Cancer's Vulnerability Is Our Strength

Cyteir Therapeutics is a private, clinical-stage oncology company focused on developing first-in-class therapies that target key vulnerabilities in cancer cells' DNA damage response (DDR) pathways. Cyteir's approach combines a deep understanding of DDR biology with the transformative potential of synthetic lethality to identify novel drug targets for defined patient populations. The team is leveraging its extensive and collective expertise in drug development to rapidly advance its pipeline of targeted therapies.

"Our mission at Cyteir is to build a world-class oncology therapeutics organization focused on translating new discoveries in the biology of DNA repair and genome stability into effective medicines that will improve the lives of cancer patients."

Lead Program: CYT-0851, a Selective Inhibitor of RAD51-Mediated Homologous Recombination

RAD51 is a DNA recombinase that plays an essential role in homologous recombination (HR)-mediated double-strand DNA break repair. Cyteir's founding scientists made the seminal discovery that aberrant expression of the DNA-damaging enzyme activation-induced cytidine deaminase (AID) promoted dependence on HR for survival. This fueled the search for HR inhibitors to treat cancer patients with tumors overexpressing AID.

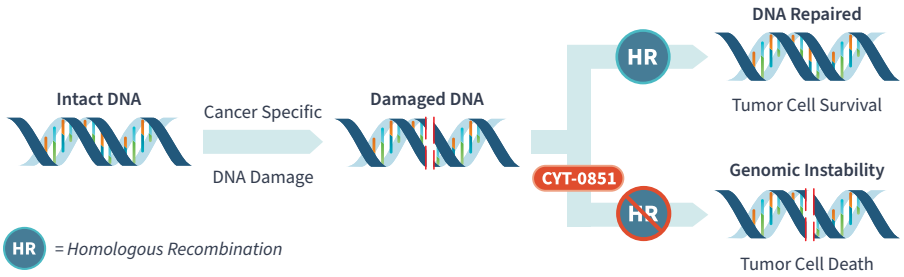
CLINICAL STAGE

PROGRAM	INDICATION	PRECLINICAL	PHASE 1/2	PHASE 2/3	PLAN
CYT-0851 (RAD51)	Monotherapy in solid tumors and hematologic malignancies				*Enter Ph 2 2H2021*
	Combination therapy in solid tumors and hematologic malignancies				*Initiate trial 2Q2021*

RESEARCH STAGE

PROGRAM	INDICATION	DISCOVERY	LEAD OPTIMIZATION	IND ENABLING STUDIES	PLAN
CYT-1853 (RAD51 2nd Gen)	Solid tumors and hematologic malignancies				*IND 2022*
CYT-XXXX (undisclosed)	Solid tumors				*IND 2023*
CYT-YYYY (undisclosed)	Solid tumors				*Nominate target 2021*

HOW CYT-0851 WORKS



- Cancer cells often have higher DNA damage burden (e.g., aberrant expression of AID)
- This can lead to increased dependence on pathways that repair DNA breaks
- RAD51-mediated homologous recombination (HR) is a major DNA-break repair pathway
- Inhibiting RAD51-mediated HR in these cancer cells leads to accumulation of unrepaired DNA damage and tumor cell death

Cyteir's lead compound, CYT-0851, is the only inhibitor of RAD51-mediated DNA repair in clinical development. Cyteir progressed this program from invention to IND in under three years. In pre-clinical models, CYT-0851 inhibits the growth of various B-cell malignancies and solid tumors. Consistent with the founding hypothesis, aberrant expression of AID in human lymphoma cell lines correlates with sensitivity to CYT-0851. A phase 1/2 study is currently enrolling patients with selected hematologic malignancies and solid tumors at leading U.S. cancer research centers to evaluate the safety, pharmacokinetics, and clinical activity of CYT-0851 as a monotherapy. By selectively killing cancers with high levels of DNA damage, CYT-0851 has the potential to exhibit a favorable safety profile that may allow it to be combined with other cancer treatments.

Cyteir has developed multiple research assays that could be readily developed into companion or complementary diagnostics to identify patients whose tumors may be more susceptible to CYT-0851 therapy. In April 2020, the company received an investigational device exemption (IDE) from the U.S. Food and Drug Administration to begin evaluating one of these assays in patients.

CYT-0851

- **Target:** RAD51-mediated DNA repair
- **Dosage Form:** Small-molecule, oral, once-daily administered drug
- **Targeted Diseases:**
  - **Hematologic B-cell Malignancies:** Non-Hodgkin lymphoma, including diffuse large B-Cell lymphoma and mantle cell lymphoma, multiple myeloma, and chronic lymphocytic leukemia
  - **Solid Tumors:** Pancreatic cancer, ovarian cancer, breast cancer, head and neck cancer, small-cell lung cancer, and soft tissue sarcoma

Research-Stage Programs

Beyond CYT-0851, Cyteir has a next generation RAD51 program in late-preclinical development, as well as two undisclosed DDR target programs in early-stage discovery approaching lead optimization. Additionally, the Cyteir team is actively identifying, prioritizing, and evaluating additional DDR pathway targets based on their role in cancer and whether they have an identifiable patient population (i.e., whether they possess a specific cancer vulnerability) that might benefit from targeted therapy.

Targeting Treatment to the Right Patients

Cyteir applies insights from both traditional loss-of-function (LOF) and novel gain-of-function (GOF) synthetic lethality screens to identify novel, predictive patient selection biomarkers for each of its programs and then validates them in preclinical models. The GOF approach targets cancers where an abnormal gain of function, such as increased AID expression, creates a unique vulnerability that can be therapeutically targeted.

At a Glance

FOUNDED
2012

HEADQUARTERS
Lexington, Mass., United States

FINANCING
Series A: $5.5 M (Nov 2016)

Series B: $55.2M (May 2018–expanded Nov 2019)
Investors:
- Bristol-Myers Squibb/ Celgene Corporation
- DROIA Ventures
- Lightstone Ventures
- Novo Holdings
- Osage University Partners (OUP)
- Venrock

Series C: $80M (Feb 2021)
Investors:
- Acuta Capital Partners
- Ally Bridge Group
- Ample Plus Fund
- Avidity Partners
- CaaS Capital Management
- Janus Henderson Investments
- RA Capital Management

Joined by existing venture capital investors

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