

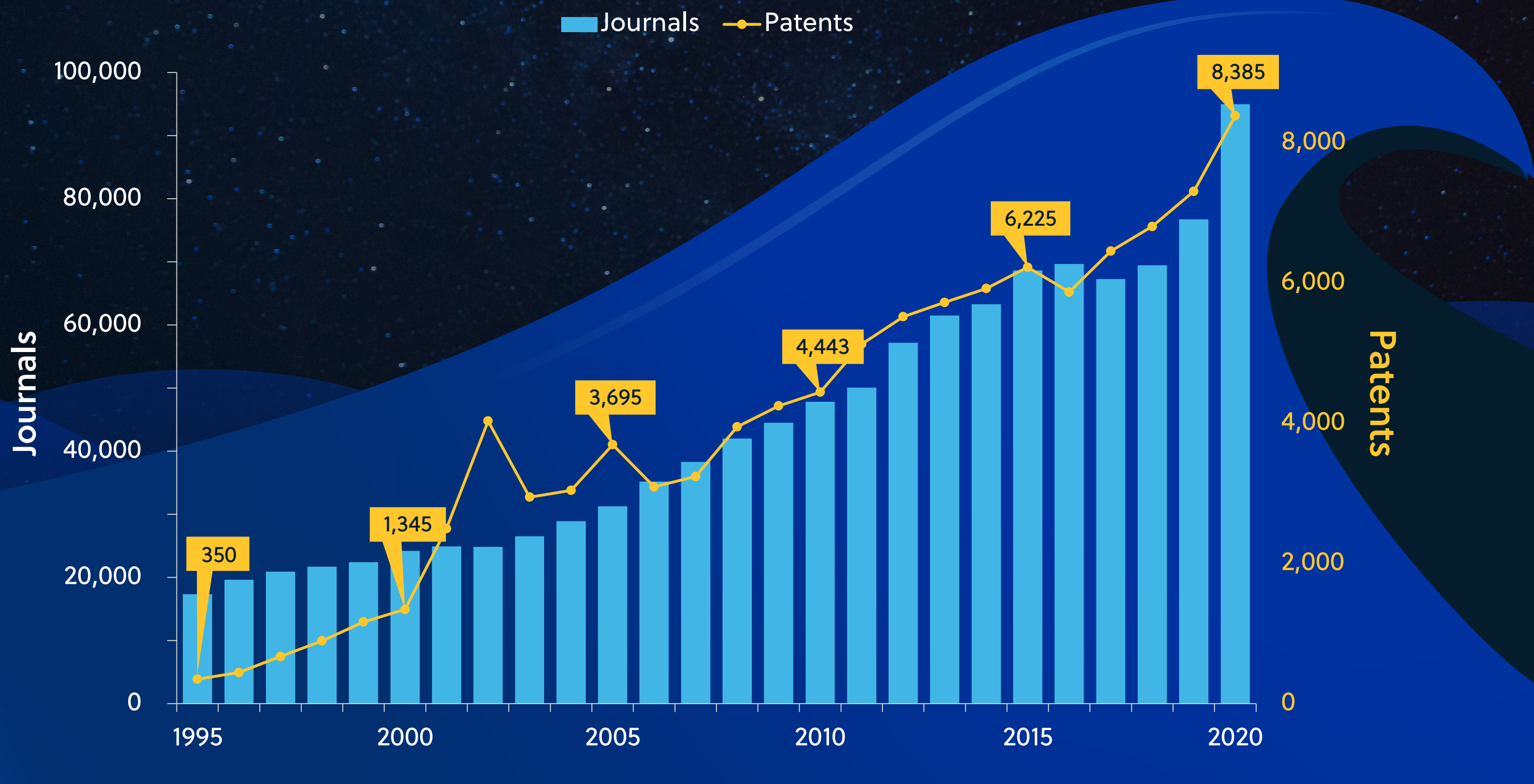
RNA MEDICINES

Is the increase in investment here to stay?

