



The case to be proud as an LGBTQIA+ scientist

Pride holds a special place in the hearts of lesbian, gay, bisexual, transgender, queer, intersex, asexual+ (LGBTQIA+) individuals as a time to celebrate the progress we have made, and advocate for the advances yet to come. Here, I highlight ways in which the scientific community has had a crucial role in driving this progress, and provide a personal perspective on the importance of being open and proud of my identity as a gay cell biologist.

Scientific research has been crucial for understanding and countering the effects of homophobia, transphobia and other forms of anti-LGBTQIA+ discrimination on individual and public health. Yet today, the LGBTQIA+ community faces continued challenges, and there is an ongoing need for staunch allies in the scientific community to counter a culture of shame and misinformation with evidence and progress.

Any celebration of LGBTQIA+ pride should acknowledge the amazing history of the community, and here I focus on that history from my own viewpoint in the context of my home nation of the United States. In the mid-twentieth century, dominant conservative forces opposed the expression of non-cisgender and non-heterosexual identities, and the American Psychiatric Association (APA) baselessly and without medical evidence classified homosexuality as a mental disorder¹. Courageous activists in the 1960s spoke out at a time when stigma born from society and medicine forced many into the closet, to hide any same-sex attraction or non-binary gender presentations. The Black Cat, Stonewall and other protests sparked a national, but also international, reckoning with the idea that civil rights should be expanded, including repealing anti-sodomy laws and providing other protections for LGBTQIA+ people. The first Pride parades took place in 1970 to commemorate these protests and continue the advocacy that they had started². During these times, science also made seminal contributions toward better understanding the nature of homosexuality. Pioneering scientific studies — including those by Alfred Kinsey and Evelyn Hooker — provided key evidence on the prevalence of same-sex sexual behaviours, and showed that individuals that identify as homosexual or heterosexual do not exhibit distinct psychologies¹. In 1973, through the combination of civil rights advocacy and scientific progress, the APA reversed its classification of homosexuality¹.

Soon after, in the early 1980s, HIV and AIDS emerged onto the world stage as a mysterious and deadly illness³. Efforts to understand the disease wrongly referred to by some at the time as “gay cancer” were hindered by the prejudices triggered by a deadly infection that could be sexually transmitted and emerge with a disproportionate prevalence in the LGBTQIA+ community. Owing to this stigma, people living with HIV — whether LGBTQIA+ or not — have faced strong sources of pressure to remain silent about their status. This silence fuelled the spread of the disease throughout the world, with outsized effects not only on the LGBTQIA+ community, but also on individuals who suffered from additional forms of discrimination, including, for example, those of low socioeconomic status, minority racial or ethnic and other underprivileged groups. In those years, Pride demonstrations took on a new urgency to advocate for the health and lives of everyone impacted by HIV and AIDS. Allies in the scientific and medical communities helped pave the way towards more positive outcomes, in spite of a national response that seemed slow at best and dismissive at worst. Over the next few decades, HIV was identified as a virus, effective methods for testing individuals were developed, and the first reverse-transcriptase and protease inhibitors were approved³, ultimately providing hope that an HIV diagnosis was no longer a death sentence. Alongside these scientific developments, individuals also found the courage to speak openly about their own status, overcoming stigma to put a human face onto the people affected by HIV.

I started my undergraduate studies in the late 1990s, a time which now seems an inflection point in how major issues facing the LGBTQIA+ community were evolving in the United States and the world. The momentum for civil rights was building toward key legal and political victories for the marriage equality movement, supported, in part, by ongoing social scientific studies

that indicated that children with same-sex and gay parents experience similar outcomes^{4,5}. Throughout the history of the movement, the central way to change minds came from more and more individuals finding the courage to be honest about their identity with friends and family, slowly but surely changing society to be more accepting.

