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AI to transform all processes in drug development by 2026: CPHI report

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In 2030, over 50% of FDA approvals will involve AI discovered and developed drugs



The first part of the influential CPHI Annual Report predicts sizeable progress ahead for artificial intelligence (AI)'s use in pharma, as despite the wider excitement around ChatGPT and other generative AI's having cooled in recent months, pharma's real-world applications continue to expand.

The implications go far beyond its current use and most startling of all – notwithstanding the so far limited successes – it is expected that within 10-years over 50% of approved drugs will involve AI in their development and/or manufacturing.

The CPHI Report's AI findings, which are released ahead of CPHI Barcelona, the world's largest pharma event, held at Fira Barcelona (October 24-26th, 2023), point to the technology having a transformational impact on all parts of drug discovery and development within the next 24-months.

The CPHI Report features the insights from 250 global pharma companies and is widely seen as a key barometer of the industry's future growth prospects. For the first time in the report's history pharmaceutical 'AI companies' (26%) have overtaken 'late stage' (20%) and 'early stage' (19%) biotechs as the industry's most appealing investment option for VCs.

Significantly, the rate of change appears to be accelerating, with 62% forecasting that the first fully AI drug discovered and developed therapy will be approved by the FDA within the next 5 years – with 20% believing this can be achieved in under 2-years. Looking further ahead, by 2030, over half (52%) of new drugs approved will be discovered or developed using AI.

In fact, highlighting AI's evolution and its expected far wider medium-term impact across pharma, it was predicted by executives to be central to all four of the top ranked technologies to breakthrough into 'routine use' by pharma in 2026'. Costs are also predicted to be lower as clinical trial designs are improved alongside *in silico* modelling and manufacturing efficiencies, with even clinical trial patient recruitment benefiting from the technology's ability to analyse massive datasets. Unsurprisingly, AI's role in target discovery (60+%) and manufacturing optimisation (52%) remained the most chosen application looking three years ahead, but nearly 43% also envisage it will even help to build base regulatory submissions.