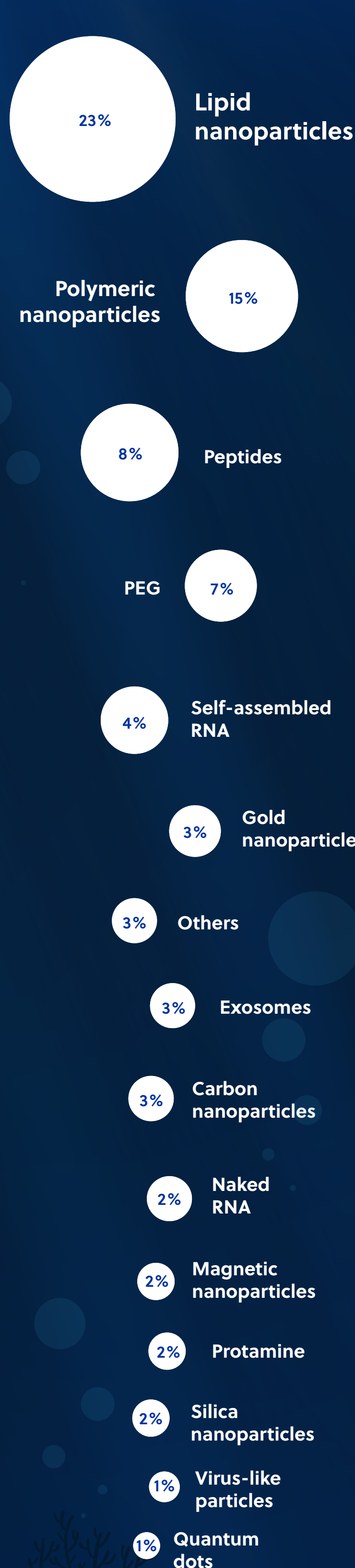
Over the past two decades, the number of journal articles and patents on RNA medicines resembles a series of ever increasing waves as surges of innovation-driven activity crash into the unforeseen challenges of the real world.

Will the current growth in publication activity sparked by the much-needed success of the COVID mRNA vaccines follow a similar near-term drop? A deeper dive into the literature and examination of market trends suggests that a tsunami of opportunity is yet to come.

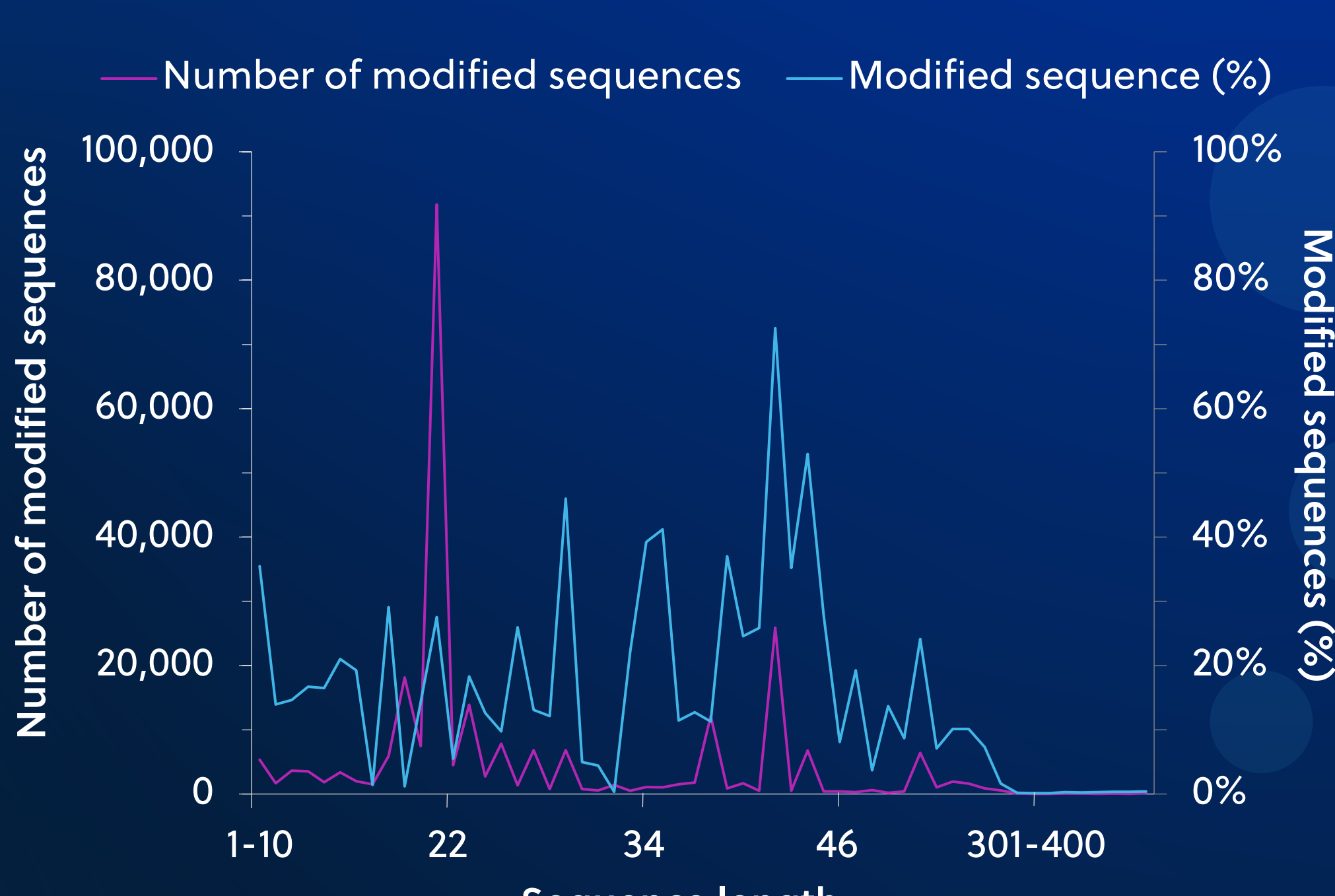
Learn more about trends in RNA medicines in the CAS Insights™ Report "RNA-derived Medicines: a review of the research trends and developments" at cas.org/RNA-report.



