Dr. Passmore is an Associate Professor at the University of Manitoba. He maintains an active nationally grant funded (Health Canada – SUAP, Own the Podium, Canadian Chiropractic Research Foundation) research program, supervises undergraduate, Masters and PhD trainees, and he has published more than 65 peer reviewed journal articles.

He has expertise in perceptual motor control and learning, most specifically related to applications of Fitts's Law, and Focus of Attention. His research interests include applying principles from Motor Learning and Control to the assessment of clinical populations (spine musculoskeletal issues), and the perceptual factors influencing delivery of manual therapy (spinal manipulation).

He served on the Canadian Chiropractic Guideline Initiative (CCGI) guideline development committee for the creation of three clinical practice guidelines. In 2019, he was appointed by the Canadian Federal Government through Health Canada to a 3-year term on the External Advisory Panel of the Canadian Pain Task Force (CPTF). In 2020, he was named "Researcher of the Year" by the Canadian Chiropractic Association (CCA). Additionally, he was appointed to the World Federation of Chiropractic (WFC) Research Committee in 2020. He is on the World Spine Care Research Committee, and is a co-lead on a project with the Pimicikamak people in northern Manitoba serving the spine care needs of the community. In 2023, Dr. Passmore was appointed to the Council on Chiropractic Education Canada (CCEC) as a Western Canada representative. He represents World Spine Care on the World Rehabilitation Alliance (WRA) primary care working group of the World Health Organization (WHO).