

Historically, when the capital markets' enthusiasm for the biotech sector has gone from cool to cold, companies have turned to partnering as an alternative source of support. As investors began turning away from biotech in late 2021, there was an expectation among commentators that this might trigger an upsurge in both mergers and acquisitions (M&A) activity and biopartnering deals. This did not happen. During 2022, the global biotech sector saw a drop off in its ability to raise finance. After record-breaking fundraising in 2020 and 2021, investor enthusiasm waned in 2022. Indeed, the \$60.8 billion collected by biopharma companies throughout 2022 was down by 48.6% from 2021 and 54.8% from 2020.<sup>1</sup> Global initial public offerings were thin on the ground, with only 35 completed generating \$4.85bn. Biotechs raised \$16.9 billion through 158 follow-on offerings, while there were 381 public and other financings that raised \$16.86 billion and 493 private VC rounds that raised \$22.2 billion. According to BioWorld, M&A activity was at its lowest level since 2013, and while the reported bio partnering deal values for 2022 were the second highest recorded, the number of transactions was the lowest since 2018. With the pharma sector still struggling when it comes to R&D productivity, it continues to rely heavily upon biotechs for innovative ideas. With interest rates still high across the globe and the world economy still facing challenges from geopolitical tensions, biotech executives have been advised to manage their capital even more tightly, make the finds they have last longer, focus on mainly the lead programs, and find alternative sources of finance. VCs, who have raised considerable sums in recent years, are likely to reserve more for existing portfolio companies. There is an expectation that corporate venture capitalists may return to the fore in financing biotechs. Big Pharma's growing reliance on external sources of innovation was evident in Clarivate's latest Top 100 Global Innovators™ report.<sup>2</sup> What the analysis reveals is that the leading pharma companies are responsible for a smaller share of pharmaceutical inventiveness, while over the last decade, the number of pharmaceutical inventions is approaching double its annual production rate, which is largely due to increased innovation from Mainland China. Biotech innovation still speaks with an American accent, but that influence is declining... in 2022, some 43% of biopartnering transactions involved at least one United States-based company. Biotechs raised \$16.9 billion through 158 follow-on offerings, while there were 381 public and other financings that raised \$16.86 billion and 493 private VC rounds that raised \$22.2 billion. <sup>4</sup> In 2020 the number of pharmaceutical-related inventions filed by Mainland Chinabased entities, for the first time, exceed the total for all other countries and regions -- a continuing trend. Moreover, in the past decade there has been a doubling in pharma-related inventive activity from academia. A geographic analysis of dealmaking activity confirms that biotech innovation still speaks with an American accent, but that influence is declining, while the influence of Asia-Pacific-based industry, most notably entities based in Mainland China, is rising. In 2022, some 43% of bio partnering transactions involved at least one United Statesbased company, while 15% of all transactions involved only United States-based biotechs. Moreover, 29% of deals involved at least one European partner, while one in four transactions had at least one participant from the Asia-Pacific region.