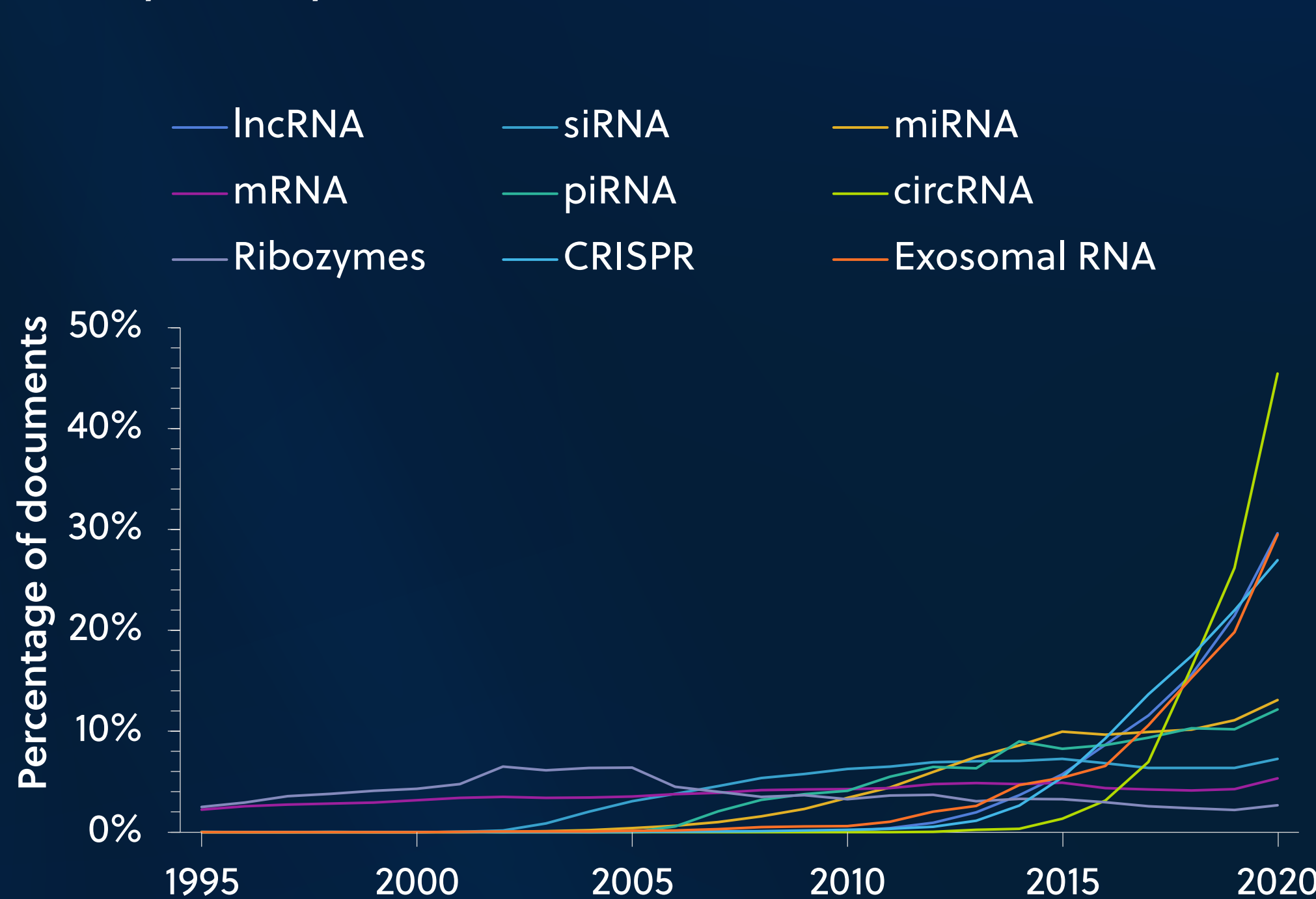
Nanoparticles and peptides dominate delivery method research



