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COVER ARTIST:
PARISA MISHAL HOSSAIN

Bachelor of Health Sciences (Honours), Class of 2026,
McMaster University

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SOPHIA CHAU

Bachelor of Health Sciences (Honours), Class of 2028,
McMaster University

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Dear Reader,

Welcome to Issue 48 of *The Meducator*!

With each passing day, modern healthcare takes great leaps towards the ideal vision of years past. Technologies emerge, revolutions never believed to be possible come to the world's fruition, and we remind ourselves that we need not settle for what we believe we are capable of at any given moment. Throughout Issue 48, we have been inspired by a single set of questions: "How has health science progressed, and where is healthcare going?" Inspired by Y2K, this issue reflects the evolution seen in the field across 22 years of *The Meducator*. The child on Issue 48's cover, illustrated by Creative Director Parisa Mishal Hossain, represents a torch being passed from a generation of health professionals to this new one. We delve into the leaps made by contemporary ideas, a theme which permeates the issue.

Issue 48 opens with an exploration of emerging advancements in health sciences across the globe, written by editors Adele Feng and Kumkum Anugopal. In a thoughtful PathoProfile covering polycystic ovary syndrome, Hadi Fares, Nirujah Sutharsan, and Noelle Di Perna highlight its present clinical complexity. In Interview Spotlight, Emily Wang and Kathy He meet with Dr. Andrew Healey who offers his expertise in the realm of organ donation. Continuing this theme, Allison Lee and Iman Yaser compare and contrast opt-in versus opt-out organ donation systems. Aditya Misra, Andrew Yang, and Dilnoor Randhawa highlight the evolving landscape of Indigenous health, while Joel Abraham, Rita Gergis, and Sruti Prabakaran discuss the science of emotion as they unpack the roles of the four happiness hormones.

The issue journeys into a constellation of next-generation therapies that embody healthcare's accelerating future. Atta Yazdy, Grace Hur, and Ian Kim explore cutting-edge biomaterial applications for stem cell-derived exosome therapy, while Firdose Khan and Patricia Zhang examine stem cell therapies for multiple sclerosis. Extending this arc of discovery, Evan Zhao and Sophia Wang delve into transcranial magnetic stimulation as an innovative treatment for depression. Bringing this exploration to a close, Angela Hong and Zahra Tauseef investigate advances in CAR NK-cell therapy. We are honoured to share the work of our contributors in Issue 48, and we hope that their pieces inspire curiosity, dialogue, and innovation.

We are endlessly grateful for our 100 passionate staff members and faculty reviewers who have been endlessly supportive throughout the Issue 48 publication cycle. We would like to extend a special thank you to our executive team: Aarani, Camela, Cynthia, Elaine, Evan, Henin, Henry, Jacqueline, Jia Jia, Megan, Michelle, Mishal, Raymond, Ria, Ruhani, Ryan, and Serena, for their outstanding leadership and dedication. We are also extremely thankful for our sponsors, without whom Issue 48 would not be possible. To McMaster University and the McMaster community, thank you for providing us a wonderful home and always keeping us inspired. And to you, our reader, thank you for your continued support of our publication.

Enjoy Issue 48!

■ **VERONICA GRIGNANO**

Bachelor of Health Sciences
(Honours) Class of 2027

■ **DOMINIC GANGEMI**

Bachelor of Health Sciences
(Honours) Class of 2027

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