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Medical Engineering Students Designing Innovations for a Cause

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August Issue

Canadian Innovation, International Youth Day, and 2020 Paralympics

By **Nicholas Feng** on August 28, 2021

Welcome to the August issue of our MEDIC newsletter! This month we will be discussing topics of the Canadian entrepreneurs who have recently created a recovery program for COVID-19 patients who have lost their smell using instructional videos. Additionally, we will highlight the United Nations, International Youth Day, a day for nations and organizations to discuss youth issues for the better future of all and highlight this year's engagement theme. Finally, we will look at the 2020 Tokyo Paralympics and the innovations that allow individuals with disabilities to compete at a competitive level.

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THIS MONTH'S
TOP STORIES

Canadian entrepreneurs develop recovery program for COVID-19 patients who lost their smell

Summary by **Jessica Jung** on August 10, 2021

Source: Sniffly



Loss of smell is one of the most common symptoms COVID-19 patients face according to experts. In June 2020, a study found that out of 8,400 people with COVID-19, 41 percent experienced some sort of loss of smell. Although most patients regain their ability to smell once the virus has passed, a European study found that approximately 5 percent of COVID-19 patients experience a compromised sense of smell after six months. Two Canadian entrepreneurs, Bobby Rasouli and Armin Faraji, launched the Sniffly's smell training program in early July to help patients regain their sense of smell. Since launch, the company has seen over 1000 registrations, with the majority being from doctor referrals. The founders lost their own senses of smell after testing positive for COVID-19 in 2020. This was the inspiration behind their company, once they realized there were many therapeutic options to help regain patient's senses of smell.

Sniffly is a free online course consisting of 17 instructional videos. In the videos, Rasouli explains the mechanisms behind the olfactory system and talks about the science behind smell training. The videos take the user through a series of four different essential oils in which they smell each for five seconds for a set of three times, repeated twice a day. The scents are rose, eucalyptus, lemon and cloves as identified by Thomas Hummel in 2009. Hummel was a German smell researcher who first developed olfactory training. This kind of smell training relies on neuroplasticity (the brain and nervous system's ability to strengthen smell by forming networks and making connections), and can take months before participants notice a difference.

For more information about Sniffly, visit their website (<https://www.sniffly.io/>).

International Youth Day

Summary by [Nicholas Feng](#) on August 15, 2021

Source: United Nations



International Youth Day (IYD) is an awareness day promoted by the United Nations that took place on Thursday, August 12, 2021, its 21st consecutive year following its first observation on August 12, 2000. This eventful day is an opportunity for governments and nations to draw attention to youth issues worldwide and promote various concerts, workshops, cultural events, and meetings with youth organizations to discuss future plans. Youth innovation is the backbone of some of the most integrated, technological advanced discoveries and creations that transform the way the world lives. Since its conception, topics that have been discussed include, food systems, disease and pandemic responses, safe spaces, prevention of conflict, and many more. As every year is dedicated to a specific engagement theme, the theme for 2021 IYD is “Transforming Food Systems: Youth Innovation for Human and Planetary Health.”

The existence of international days predates the establishment of the United Nations, but the UN is embracing them as a powerful advocacy tool to educate the public on issues of concern and to mobilize political will and resources to address these problems.

Tokyo Paralympics 2021: Innovation and Inclusive Society

Summary by [Nicholas Feng](#) on August 28, 2021

Source: CBC News



Innovators are beginning to gather and prepare for the covid delayed Tokyo 2020 Paralympics, which will continue until September 5. As the Paralympic movement offers sport opportunities for athletes with physical, vision and/or intellectual impairments, innovations being featured are highlighting the technological improvements, design, and initiatives that are making sport more accessible and enjoyable for all.

From prosthetics to carbon fibre wheelchairs and assisted devices, technology for Para sports is advancing with new materials and improved designs. While innovation is associated with highly advanced improvements, it can also be “low-tech,” or more specialised for assistive technology and tailored equipment.

Current Paralympic equipment include:

- Badminton chairs (debut at Tokyo 2020)
 - Short, fast, techniques for stopping and recovering
 - Backrest and extra caster wheels for free move and twist
- Cycling track racing bikes
 - Allowed modifications for athletes with arm impairment
 - Handlebars modified for mobility
 - Fixed prosthesis to pedal
- Release brace archery
 - Manual trigger mechanism to aid archer release the arrow
 - Strapped on to the upper body
- Running blades
 - Springy and compact, prosthetics running blades to replace calf and ankle
- Wheelchair racing chairs and gloves
 - Predominantly made from aluminum, but manufacturers are using carbon fibre technology
 - Customised glove for competitions using 3D printing technology

As accessibility becomes an ever increasing commitment of organizations and communities to uphold, people with disabilities are able to participate in competitive organized sporting events. With specialized equipment or varied rules and traditions to their olympic sport counterpart, Paralympians are elite sport performers, where athletes go through a stringent qualification process so that the best, or highest qualified based on performance, rather than limitations of disabilities can compete at the Games.

MEDIC's New and Improved Website

If you missed it last month... don't forget to check out our new website at medicfoundation.org! Let us know what you think, and if there's anything you'd like to see added to our website! Do you have something you think would be worth featuring or

spotlighting next month? Notice any issues viewing or accessing our website? We appreciate all feedback, so don't hesitate to contact us!

Thank you for subscribing to our newsletter and supporting our initiative! Don't forget to tune into next month's issue!

[CHECK OUT OUR WEBSITE](#)

References

<https://www.un.org/en/observances/youth-day>

<https://www.paralympic.org/feature/cutting-edge-technology-behind-para-sports>



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