



Original Article



The International Natural Product Sciences Taskforce (INPST) and the power of Twitter networking exemplified through #INPST hashtag analysis

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Abbreviations: COVID-19, Coronavirus Disease 2019; DHPSP, Digital Health and Patient Safety Platform; FDA, Food and Drug Administration; HIV/AIDS, Human Immunodeficiency Virus/ Acquired ImmunoDeficiency Syndrome; INPST, International Natural Product Sciences Taskforce; ICNPU-2019, The 4th International Conference on Natural Products Utilization from Plants to Pharmacy Shelf, 2019; LDCs, Least Developed Countries; MDPI, Multidisciplinary Digital Publishing Institute; ROS, Reactive Oxygen Species; SARS-CoV-2, Severe Acute Respiratory Syndrome Coronavirus 2; STEM, Science Technology Engineering and Mathematics.

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ABSTRACT

Background: The development of digital technologies and the evolution of open innovation approaches have enabled the creation of diverse virtual organizations and enterprises coordinating their activities primarily online. The open innovation platform titled “International Natural Product Sciences Taskforce” (INPST) was established in 2018, to bring together in collaborative environment individuals and organizations interested in natural product scientific research, and to empower their interactions by using digital communication tools.

Methods: In this work, we present a general overview of INPST activities and showcase the specific use of Twitter as a powerful networking tool that was used to host a one-week “2021 INPST Twitter Networking Event” (spanning from 31st May 2021 to 6th June 2021) based on the application of the Twitter hashtag #INPST.

Results and Conclusion: The use of this hashtag during the networking event period was analyzed with Symplur Signals (<https://www.symplur.com/>), revealing a total of 6,036 tweets, shared by 686 users, which generated a total of 65,004,773 impressions (views of the respective tweets). This networking event’s achieved high visibility and participation rate showcases a convincing example of how this social media platform can be used as a highly effective tool to host virtual Twitter-based international biomedical research events.

Introduction

Significance of natural products and natural product research

Nature offers multiple solutions to almost all the challenges faced by mankind. In particular, natural products represent a sustainable bio-resource with the potential to treat and manage various diseases and disorders (Durazzo et al., 2018a; Durazzo and Lucarini, 2021, 2019; Ghareeb et al., 2020; Uhrin et al., 2018). Globally, a fast and dynamically growing body of evidence is continuously emerging from computational level to the clinical level, enabling translational aspects and diverse applications of a wide range of bioactive natural products (Apoorva et al., 2021; Bankar et al., 2011; Bansal et al., 2021; Dangar and Patel, 2021; Igoli et al., 2014a, 2014b; Madaan et al., 2022;

Marzocco et al., 2021; Okoh et al., 2021; Singla, 2021; Singla et al., 2021a, 2021b, 2021c; Singla et al., 2021d). Plants, animals, and microbes serve as natural resources and goldmines for therapeutics, supplements, and nutraceuticals discovery (Capó et al., 2021; Dai et al., 2021; Durazzo et al., 2018b, 2020; Mironczuk-Chodakowska et al., 2021; Santini et al., 2018; Santini and Novellino, 2014, 2017, 2018; Santini et al., 2017; Singla and Dubey, 2019; Singla et al., 2019; Wink, 2015; Yang et al., 2019a). Not only do the traditional medicinal systems rely on natural products, but the modern medicinal systems also heavily rely on using multiple natural product scaffolds for drug development, in an unmodified state or for-property optimization achieved by modifying the starting natural product scaffold (Atanasov et al., 2015; Chaturvedi et al., 2020; Ravula et al., 2021; Tewari et al., 2021). For clinical purpose, there are already a lot of highly successful natural