Chemical modifications are critical for stabilizing RNA for therapeutic use

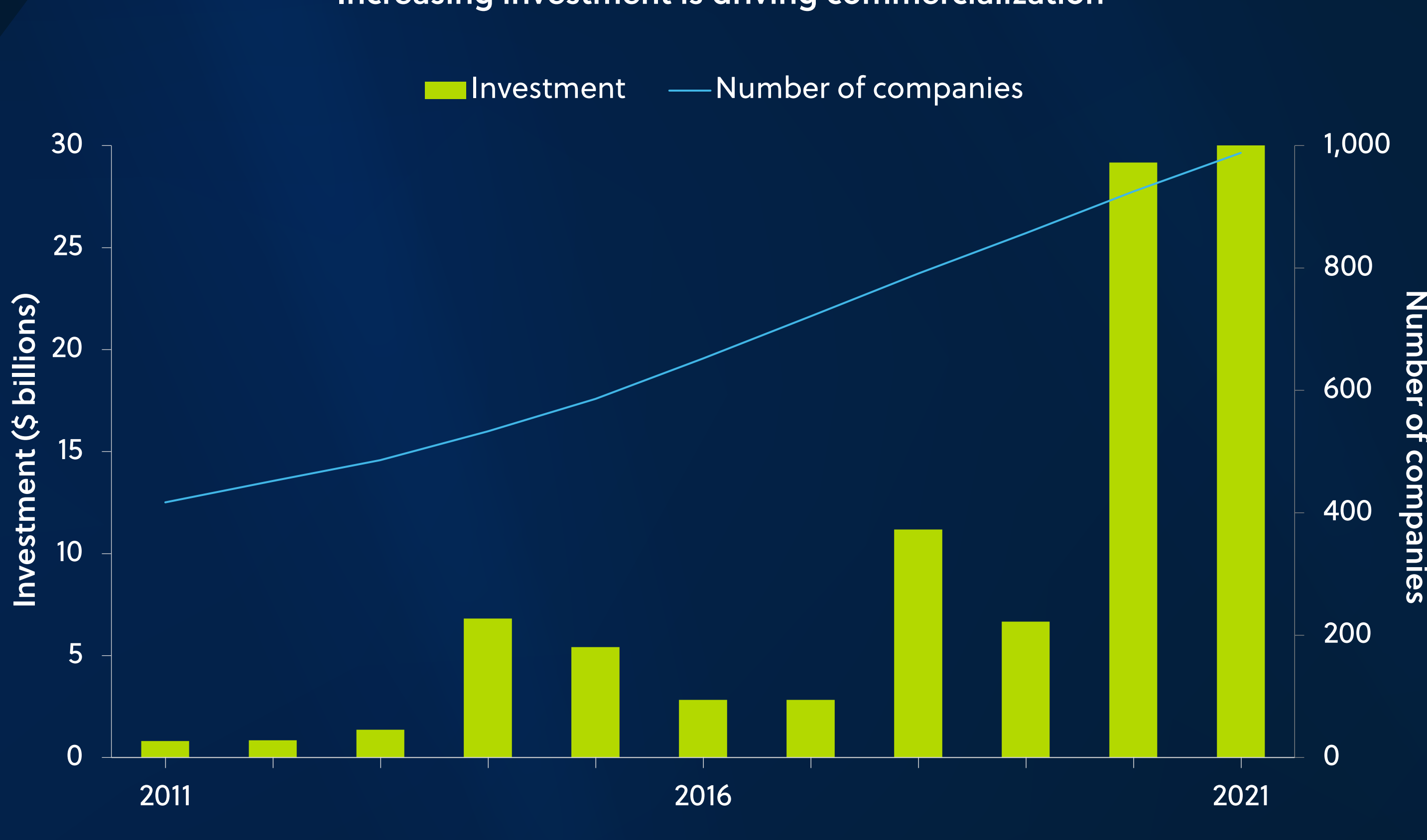


The rapid increase in the percentage of documents focusing on circRNA, lncRNA, and exosomal RNA show where the field is headed



For each RNA type, percentages are calculated by dividing the number of publications on that RNA type in a specific year by the total number of publications on that RNA type between 1995 and 2020. For example: Percentage of circRNA documents in 2020 = (number of circRNA documents in 2020)/(total number of circRNA documents from 1995 to 2020).

