



CASE STUDY

# The Value of Strategic Partnerships in Cancer Therapy Innovation

**Rapid data delivery and effective communication to fuel investor confidence.**

## How Melior Discovery is Empowering Precision Oncology

Melior Discovery is a leader in drug repositioning and a specialist CRO providing *in vivo* pharmacology solutions. With decades of experience in *in vivo* phenotypic screening, Melior helps clients to rapidly screen therapeutic candidates and generate the data that compels action.

Modifi Bio, a biotech startup focused on innovative cancer treatment solutions, faced the daunting challenge of advancing its research with limited resources and a pressing need for specialized *in vivo* pharmacology studies. This case study delves into how Melior Discovery was able to provide Modifi Bio with critical data for investment, demonstrating the power of collaboration in the biotech industry.

## Project Summary

### CLIENT:

Modifi Bio

### INDUSTRY:

Biotech - DNA  
modification technology  
in cancer R&D

### THE CHALLENGE:

Modifi Bio needed high-quality *in vivo* pharmacology data to advance their innovative cancer treatment research, on a limited budget and with restricted internal resources.

### MELIOR'S SOLUTION:

- Using Modifi Bio's engineered cell lines, Melior established *in vivo* models with a subcutaneous implant of the cells and the intracranial implantation of the tumors.
- Melior validated the model by its growth kinetics and take rates, replicating and reproducing previous academic research data.
- Expanding upon this, Melior completed two significant studies that tested Modifi Bio's drugs alongside reference compounds, generating critical data for attracting investment.

### RESULTS & BENEFITS:

- Melior produced high-quality, reliable data presented in a compelling and easy-to-digest format for Modifi Bio to show to stakeholders and use to influence investment.
- The draft report was delivered in less than a week, and the final report in a matter of days.
- This rapid delivery of high-quality data enabled Modifi Bio to overcome operational and financial constraints, and validate their therapeutic approaches.

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*Melior was able to do exactly what we needed essentially flawlessly... They communicated the data really well with regular updates—they became an extension of us.*

 Modifi Bio

**Bruce Ruggeri, Ph.D.,**  
VP Pharmacology, Modifi Bio

### About Bruce

Bruce Ruggeri, Ph.D., has over 27 years of experience in the pharma biotech industry, specializing in oncology, drug discovery, and developing small molecule therapies. Before joining Modifi Bio as their vice president of pharmacology, Bruce contributed his skills to various biopharma and cancer biology companies.

## The Challenge: Doing Good Science with In-House Resource Constraints

Without an in-house animal facility for performing critical *in vivo* pharmacology work, Modifi Bio had previously relied on academic collaborations to test its novel drug discovery approaches in tumor models. However, the fluidity of academic timelines led to project unpredictability and introduced costly delays.

Due to the unique complexity of their focus on brain cancer treatment, which requires incredibly complex *in vivo* models, Modifi Bio needed a partner with a specific set of technical capabilities without compromising efficiency or experience.

Looking for a reliable CRO who could execute a project on time and to a high standard, Modifi Bio found an ideal partner in Melior Discovery.

## The Solution: Efficient Technical Execution Meets Effective Communication

From day one, Melior demonstrated its specialized capabilities for conducting *in vivo* pharmacology studies. This deep expertise was crucial for advancing Modifi Bio's research, where Melior could leverage their oncology knowledge and their neuroscience and CNS background to perform the intricate brain surgeries necessary for Modifi Bio's glioblastoma studies. Their ability to implant tumor cells into the brain (orthotopic implantation) was essential for accurately assessing the efficacy of Modifi Bio's therapeutic agents in a relevant biological context, and this technical proficiency led to the rapid success of the studies.

Melior successfully replicated and expanded upon Modifi Bio's initial in-house data, validating the company's innovative approach to cancer treatment before building upon that foundation to produce high-quality, reliable data, underscoring the technical excellence of Melior's work.

But beyond the quality of the work, Melior's flexible approach, responsiveness, and willingness to accommodate changes in the study protocols as needed provided Modifi Bio with an adaptability that was critical for enabling them to pivot based on new insights or requirements swiftly. Regular updates and the timely provision of study results meant that Modifi Bio was continually informed about the progress of the work, ensuring that the research was as effective as possible. The quick turnaround on draft and final reports after study completion allowed Modifi Bio to promptly leverage the results for further development, discussions, and presentations to investors.

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*If you're looking for a US-based CRO that can do good quality work, produce an excellent work product, is going to be very responsive to your needs, can accommodate changes in study plans, and keep you in the loop, go with Melior.*



**Bruce Ruggeri, Ph.D.,**  
VP Pharmacology, Modifi Bio

## Why Did Modifi Bio Choose Melior Discovery?



### EXPERTISE ACROSS DISEASES

Melior's breadth and depth of knowledge were instrumental in allowing the combined CNS and oncology expertise required to generate brain tumor models.



### QUALITY AND EFFICIENCY

Melior successfully replicated and expanded on Modifi Bio's initial data, providing clean, comprehensive study outcomes with efficient communication throughout the project timeline.



### OUTCOME-DRIVEN APPROACH

The data produced by Melior was instrumental in discussions with potential investors for Modifi Bio, showcasing the tangible impact of their partnership on Modifi Bio's objectives.

## The Outcome: The Power of Proof

Melior Discovery provided reliable data from the studies, which is crucial for validating Modifi Bio's therapeutic approaches. Creating compelling investor decks featuring Melior's quality data, including survival studies and bioluminescent imaging, allowed Modifi Bio to showcase their treatment's impact on brain tumor models, which enhanced investor confidence.

The success of initial studies led to further research endeavors with academic partners and other CROs, expanding the scope and depth of Modifi Bio's research activities. This breadth of data was critical for ongoing funding discussions and supporting the company's strategic objectives, illustrating that the partnership with Melior Discovery extended beyond the technical achievements and provided strategic value to Modifi Bio, including flexible and responsive collaboration, effective communication, and the timely delivery of study outcomes.



*Talk about something that gets your investors going! They showed these beautiful survival curves with our agent versus control, and visual photos are in all of our investor decks because... it's powerful.*



**Bruce Ruggeri, Ph.D.,**  
VP Pharmacology, Modifi Bio

## Collaborative Innovation as an Accelerator in Biopharma

Melior Discovery's partnership with Modifi Bio illustrates the critical role that a flexible, skilled, and communicative CRO can play in the success of biotech companies. Through this collaboration, Modifi Bio was able to advance its oncology research and lead therapeutic agent.

This case study is proof that choosing the right partners at the right time is essential to mitigating the inherent challenges in the competitive and resource-intensive field of drug discovery and development, especially when internal resources are limited and the stakes are high.



*The most important value inflection point in a drug development program, apart from initial clinical proof-of-concept, is the first in vivo proof-of-concept. We get that. So, we pour our energies into providing the best study outcomes for every project.*

*Ultimately, Modifi Bio's success is also Melior's. So we will always try to accommodate the on-the-fly changes that help our customers to meet their goals.*



**Andrew Reaume, Ph.D.,**  
President & Co-founder



*Melior works in many therapeutic areas, like CNS, inflammatory disease, GI, cardiovascular, and oncology. I was very pleased that when it came to doing tumor studies, both subcutaneous and intracranial, they did them well. They reported on the studies on time and did the data analysis really well.*



**Bruce Ruggeri, Ph.D.,**  
VP Pharmacology, Modifi Bio

For more on this success story and to start your own, contact Melior at

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Find out more about Melior at  
<https://www.meliordiscovery.com/>