

Creating Superior Drugs Through Fleximer

MANAGEMENT

Julie A. Olson, Ph.D.,
President, CEO and
Director

Robert J. Fram, M.D.,
Chief Medical Officer

Peter B. Leone, MBA,
Chief Operating Officer

**Timothy B. Lowinger,
Ph.D.,**
Chief Scientific Officer

BOARD OF DIRECTORS

C. Boyd Clarke
Chairman

**Nicholas G.
Bacopoulos, Ph.D.,**
President, Medexis

Thomas R. Beck, M.D.,
Venture Partner,
Fidelity Biosciences

Julie A. Olson, Ph.D.,
President & CEO,
Mersana Therapeutics

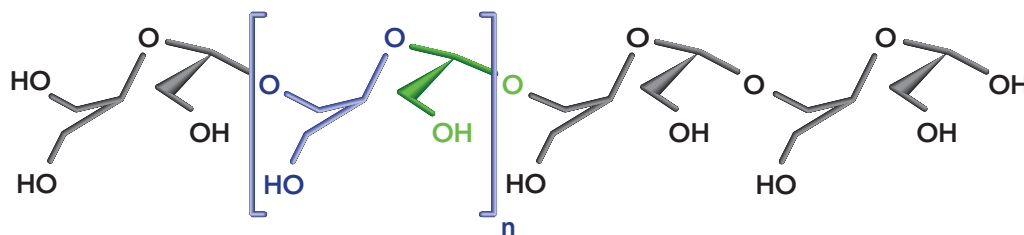
Joyce Tsang, Ph.D.,
Partner, ProQuest
Investments

Martin Vogelbaum,
Partner, Rho Ventures

About Mersana

Mersana Therapeutics employs its biodegradable polymer platform (Fleximer®) to create new and better medicines. We are advancing our own clinical-stage pipeline of novel compounds with the potential to address multiple oncology indications. We also leverage the versatility of Fleximer through partnerships to overcome the safety, efficacy, and delivery challenges of nucleic acids, biologics, and small molecules in numerous therapeutic areas.

Mersana is supported by top-tier investors to advance its oncology pipeline through the clinic. The Company's lead program, XMT-1001, is a Fleximer-camptothecin conjugate that is completing a Phase 1 trial in cancer patients with refractory solid tumors. XMT-1107, a Fleximer-fumagillin conjugate, is expected to enter Phase 1 studies in 2010. Mersana has built an efficient and versatile team to create additional cancer pipeline candidates and to exploit its Fleximer platform in biological applications both independently as well as with strategic partners.



Fleximer Platform

Fleximer is a novel, biodegradable and bio-inert polymer that can be chemically linked to small molecules, biologics and nucleic acids to enhance their pharmacokinetics and safety. Attaching Fleximer to existing and experimental agents can transform the molecules into new, patentable drugs with potentially superior properties. Fleximer has demonstrated the following important and differentiating qualities:

- Improves the solubility of conjugated drugs, including small molecules
- Provides longer drug exposure, resulting in increased tumor tissue uptake of the active drug
- Provides enhanced biodistribution
- Offers a tunable half-life and improved pharmacokinetics
- Can be conjugated using a variety of linker technologies, each developed for specific applications and matched to a specific therapeutic program's goals
- Can deliver more than one active agent in a single molecular entity, with controlled release of each drug, providing potential synergistic activity
- Lacks immunogenicity
- Is fully biodegradable, unlike several other drug delivery approaches
- Has demonstrated safety in numerous studies – general toxicity and immunotoxicity
- Has demonstrated manufacturing advantages – low COGS, scalable GMP process in place, excellent stability



Pipeline

Mersana is advancing its own pipeline of novel compounds, which were generated utilizing the Fleximer platform. Our compounds have the potential to address multiple oncology indications with potentially reduced development risk by linking Fleximer to agents that, to different degrees, have already shown proof-of-concept in the clinic.

XMT-1001

Our lead candidate, XMT-1001, is currently in Phase 1 in cancer patients with refractory solid tumors. XMT-1001 is a conjugate of Fleximer and camptothecin (CPT), a broad-spectrum cytotoxic. In prior Phase 2 trials (not sponsored by Mersana), the free drug CPT demonstrated evidence of anti-tumor activity, but also exhibited safety concerns, including severe bladder toxicity. Nonclinical studies of XMT-1001 in oncology models have shown significant improvement over the clinically active CPT and irinotecan, evidenced by broad-spectrum activity with better efficacy and safety. Results from nonclinical studies with XMT-1001 in oncology models demonstrate the following:

- Increased therapeutic efficacy in preclinical models compared to CPT and irinotecan
- Greater therapeutic window than irinotecan
- Fleximer backbone extends half-life of CPT and provides controlled release
- Enhanced tumor distribution and accumulation – CPT is 75x more concentrated in the tumor when conjugated to Fleximer, compared to when administered alone

XMT-1107

Mersana's XMT-1107 program is currently in preclinical development and is approaching Phase 1 clinical testing. XMT-1107 is a conjugate of Fleximer and a novel analog of fumagillin, an angiogenesis inhibitor. Prior to Mersana's efforts, a small molecule fumagillin analog showed anti-cancer activity in several tumor types in Phase 1 and 2 trials, but development was discontinued because a short half-life required frequent intravenous dosing and reversible CNS toxicity was observed in patients. The XMT-1107 program provides key potential benefits over other analogs, including an extended half-life with sustained release of the active release product, as shown in nonclinical studies, as well as evidence of efficacy alone or in combination with other agents in human tumor xenograft models. Mersana's Fleximer-linked drug, XMT-1107, provides key benefits over free fumagillin and other competitive agents, including:

- Extended half-life, resulting in a sustained plasma exposure, mimicking a prolonged, continuous infusion
- Improved solubility
- Anti-tumor activity in preclinical models alone or in combination is superior to other anti-angiogenic agents
- Preclinical studies show dramatic benefit of conjugated versus free small molecule at equivalent doses
- Preclinical activity in a wide variety of cancer models
- Preclinical evidence for CNS safety and very low brain exposure in animals

siRNA Delivery and Other Programs

The Fleximer platform is highly versatile and has applications across therapeutic categories for enhancing the delivery of all types of therapeutics. Therefore, Mersana is actively pursuing research programs into additional therapeutic applications to support the Company's existing pipeline. In particular, Mersana is developing Fleximer as a universal system for systemic delivery of siRNA-based therapeutics to a wide variety of organs and tissue types. Fleximer's ability to carry multiple payloads on a single molecule, its demonstrated lack of toxicity in humans, and its ease of manufacturing are attributes which are being leveraged to address the targeted delivery and cell-uptake challenges posed by siRNA delivery.

INVESTORS

Cape Family Fund

Fidelity Biosciences

Harris & Harris Group

Lansing Brown
Investments

ProQuest Investments

PureTech Ventures LLC

Rho Ventures

CONTACT

840 Memorial Drive
Cambridge, MA 02139
Tel: 617.498.0020
Fax: 617.498.0109
info@mersana.com
www.mersana.com

February 2010

www.mersana.com

