

$\alpha\beta$ - TCR Technology



Tolera
THERAPEUTICS

Autoimmune Disease



Transplant Rejection



*A Clinical Stage
Immune Modulation Company*

Tolera Therapeutics is a Kalamazoo, Michigan biotechnology company funded in June 2008. Primary investors in the company include Triathlon Medical Venture Partners, Hopen Life Sciences, SWMF Life Sciences Fund and the Michigan Economic Development Corporation. Tolera has raised \$14 million and has \$5 million of cash-on-hand.

A novel monoclonal antibody for Short Course Immune Induction Therapy (SCIIT)

Significant advances in immunological research have resulted in mounting evidence supporting Short Course Immune Induction Therapy (SCIIT) for a number of immunological conditions, including transplant induction, type 1 diabetes onset, and multiple sclerosis relapse. However, currently available induction agents have failed to show acceptable safety, introducing significant side effect risks including severe infections, cancers, and autoimmune responses. Tolera is in Phase 1/2 clinical trials investigating its T-cell targeting monoclonal antibody TOL101 (anti- $\alpha\beta$ TCR) as a novel approach to safely down regulate T-cells for SCIIT. The combination of specific targeting of the $\alpha\beta$ chain of the human TCR, and a novel mechanism of action, offers the potential for safer immune modulation with a broader therapeutic index.

Short Course Immune Induction

Therapeutic approach employing rapid, specific, short-term modulation of the immune system, using a therapeutic agent to induce T-cell non-responsiveness, also known as operational tolerance.

TOL101 reflects current immunological insight, not conventional thinking

Conventional thinking has promoted the use of IgG polyclonal antibodies for use against select T-cell immunological disease. Currently available immune therapies were designed for conventional long-term immune suppression and are known to increase patient risk of infections, malignancies and autoimmunity. Clinicians understand that these IgG antibodies keep the patient immune system compromised well beyond the therapeutic need, unnecessarily increasing patient risk. By contrast, TOL101's mechanism of action, a result of its IgM antibody design, provides complete, targeted, short-course down-regulation of the immune system more closely matching current therapeutic requirements. Predecessors in the TOL101 antibody lineage have demonstrated safe, effective immune induction in a number of pre-clinical, Phase I, and Phase II studies.

Current focus: commercialize TOL101 for transplant immune induction

Tolera will begin its Phase 1/2 transplant clinical trial in the summer of 2010 showing comparative results against Thymoglobulin, the industry leader in transplant induction therapy. With focused execution since initial funding in June 2008, Tolera has completed its product development, GMP manufacturing, and non-clinical work, and submitted and received IND application approval. TOL101 has received orphan drug status from the FDA.

Clinicians envision $\alpha\beta$ -TCR technology addressing a wide range of immune disorders

Key opinion leaders in immunology, endocrinology and neurology have indicated that TOL101 has the potential to stop the progression of select T cell related degenerative autoimmune diseases such as type 1 diabetes and/or multiple sclerosis, due to TOL101's mechanism of action, the interruption of T-cell pathogenesis, and its safety profile. As a result of these clinical insights, Tolera's Phase 2 efficacy and safety data in transplantation will be leveraged to support clinical investigation of TOL101 as a short course immune induction agent in autoimmune disease.

Key opinion leaders and clinicians have indicated that the company has a unique opportunity to bring a safer immune induction therapy to a number of high value markets. While novel biologic targets in immunology are highly sought after by drug companies, industry projections indicate a serious lack of new product introductions on the horizon. Partnering to develop programs in type 1 diabetes, multiple sclerosis and other therapeutic areas, offers promising upside opportunities for the company. With markets ranging from half a billion dollars revenue, to tens of billions of dollars, Tolera's goal is to obtain commercial partners to support investigations in type 1 diabetes, multiple sclerosis and other T-cell mediated autoimmune diseases.

Therapeutic Areas

- *Transplant induction*
- *Type 1 Diabetes, onset*
- *Multiple Sclerosis, relapse*
- *Other autoimmune*

Tolera plans for market approval, partner opportunities

Tolera plans to develop its T-cell therapy, TOL101, initially for transplant induction with the aim of providing clinicians with an improved therapeutic safety index over current therapies. The goal is to obtain FDA market approval for this first indication (organ transplant) within 3 – 4 years on additional fund-raising of \$25 - \$30 million. In addition, Tolera is seeking partners to support development of TOL101 for one or more autoimmune indications, leveraging the data derived from the transplant study to initiate Phase 2 trials in type 1 diabetes or multiple sclerosis. Tolera will also partner to develop its monoclonal antibody $\alpha\beta$ -TCR platform. As clinical development progresses, this strategy will provide investors with multiple strategic options including partnership, sale, or IPO.

An investment opportunity offering numerous strategic options

Tolera is seeking a new lead investor to add to its existing investor base, building a more robust Series C syndicate, and providing funds to complete the Phase 2 trial and initiate Phase 3/BLA programs. With \$5 million of cash-on-hand, Tolera seeks an additional \$5 to \$8 million to complete its Phase 2 (target 2011) and concurrently pursue one or more Pharma partners for the larger autoimmune markets and platform development. At this inflection point, investors and management may elect to raise additional funds (\$25 - \$30 million) to move to market approval / BLA. These options taken together open the door for multiple investor exit scenarios including significant out-license, sale, or IPO. Tolera will generate significant shareholder value by executing later stage trials of TOL101, a short course immune induction agent, differentiated by its safety profile and therapeutic index.



Management / Founders:

John J. Puisis *President and CEO*
Maria Siemionow MD PhD DSc CSO
Jim Herrmann *Chief Operating Officer*

Investors:

SWMF Life Sciences Fund
Triathlon Medical Ventures
Hopen Life Sciences
Michigan Economic Development Corp.

Board of Directors:

Suzette Dutch *Triathlon Medical Ventures*
Douglas R. Morton Jr PhD *SWMF Life Sciences*
Mark Olesnavage *Hopen Life Sciences*
Donald R. Parfet *Apjohn Group*
John J. Puisis *CEO*

Clinical Advisors:

Renal transplant:

Stuart Flechner MD *Cleveland Clinic*
Diane Cibrik MD MS *University of Michigan*
Xunrong Luo MD PhD *Northwestern University*

Type 1 Diabetes:

Kevan Herold MD *Yale University School of Medicine*
Matthias Von Herrath MD *LaJolla Institute for Allergy and Immunology*

Multiple Sclerosis:

Marcus Müller MD *University Hospital, Bonn Germany*

Advisors:

Immunology: Steve Miller PhD *Northwestern University*
Inventor: John Thompson MD *University of Kentucky*
Regulatory: Ellen Cooper MD *ClinReg Solutions*
Intellectual Property: Casimir – Jones
Legal: Honigman