

Dear Reader,

Everyday, we are engrossed by the objects that we can see and touch. We take for granted the simplest processes of life -- forgetting all the microscopic components that work vigorously to allow daily functioning. Yet, many notable discoveries and breakthroughs involve only one gene, molecule, or cell. The progression of research has stretched boundaries and magnified our field of vision. In exploring these scientific advances, we bear the responsibility of establishing rules and considering the ethical implications.



Our thirteenth issue focuses on these fundamental components, highlighting its biological roles and discussing its influence in society. For instance, the lucrative effects of genetic discovery are explored by Dan Mok, when discussing the legal and financial realities of gene patents. Ran Ran and Tiffany Chan identify epidemiological trends associated with the hygiene hypothesis, and investigate immunological mechanisms that participate in allergic responses. The concept of personalizing medicine to one's genetic composition holds a future position in healthcare, as described by Manan Shah. Implications of genetic screening are further explored by Sarah Levitt, as she guides us through the moral and political issues of "saviour siblings." Lastly,

Kirandeep Bhullar addresses the increasing concerns of antibiotic resistance through a description of bacterial mechanisms and evolution. Together, these articles demonstrate the significant social involvement, beyond biological function, of life's smallest components.

Likewise, this publication depends heavily on the dedication and hard work of different groups of individuals. Thank you ever so much to the writers, whose effort and enthusiasm offer us insight into important medical and health matters, and to the post-graduate editors, who ensure superior quality of our publication. I would like to extend my appreciation to Dr. Del Harnish and the Bachelor of Health Sciences Program, who continue to generously support this valuable initiative. Lastly, I am honoured and excited to work with our growing team of executives, whose patience, cooperation, and talents have made this possible. To Jacqueline Ho, thank you for your support and ability to keep everything organized. Thanks to our skilled editors: Harjot Atwal, Veronica Chan, Randall Lau, Simone Liang, Siddhi Mathur, Alexandra Perri, Navpreet Rana, Manan Shah, and Fanyu Yang; your work with the writers and post-graduate editors is exceptional and I am grateful for your collaborative efforts. Thank you to our creative team, led by Stephanie Low. Her extensive experience in layout has polished the publication to its sleek visual finish, with the help of the artistic strengths of Ran Ran and Andrew Yuen. To Avinash Ramsaroop, thank you for your development and maintenance of the website, an important channel of information. Finally, I would like to introduce our newest executives: Ahmad Al-Khatib, Alyssa Cantarutti, Randal Desouza, Keon Maleki, Hiten Naik, and Sangeeta Sutradhar. I truly thank you for all the work you have done already; with such intelligent, keen, and energetic individuals, I know that the future of the Meducator is bright.

Please visit our website, [www.meducator.org](http://www.meducator.org), to see past issues, find information about submitting articles, and read our daily MedWire updates. The website also provides a form for inquiries and comments; we want to hear from our readers! On behalf of the writers and staff, we hope you enjoy this issue.

Sincerely,

Crystal Chung  
B.H.Sc. IV

# Presidential Address

## Meducator Staff

### President

Crystal Chung

### Vice-President

Jacqueline Ho

### Editorial Board

Veronica Chan

Randall Lau

Simone Liang

Siddhi Mathur

Alexandra Perri

Navpreet Rana

Manan Shah

Fanyu Yang

### Creative Director

Stephanie Low

### Web Master

Avinash Ramsaroop

### Public Relations

Harjot Atwal

### Graphics & Design

Ran Ran

Andrew Yuen

### Junior Executives

Ahmad Al-Khatib

Alyssa Cantarutti

Randal Desouza

Keon Maleki

Hiten Naik

Sangeeta Sutradhar

## Post Graduate Editors

Dr. Ronald Carter,  
PhD, DVM

Dr. Kimberly Dej, PhD

Dr. Fiona Miller,  
MA, PhD

Dr. Ken Rosenthal,  
PhD

Dr. Lisa Schwartz,  
MA, PhD