



Overview: Akanocure is a platform-based drug development company focusing on orphan and unmet needs in oncology, immunology, and infectious diseases.

Technology: Akanocure's enabling technology is a synthesis platform that allows it to design, optimize, and manufacture novel drug candidates with high degree of complexity, diversity, and biological relevancy leading to more potent, more effective, and safer drugs.

Problem: A **dysregulated immune response** is at the heart of many disease states including cancer, infectious diseases, and immunological disorders. In **cancer**, a dysregulated immune response allows the cancer to proliferate, metastasize, resist treatment, and evade detection and clearance by the immune system.

Indication/Unmet Need: Advanced lung cancer has only a 5.5% 5-year survival. The biggest unmet needs include: (1) lack of second-line therapy for patients that progress on current therapies. Chemotherapy has been the standard of care for 20 years with very low response rates (15%–20%), and (2) lack of options to stop brain metastasis.

Solution: AK-423 is an immunotherapy that modulates the immune response in the tumor microenvironment. Moreover, AK-423 has a direct anticancer effect where it stops cancer proliferation, metastasis, and allows the body's immune system to clear the cancer. AK-423 is currently in the lead optimization stage for inhalation therapy.

Broader Vision: The initial focus would be taking the inhaled AK-423 to clinic against lung cancer. The longer-term goals include a targeted oral version to go after other cancers including metastatic breast and ovarian cancers, targeting other indications (infectious diseases), in addition to pursuing other candidates in the pipeline (AK-321).

Competitive Advantage: (1) **Compensation:** candidates that target the same pathway as AK-423 did not perform well due to compensation from other pathways. AK-423 does not suffer from this drawback as it shuts down all compensatory mechanisms, (2) **Pharmacokinetics:** drugs designed against the same protein target of AK-423 suffered from improper pharmacokinetics. Akanocure's platform permits high control over fine-tuning the physicochemical and consequently the pharmacokinetic properties of its candidates, (3) **Safety:** AK-423 is safer than other candidates due to its mode of administration. Inhalation permits the use of much lower doses and minimal systemic exposure which greatly decreases the chances of toxicity.

Intellectual Property: Akanocure has exclusively licensed the platform from Purdue University and has been granted its own patents covering the platform, in addition to patents under preparation for its pipeline candidates.

Market: The global cancer market is projected to reach \$272 Bn by 2030 (CAGR 7.2% 2022-30). Lung cancer is projected to occupy 25% of the total cancer market by 2030 (\$ 67.9 Bn, CAGR 14.1% 2022-30). Immunotherapy was valued at \$114.25 Bn in 2022 and expected to reach \$196.45 Bn by 2030 (CAGR 7.2% 2022-30).

Business Model: Akanocure follows a fully integrated drug discovery and development company model. Its goal is to take its pipeline further along the clinical development and regulatory process.

Team: (a) Sherine Abdelmawla, Ph.D. (Founder, CEO); (b) Mohammad Noshi, Ph.D. (Founder, CSO); (c) Philip L. Fuchs, Ph.D. (Founder and Advisor): Emeritus R. B. Wetherill Professor of Chemistry, Purdue University; (d) Homer Pearce, Ph.D. (SAB, Chairman): former VP of Cancer Research and Clinical Investigation, Eli Lilly, (e) Wael Harb, M.D., EMBA (SAB): VP of Medical Affairs, Syneos Health; (f) Allen Ritter, Ph.D. (SAB): former VP of Manufacturing, Endocyte; (g) John Bamforth (BOD, Chairman): former global Chief Marketing Officer, Eli Lilly; and (h) Chris Seybold. (BOD): CFO of Gemini Data and of FOUNDER.org; an impact investor.