled aerosol using magnetic particle imaging towards inhaled therapeutic monitoring. *Theranostics*. 2018 Jun 8;8(13):3676–3687.

- 11) Yu EY, Chandrasekharan P, Berzon R, **Tay ZW**, Zhou XY, Khandhar AP, Ferguson RM, Kemp SJ, Zheng B, Goodwill PW, Wendland MF, Krishnan KM, Behr S, Carter J, Conolly SM. Magnetic Particle Imaging for Highly Sensitive, Quantitative, and Safe in Vivo Gut Bleed Detection in a Murine Model. *ACS Nano*. 2017 Dec 26;11(12):12067–12076.
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- 17) **Tay ZW***, Goodwill P, Hensley D, Taylor L, Zheng B, and Conolly S. 2016. “A High-Throughput, Arbitrary-Waveform, MPI Spectrometer and Relaxometer for Comprehensive Magnetic Particle Optimization and Characterization.” *Scientific Reports*. 2016 Sep 30;6:34180
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Patents

- US Patent Application 15/998,525. Pulsed magnetic particle imaging systems and methods. Filed 16.08.2018. (Licensed)