Letter from the Editor-In-Chief

[

The World Belongs to the Brave II
Thach Nguyen MD FACC FSCAI

In 2009, I wrote an editorial for the Coronary Bifurcation symposium issue of the Journal of Interventional Cardiology [1]. The main idea was that innovation in interventional cardiology is a game, free for all, especially for the brave. Now, in 2023 at the 3rd decade of the 21st century, this 2nd issue of the TTU Journal of Biomedical Sciences, the editors and authors would like to present the works of the young and restless researchers and clinicians from Vietnam and around the world.

The first two papers generally present the clinical strategies for diagnosing and managing patients with thyroiditis or hepatitis D virus infection among hepatitis B patients. The next 2 papers focus on the basic science or clinical research applications, including photodynamic therapy in patients with cancer or dynamic coronary angiography for patients with coronary artery disease. The last 3 papers bring the readers to the forefront of research and medicine by applying artificial intelligence (e.g., Chat GPT) in their daily work.

In the first paper by Meden Isaac-Lam, from Purdue University, Westville, IN USA, Photodynamic therapy (PDT) or light treatment is a procedure to treat certain types of diseases that uses a photosensitizer (PS), which upon light activation produces cytotoxic oxygen species destroying tumor cells. This mini-review presents a brief historical background of PDT, photo-activatable agents utilized, mechanism of photodynamic action, studies in vitro and in vivo, clinical trials, limitations and future prospects of its application in various types of cancer, infections caused by pathogens such as COVID-19, and heart diseases.

The second paper is titled Thyroiditis – A Clinical Update and Review by Caroline T. Nguyen, Peter A. Singer from the Division of Endocrinology, Metabolism, and Diabetes, Departments of Medicine, Obstetrics and Gynecology, Keck School of Medicine, University of Southern California, Los Angeles, California USA. This review categorizes thyroiditis into two groups based on the presence or absence of tenderness, painful and painless, and reviews their primary etiologies, diagnostic modalities, and treatment options.

The 3rd paper by Nguyen Thi Thu Huong et al. discusses the situation of Hepatitis D virus infection in adult hepatitis B patients at the outpatient Clinic of Pasteur Institute in Ho Chi Minh City, Vietnam. The reason is that hepatitis D virus (HDV) infection, also known as delta virus, has been identified as a crucial risk factor contributing to severe complications among hepatitis B patients. Such complications arise as HDV accelerates the progression towards cirrhosis, exacerbates the risk of decompensated cirrhosis, and increases mortality rates compared to non-HDV hepatitis B infections. This study endeavors to explore HDV co-infection in adult hepatitis B patients.

The 4th paper is the Amiodarone-Induced Delirium by Aisha Khalid, Jack Tarlinton, Tony Kwan, Kenneth Khoo from Harvard Medical School, Boston, MA, USA, Calvary Public Hospital Bruce, Canberra, and Australian National University, Canberra, Australia. This is a case report of a patient developing delirium after starting amiodarone and improved after discontinuing amiodarone. The exact mechanism of this side effect is not fully understood. So, in the care of patients receiving amiodarone, the patients should be closely monitored for signs of delirium, particularly with

higher doses, new onset of symptoms after drug initiation, and longer treatment durations. Prompt recognition and management of amiodarone-induced delirium are essential to prevent complications and ensure optimal patient outcomes.

The 5th paper is the New Techniques of Recording and Interpretation of Dynamic Coronary Angiography by Thach Nguyen et al., from Tan Tao University, School of Medicine and Cardiovascular Research Department, Methodist Hospital, Merrillville, IN USA. The current problem is that coronary angiogram (CAG) can only show the static image of a narrowing of the arterial channel without identifying the mechanism of the disease nor predicting its progression or regression. Therefore, the authors suggest a new technique focusing on the blood flow patterns and analysis of their normal or abnormal dynamics using the same methodologies hydraulics engineers used.

The last three papers, all involving the Artificial Intelligence program, including Chat GPT in writing, doing research including real-life questions challenging the AI program. First, Nghi V Tran, MD, from the Department of Medicine at Weiss Memorial Hospital in Chicago, explores the practical applications and potential benefits of ChatGPT in crafting a research paper. By providing a systematic and in-depth exploration of ChatGPT's potential in facilitating research paper creation, the authors aim to empower researchers with valuable insights and practical tips for harnessing the power of AI in their academic work.

In his second paper, Nghi V Tran shows how to edit a manuscript with the assistance of ChatGPT as an editing tool. This article adds to the growing literature on the use of AI in manuscript editing, providing valuable insights into ChatGPT's benefits and limitations as an editing tool for authors. By improving the quality of the work, providing constructive feedback, and streamlining the editing process, ChatGPT can aid authors in producing high-quality work more efficiently.

In the 3rd paper on the applications of ChatGPT in research, Thach Nguyen et al. challenge Chat GPT in explaining the metamorphosis of laminar flow in anatomical variations. This is a disruptive effort to break the stalemate in current research on atherosclerosis. In a hypothesis-generating exercise, the authors challenged the artificial intelligence (AI)–based language model ChatGPT with provocative questions. Who is the winner? AI or human intelligence? No need for time to tell. The human brain sees that AI ChatGPT is bound (or chained or shackled) to the hard drive or memory of the Internet. It is great to ask ChatGPT to check the extent or limits of current global knowledge. ChatGPT has not learned how to go outside the box because AI or ChatGPT is the box. When ChatGPT can think outside the box, AI ChatGPT becomes a great challenger.

In this 2nd issue of TTU Journal of BioMedical Sciences, 70 percent of the papers are cooperation between authors from Vietnam and abroad. Seventy percent of papers come from researchers outside TTU. Eighty-five percent of papers with the first authors come from the US (Harvard Medical School (HMS), University of Southern California (USC), and Purdue University, the Alma Mater of 27 American space astronauts. The editor team of TTU J of Biomedical Sciences would like to thank the leadership team's support at TTU, and from all colleagues and friends in Vietnam and worldwide. Similar to the article of the first issue of the TTU JBMS, all articles with authors belonging to the Harvard University community will be uploaded on DASH, the open-access research repository of the Harvard community, and the search engine of the Harvard University Library. DASH Home (harvard.edu)

REFERENCES

[1] Chen SL, Kwan TW, Gao RL et al."The world belongs to the brave." Journal of interventional cardiology, Apr. 2009, 22:97–98, DOI: 10.1111/j.1540-8183.2009.00445.x, PMID: 19379465.