## From microRNAs to Artificial Intelligence; Are These All Our Secret Weapons?

COVID-19 pandemic has been a tremendous quake in the World's health systems with great demolition and many aftershocks. Though some developed countries have used either preventive social health measures or national vaccination strategies, the majority of the world countries are still struggling with this giant century disaster (1-3). Among the long list of the disaster aftershocks, the emerging variants, the vaccine-attributed complications, the social, mental, and economic blows to countries, deprivation from treatment for other diseases due to the risk of concomitant COVID-19 infection, and the inequalities in reaching preventive and therapeutic measures could be mentioned (4-6).

However, this is not all the story. The complexity of the pandemic was a driving force to mitigate all fields of medicine. A great number of studies were started. The bibliometric assessments have revealed that during the COVID-19 pandemic, the majority of published articles have been affiliated to (7-11)

- China
- United States
- European countries

However, the most common topics included (7-11):

- "Epidemiological Features"
- "Treatment"
- "Clinical Features"

On the other hand, the most highly cited journals were the following (7-11)

- "The Lancet" and Lancet Associated Journals
- New England Journal of Medicine
- JAMA/JAMA Internal Medicine
- Nature/Nature Reviews
- International Journal of Antimicrobial Agents
- Science

On the other hand, the main COVID-19 related studies had a significant shift towards problem-solving approaches, being discussed in the Journal of Cellular and Molecular Anesthesia throughout the recent issues including the current issue (12-16):

- Epidemiological features
- Clinical aspects
- Pharmacological and pharmaceutical topics
- Virological studies
- Modes of disease transmission
- Internet-based methods (for disease modeling, pandemic control, and new vaccine-drug discovery)
- Artificial intelligence to control the pandemic both clinically and epidemiologically
- Novel techniques like mRNA to produce vaccines
- Media and social approaches to increase Awareness and social control of the pandemic

However, no one could foretell the final fate of the pandemic. Researches are going on; since they have proved as our ultimate solution to defeat the pandemic. COVID-19 has dramatically changed not only our medicine, medical research, and pharmaceutical industry, but also many aspects of our social behaviors and mindset (17). Optimism and will are the soul of all scholarly activities and human's most powerful weapon. We will rise again, and as Rumi has quoted in the 13<sup>th</sup> century:

Every cry undoubtedly ends in laughter, But the provident man will be the lucky one

## References

1. Dabbagh A. Cellular and Molecular Approaches to COVID-19: "Road to Perdition" or "The Shawshank Redemption". J Cell Mol Anesth. 2020;5(4):214.

2. Dabbagh A. COVID-19: Apocalypse Now? J Cell Mol Anesth. 2020;5(1):1-2.

3. Seshaiyer P, McNeely CL. Challenges and Opportunities From COVID-19 for Global Sustainable Development. World Med Health Policy. 2020;12(4):443-53.

4. Jafari H, Amiri Gharaghani M. Cultural Challenges: The Most Important Challenge of COVID-19 Control Policies in Iran. Prehosp Disaster Med. 2020;35(4):470-1.

5. Giannopoulou I, Tsobanoglou GO. COVID-19 pandemic: challenges and opportunities for the Greek health care system. Ir J Psychol Med. 2020;37(3):226-30.

6. Chen PJ, Pusica Y, Sohaei D, Prassas I, Diamandis EP. An overview of mental health during the COVID-19 pandemic. Diagnosis (Berl). 2021.

7. Borku Uysal B, Islamoglu MS, Koc S, Karadag M, Dokur M. Most notable 100 articles of COVID-19: an Altmetric study based on bibliometric analysis. Ir J Med Sci. 2021:1-7.

8. ElHawary H, Salimi A, Diab N, Smith L. Bibliometric Analysis of Early COVID-19 Research: The Top 50 Cited Papers. Infect Dis (Auckl). 2020;13:1178633720962935.

9. Afshar A, Tabrizi A. Bibliometric Analysis of the100 Highly-cited Articles about COVID-19. Arch Bone Jt Surg. 2020;8(6):748-56.

10. Chahrour M, Assi S, Bejjani M, Nasrallah AA, Salhab H, Fares M, et al. A Bibliometric Analysis of COVID-19 Research Activity: A Call for Increased Output. Cureus. 2020;12(3):e7357.

11. Yu Y, Li Y, Zhang Z, Gu Z, Zhong H, Zha Q, et al. A bibliometric analysis using VOSviewer of publications on COVID-19. Ann Transl Med. 2020;8(13):816.

12. Rajaei S, Dabbagh A. The immunologic basis of COVID-19: a clinical approach. J Cell Mol Anesth. 2020;5(1):37-42.

13. Zandi M, Soltani S, Sanami S, Rasooli A. Spike Protein Mutations and the Effects on SARS-CoV-2 Pathogenesis. J Cell Mol Anesth. 2021;6(2):148-53.

14. Fani M, Namdar-Ahmadabad H, Azimian A, Ghasemzadeh-Moghaddam H. Predicting microRNAs as Anti-viral Agents in SARS-CoV-2 Infection Based on the Bioinformatics Approach: A Systematic Review. J Cell Mol Anesth. 2021;6(2):141-7.

15. Rahmatizadeh S, Valizadeh-Haghi S. The Readability of Online Health Information on Middle East Respiratory Syndrome Coronavirus Disease. J Cell Mol Anesth. 2020;6(2):154-63.

16. Rahmatizadeh S, Valizadeh-Haghi S, Dabbagh A. The Role of Artificial Intelligence in Management of Critical COVID-19 Patients. J Cell Mol Anesth. 2020;5(1):16-22.

17. Palanica A, Fossat Y. COVID-19 has inspired global healthcare innovation. Can J Public Health. 2020;111(5):645-8.

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