

Social media for scientists

Scientists are increasingly embracing social media in their professional lives. Here, we look at the different platforms available to researchers and how social media engagement can positively influence their day-to-day work and scientific communication.

It is estimated that ~68% of Americans get their news from social media (<https://go.nature.com/2PYdK0m>). The ease of use of social media platforms for communicating and disseminating information also makes them attractive to scientists. A 2015 survey found that 47% of scientists connected with the American Association for the Advancement of Science (AAAS), use social media to follow new discoveries and discuss science (<https://go.nature.com/2zNxY2l>). ResearchGate, LinkedIn, Facebook, Twitter and Academia.edu were the top five sites visited by scientists and engineers participating in a separate 2014 survey (<https://go.nature.com/2Dk1L6v>). Among these, Twitter has emerged as a key outlet. The brevity of 'tweets', and the capacity to include images and videos, means that scientists can go through a lot of information at a glance, with the option to dig deeper if they wish. The constant stream of posts can be filtered to match the user's interests through the creation of lists. Thus, researchers can group and follow specific accounts, for example journals, funders, institutes, science news outlets, bloggers and individual scientists, in separate threads. Twitter also offers the possibility of communicating with a wide audience in real-time. Live-tweeting from conferences has become common and offers many benefits, such as allowing attendees and non-attendees alike to receive messages about talks and participate in discussions. Although a mere 13% of scientists responding to a 2014 survey stated they are active tweeters (<https://go.nature.com/2Dk1L6v>), half of them use it to follow discussions on research-related issues.

Facebook also allows the sharing of public or private posts that include links, photos and videos. Crucially, it lacks the tight, 280 character limit of tweets and provides more flexibility in setting up detailed user pages, which some scientists use to organize public profiles for their labs. Increasingly, social media platforms are becoming tools for career development, and informal online connections can help advertise, seek and fill scientific positions. The most prominent is LinkedIn, a site specifically designed for professional relationships, including networking

and publicizing career opportunities. Academia.edu and ResearchGate cater to specific audiences, as they aim to foster academic and researcher interactions by building contact networks and facilitating communication between users.

Despite the unavailability of Twitter and Facebook in mainland China, the use of social media is still prevalent, largely due to the integration of WeChat into daily life. Known as China's 'app for everything', this Chinese-language platform is multifunctional, covering messaging, social media and mobile payments, and reached nearly 1 billion active monthly users worldwide this year (<https://go.nature.com/2K1Pm8y>). WeChat users can share personal posts, termed 'Moments' that are visible to friends only, or register an official account to push feeds to subscribers. Posting about their recent publications in this manner is common practice for scientists in China. The platform also permits group chats of up to 500 members, where scientists can discuss their findings, share information about techniques and reagents, and even seek collaborations.

The ability to build networks of social media followers has helped foster communication and collaboration between scientists regardless of their geographical location. Apart from the broad social media outlets discussed thus far, this is also possible through more specialised platforms that cater to smaller collaborating groups, some of which are focused at the workplace. 'Slack' is one such social network app, often used by scientists for lab managing, project discussions and mentoring. Scientists can set up Slack 'channels' with different purposes, such as discussing experiments or manuscripts with lab members and other collaborators in real-time, even when travelling or with group members located in different cities (<https://go.nature.com/2OJAA7c>). Scientists in China can achieve the same interactions for their teams through the Group Chat function of WeChat.

The digital revolution has provided alternative routes to disseminating scientific discoveries and keeping up-to-date with the literature. This is underscored by the emergence of 'altmetrics', article metrics

that measure an article's online exposure in the more traditional reference managers, but also news outlets and social media platforms. Although altmetric scores can provide useful information about the online attention garnered by a particular paper, it is important to remember that this is not a reflection of research quality or significance. Rather, altmetrics can provide routes for researchers to access media coverage and join the online conversation about specific papers.

Despite the professional benefits of social media, many scientists are reluctant to use them for work. Developing a useful digital footprint is time-consuming and many scientists struggle to fit this into their already heavy schedules. Moreover, the ubiquity of social media and its ability to break geographical barriers means that its use may blur the line between work and personal life. Stepping into any type of public forum also requires caution, such as in issues of confidentiality, and clinicians especially should be mindful of patient privacy when discussing their work online.

Balancing the pros and cons, should scientists be encouraged to use social media? It is up to the individual to decide. A panel on 'Engaging with Social Media' at the 2014 AAAS annual meeting noted that it is not necessary for researchers to have a social media presence. But once they decide to participate it is important to have a clear idea of what they would like to achieve from their online interactions, and to decide which platforms would best serve this purpose. Keeping separate professional and private accounts can also help maintain a good work-life balance (<https://go.nature.com/2PWDbiP>).

Readers who do use social media are welcome to follow *Nature Cell Biology* on Twitter (@NatureCellBio), and on WeChat (NatureCellBiology), where we regularly post about new content, projects and conference attendance, as well as share news items of interest to the cell biology community. □

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