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FROM INNOVATION TO PATIENTS: AI-DRIVEN DRUG DISCOVERY AND THE ROLE OF INTELLECTUAL PROPERTY RIGHTS

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Artificial intelligence (AI) is reshaping drug discovery with direct implications for patients. Drug candidates such as LP-284 for relapsed or refractory non-Hodgkin's lymphoma [1] and INS018_055 for fibrosis [2] entered clinical trials in record time, showing that AI can help bring innovative treatments to patients much more quickly, particularly valuable in diseases with limited therapeutic options. Beyond speed, AI helps design safer and more effective drugs by predicting toxicity and metabolism early in development, reducing potential failures in later phases. This could lower adverse effects, enable personalized therapy, and expand options for diseases like Alzheimer's, cancer and rare disorders.

However, major intellectual property (IP) challenges remain. The DABUS (Device for the Autonomous Bootstrapping of Unified Sentience) cases in many jurisdictions have shown that current law does not recognize AI as an inventor, creating uncertainty over ownership and the patentability of AI-created molecules. These disputes underscore the gap between rapid technological progress and slower legal adaptation. In addition, questions of novelty, non-obviousness, and data provenance complicate legal protection, raising the risk that promising discoveries may be delayed in their translation into therapies for patients [3].

For patients to benefit from AI-driven discoveries, scientific advances must be supported by legal clarity and ethical responsibility. Achieving this balance will require close collaboration between researchers, policymakers, and regulatory bodies, ensuring that innovations are transformed into therapies that reach patients. Flexible IP laws can undoubtedly improve access to novel medicines, helping innovative treatments reach patients more quickly and equitably.

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