Letters to the editor

We welcome original letters of less than 300 words; we may edit them for clarity and length. Letters may be emailed to journal@doctorsofbc.ca, submitted online at bcmj.org/submit-letter, or sent through the post and must include your mailing address, telephone number, and email address. Please disclose any competing interests.

Re: The age of mushrooms is upon us in medicine

Thank you to Dr Mark Elliot for his article outlining the potential benefits of psychedelic compounds now being studied in certain disciplines of medicine and cognitive therapy [*BCMJ* 2019;61:390-391]. While our colleagues in cardiovascular medicine, oncology, and surgery seem to have enjoyed significant advances in their respective fields, the same cannot be said of those involved in treating depression, addiction, and PTSD, and those working in palliative care.

We share Dr Elliot's enthusiasm for the potential benefits of these therapies, but also wish to issue a reminder that as we proceed with an open mind we should also remain highly critical. The medical community must not legitimize unfounded theories, and must ensure that any future studies of these compounds abide by the scientific method and prioritize the safety of our patients.

These promising therapies are sure to come under scrutiny by many, both inside and outside the medical community. With this being said, we question Dr Elliot's mention of the Stoned Ape Theory first postulated by Terence McKenna and more recently propagated by Paul Stamets on the popular podcast *The Joe Rogan Experience*. Mr Stamets, a mushroom enthusiast, seems to have one foot in the field of mycology as a science and the other in the realm of unfounded and seemingly far-fetched theories. The Stoned Ape Theory postulates that during human evolution our primitive ancestors consumed mind-altering mushrooms, the effects acting as an evolutionary catalyst, supposedly responsible for the higher-level development of language, religion, and music. We, the authors of this letter, have no formal training in mycology or anthropology, but from our brief reading, this theory appears to have no credible evidence to support it and has actually been heavily criticized by the scientific community.

The long-running stigma associated with these psychotropic compounds is in part a reaction to the ardent promotion of pseudoscience by advocates such as Timothy Leary. If these compounds are to be incorporated into mainstream medicine, we owe it to our colleagues and especially our patients to present accurate findings and reject unsubstantiated claims. It is critical that we separate the potential medicinal benefits of these compounds from the cultural and societal biases with which they are often associated.

—Chris Little, MD, FRCPC
Penticton

—Edward Brooks, MD, FRCPC
Victoria

Author replies

I couldn't agree more with your cautionary note. Paul Stamets seems to be an extraordinary mycologist with dozens of patents to his name, but with enough publicity people like him can easily become gurus, which is not good. I mentioned the Stoned Ape (Stone Age in his original article) hypothesis only because it is an interesting theory. Whether one day some experiment will come up with an observation to back it up is doubtful. This is a problem in many areas of science dealing with fundamental issues. But as Karl Popper said, "All observation is theory laden," which means nature (theory) proposes and the environment (observation from experiment) disposes, which is just stealing another well-known saying from genetics. We will see where it leads.

—Mark Elliott, MD, FRCPC
Vancouver

Re: The age of mushrooms is upon us in medicine

I was pleased to see the *BCMJ* publish Dr Mark Elliott's piece, "The age of mushrooms is upon us in medicine." Psychedelics such as LSD and psilocybin showed great promise as investigational tools and, in the case of LSD, as a treatment for addiction, until politics and irrational fears essentially ended all research into these agents for decades. Fortunately, this is changing and a number of studies, as imperfect as they are, suggest that psychedelics, combined with appropriate psychotherapy, may hold great promise in treating end-of-life anxiety, depression, and addiction.

Dr Elliott incorrectly states that psychedelics "seem to affect serotonin and/or monoamine oxidase (MAO) receptors in the brain." MAO is not a *receptor* but rather an *enzyme* that is widely distributed throughout the body (including the CNS). It is generally agreed that the actions of psychedelic agents are primarily mediated through agonism at the 5-HT2A receptor (a class of serotonin receptor) in the brain. I suspect that Dr Elliott was referring to ayahuasca, a plant-derived psychoactive brew containing *Banisteriopsis caapi* and DMT containing vines (such as *Psychotria viridis* or *Acacia sp)*. *B. caapi* contains natural MAO inhibitors that may have some minor CNS effects but act primarily by preventing metabolism of DMT in the gut. This allows the DMT to be absorbed and to exert its effects on the CNS.

Thank you for publishing this otherwise excellent brief overview of the emerging field of psychedelic medicine.