Before coming out, my fears of rejection, facing ongoing discrimination, and losing control made the closet feel comforting and safe. Over time, however, I came to recognize that coming out would be essential for me to simply be who I am. I drew inspiration from a variety of role models, and began the slow, sometimes painful, but ultimately freeing process of telling my closest friends and family that I am a gay man. I was lucky to have the privilege of coming to terms with my identity surrounded by communities that were largely welcoming and accepting.

During my graduate studies in the 2000s, even in a liberal university environment, I remember seeing relatively few openly gay scientists, especially at the faculty level. Although I recognized that I faced relatively little stigma compared with my faculty mentors and those who preceded me, it was still easy to conclude that being out wasn't necessary in a dispassionate research laboratory. As I accepted myself more, I realized that it was no simple matter to cordon off my professional and personal identities. I wouldn't be able to do my best work if I were constantly spending energy hiding key parts of myself from my peers and colleagues. I made the decision to be actively open about my sexuality from that point forward, so I could be sure to work with people who would know me as a full person. I am extraordinarily grateful to have found labs, colleagues and principal investigators who were proud to support all the aspects of my identity.

Now, as a faculty member myself, I am experiencing how much being openly gay can contribute to my teaching

and mentoring, although I still get a little nervous when I say it out loud to students. Even in as LGBTQIA+-friendly an environment as San Francisco, I often encounter students wrestling with a variety of challenges around being LGBTQIA+. For some, my being out may simply open the door to a conversation that they may have been struggling to begin with their friends, family or colleagues. For others, I can offer my story and perspective if it helps them to navigate whether and how to be out during their own journeys in science. For me, these experiences with LGBTQIA+ students have reaffirmed the importance of representation and pride, and they have made my career all the more meaningful.

As time continues, the focus and membership of advocacy groups have expanded to reflect our growing understanding of the true diversity of gender and sexuality identities. Although much social progress has been made worldwide in recognizing and protecting LGBTQIA+ rights, challenges remain ongoing. Many nations still persecute LGBTQIA+ individuals both through legal sanction and through social stigma. In the United States, the prominence of anti-racism demonstrations has provided further reminders that homophobia and transphobia combine with systemic racism to disproportionately impact people of colour who identify as LGBTQIA+. Despite the overall sense of progress, new threats are appearing in the form of aggressive anti-LGBTQIA+ movements to curtail a variety of civil rights. In 2022, the state

of Florida passed legislation that could potentially penalize educators for being open about their identity, and the governor of Texas ordered investigations of child abuse for parents of transgender youth who seek gender-affirming care, twisting the mission of the very public agencies that should be protecting transgender children targeted by this order. My hope is that scientists and scientific research will continue to have positive roles in addressing these challenges. Expert associations including the American Medical Association have issued strong statements providing evidence for the need for appropriate gender-affirming care for all individuals that identify as transgender⁶. The growth of the health equity research field provides ways to recognize and reduce the disparate physical and mental health outcomes experienced by historically underprivileged groups, including the LGBTQIA+ community⁷. Recent initiatives include understanding the effects of COVID-19 on queer non-binary and minority racial or ethnic groups⁸ and the increased risk of violence and suicide in non-binary populations⁹.

I remain hopeful that progress toward full equality for all members of the LGBTQIA+ community will continue. Since my own coming out, I have personally been amazed by the increasing numbers of openly gay scientists across career stages whom I encounter in nearly every classroom or professional event. I would not have conceived of resources such as [500queerscientists.com](https://www.500queerscientists.com), which increases the visibility of LGBTQIA+ representatives

in science, and I have been excited to see professional societies such as the American Society for Cell Biology establishing committees to officially advocate on behalf of LGBTQIA+ issues. I have found a deeper sense of belonging by seeing students, friends and colleagues be open about their identities. I can only imagine the progress that will yet be achieved through the collective acts of individual scientists' commitment to be open and proud members and allies of the LGBTQIA+ community. □

Yee-Hung Mark Chan  

Department of Biology, San Francisco State University, San Francisco, CA, USA.

✉e-mail: yhmchan@sfsu.edu

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Competing interests

The author has no competing interests.