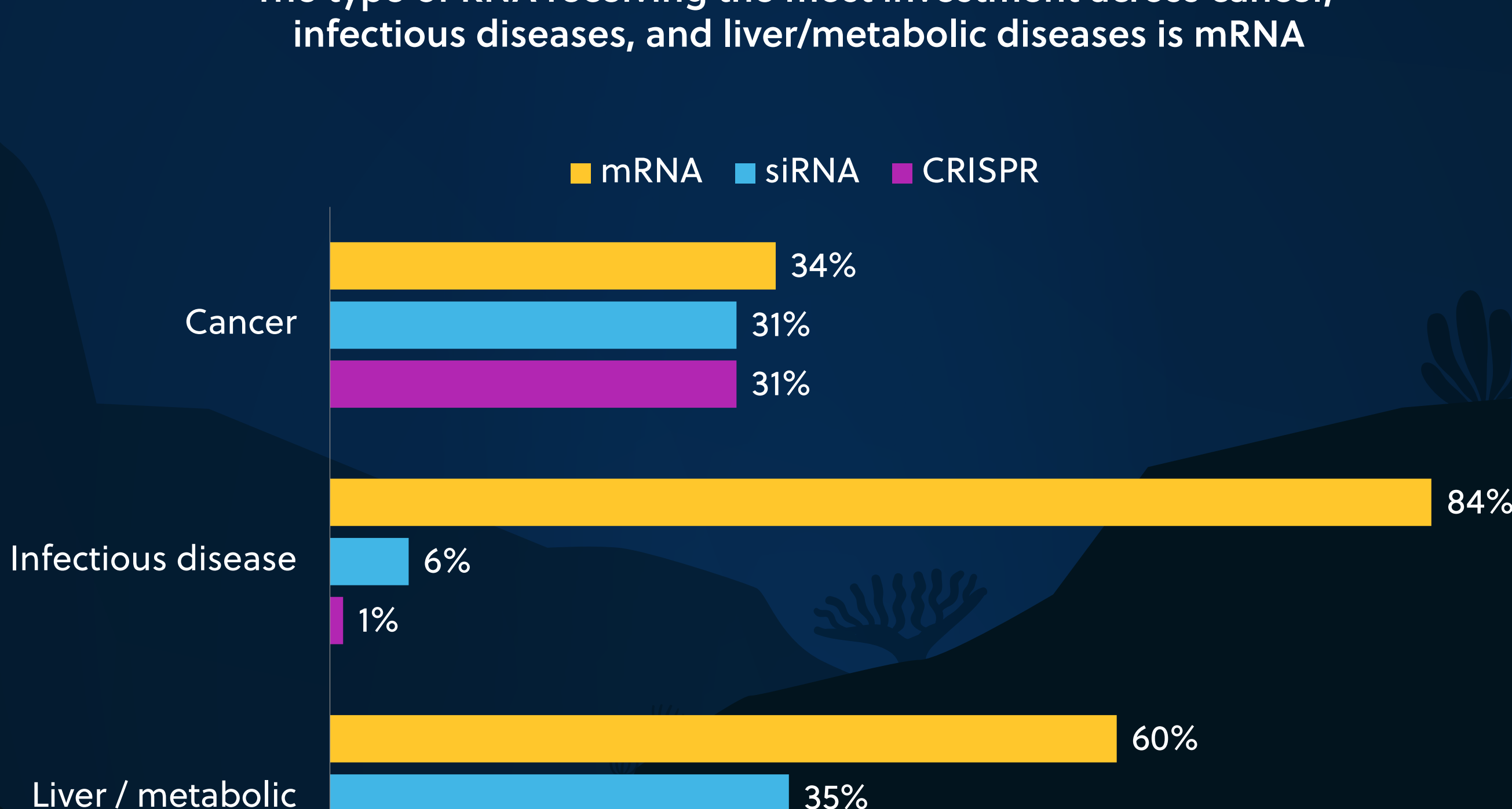
Increasing investment is driving commercialization



Cancer is the indication with the most investment



The type of RNA receiving the most investment across cancer, infectious diseases, and liver/metabolic diseases is mRNA



Comprehensive references available at cas.org/rna-report

Learn more at cas.org/insights



© 2023 American Chemical Society. All rights reserved.