—Jeffrey Eppler, MD
Kelowna

Author replies

Thanks for pointing out my error about monoamine oxidase being an enzyme rather than a receptor. As a practising anesthesiologist I don't pay as much attention to pharmacological acronyms as I should. Psychedelics *may* be helpful for treating opioid addiction, but it will be a small percentage of patients who will be cured. Going this psychedelic route is worth a shot when you look at our failure with how we

handle the problem now, whereby a drug user gets an unknown white powder, which could be fentanyl or heroin at markedly different LD50s, and that is 90% contaminants, which is then shoved into the right side of the circulation with horrific vascular/septic results. If the drug was clean and the dosage known there would be very few of these patients showing up in the operating rooms, but this is a political, not a medical issue.

Microdosed psychedelics might become a standard anesthetic preoperative medication someday.

—Mark Elliott, MD, FRCPC
Vancouver

Doctor shortage

The current family doctor shortage is a crisis. It is especially bad where I live, in Parksville on Vancouver Island. Why has the situation become so dire? In my opinion, it has happened because of gross incompetence at multiple levels of the medical profession and government. I am a retired family physician. I am a UK graduate. I was in full-time family practice in Alberta for 6 years and BC for 28 years before semi-retiring to Parksville in 2012, where I worked as a rural locum and urgent care physician part-time until I fully retired from practice in 2016, aged 69, after 46 years of medical practice. As far back as the late 1980s and early 1990s, it was well known that the average age of family physicians in BC was in the 50s. It was becoming clear to us practising family doctors that the family practice model we were all working in was becoming less attractive to the next generation of doctors, who were able to work in walk-in clinics, where they could see large numbers of people with relatively minor complaints and would not have to become involved with older patients with more chronic complaints, who require care on a more longitudinal basis. Since then, the Medical Services Plan has made changes to increase the payments for older patients with chronic conditions, which certainly helped, but none of the changes have turned the tide to attract more young physicians to enter full-time family practice. In the mid-2000s one of my partners tragically died in his early 60s of cancer. We were unable to find anybody to take over his extremely large practice consisting mainly of older patients. The only way I could not leave my own patients in the lurch when I retired from my practice was to move my charts and practice to a clinic that was a hybrid walk-in family practice, which took over all my charts so I could walk away.

I believe that action should have been taken over 20 years ago, which may have prevented the crisis we find ourselves in today. Full-service longitudinal family practice needs to become more attractive. Many young physicians do not relish the thought of running a small business, which means acquiring somewhere to develop a medical office, employing staff, ordering supplies, and paying a mortgage or rent, just to mention some of the expenses involved. It appears that many young physicians prefer to work under a different model, such as a salaried system with good benefits, vacation time, and paid continuing medical education in a team-based model with nurses, social workers, and other support workers under the same roof. This model has been shown to be successful in many parts of Canada.

The government and the profession must work harder to find ways to provide every citizen access to a local family physician. It does not appear that this is happening now. Clearly, inadequate numbers of family physicians are being trained, and the trained physicians are not coming to places like Parksville or Qualicum. It is difficult for young physicians who trained overseas to return to Canada, their home, to practise here. Canada is not providing enough places in medical schools to maintain the supply of physicians that the country requires, which is one of the reasons many young Canadians go overseas for their medical education.

Parksville is experiencing a building boom, and in a few years, there will be thousands more people living here. Who is going to look after all of us?

—Jonathan M. Winner, MD
Parksville

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access to appropriate, equitable, culturally safe, timely care. The general population should be made aware of what services, on what timeline, a publicly funded health care system can deliver so they can adjust their expectations.

If British Columbians and our governing bodies are to maximally benefit from the unique knowledge and skillsets physicians bring to the table, then payment models should universally incorporate time for teaching, multidisciplinary simulation training, research, quality improvement endeavors, evaluation, and participation in health care system management.

I believe that with ongoing open dialogue, visioning, and collaboration, we can continue to build a health care system that is sustainable and meets the needs of patients, care providers, and administrators alike. We need commitment on all sides of this shared responsibility to bring this to life. ■

—Kathleen Ross, MD
Doctors of BC President

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New DNA "clock" could help measure development in young children

Scientists have developed a molecular "clock" that could reshape how pediatricians measure and monitor childhood growth and potentially allow for an earlier diagnosis of life-altering developmental disorders.

Read the article: bcmj.org/news/new-dna-clock-could-help-measure-development-young-children

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