



In Cell Therapy . . .
Cell Source Matters™

WindMIL Therapeutics

Non-Confidential Presentation
August 2020
www.windmiltx.com



Developing the Next Generation of Oncology Cell Therapies

WindMIL's Mission:

Translate novel insights
in bone marrow
immunology into
life-saving cell therapies
for cancer patients

- Exclusive position in Marrow Infiltrating Lymphocytes (MILs™)
 - Developed a proprietary, scalable process to activate, transform and expand antigen experienced, bone marrow-derived T cells into MILs
 - Natural qualities of MILs suggest meaningful advantages over TILs and other T cell therapies
 - Strong IP position (composition, process, use patents) and deep know-how protect WindMIL's unique position
- Key data read-outs in the next 12 months are expected to demonstrate the benefits of MILs alone (non gene-modified MILs) and when combined with a CAR (gene-modified MILs, or CAR-MILs™)
 - Ph 2 open-label trial in 2nd / 3rd line refractory, relapsed NSCLC in combination with nivolumab (collaboration with Bristol-Myers Squibb)
 - In vitro and in vivo studies evaluating CAR-MIL vs traditional CAR T with heme and solid tumor CARs (collaboration with Penn's Center for Cellular Immunotherapies, under the direction of Dr. Carl June)
- WindMIL plans to close a Series B extension by early 4Q to enable rapid achievement of these multiple milestones and successful execution of a crossover financing and IPO in 2021

MILs™ and CAR-MILs™: Distinct Opportunities with Accelerated Development Plans

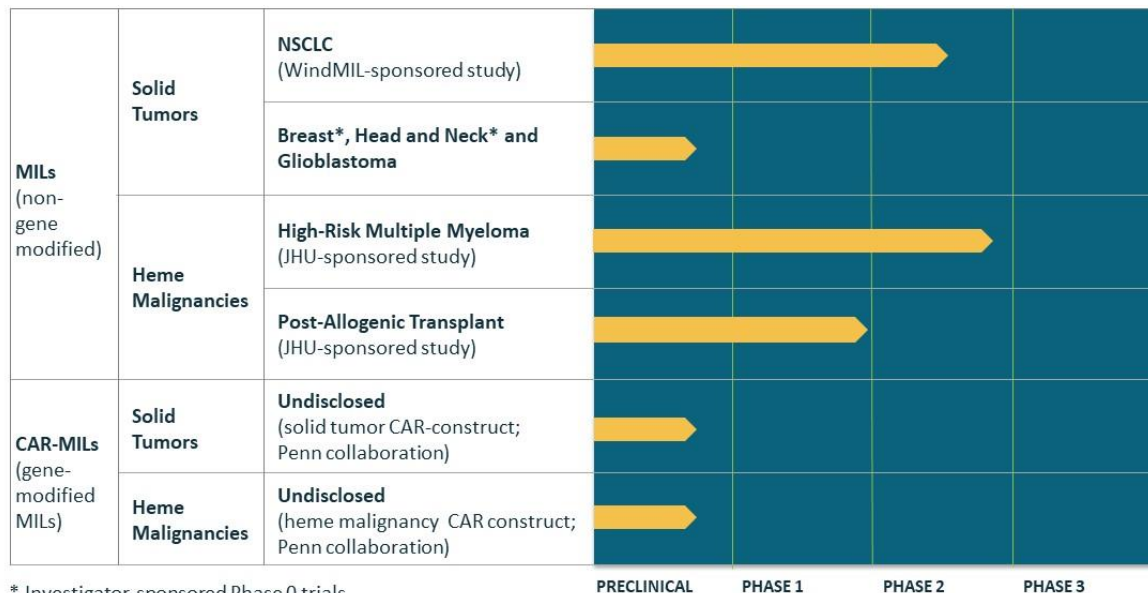
MILs (non gene-modified)

- Broad tumor antigen specificity
- High cytotoxicity
- Very favorable safety profile
- Use in earlier lines of treatment (in combination or alone)

CAR-MILs

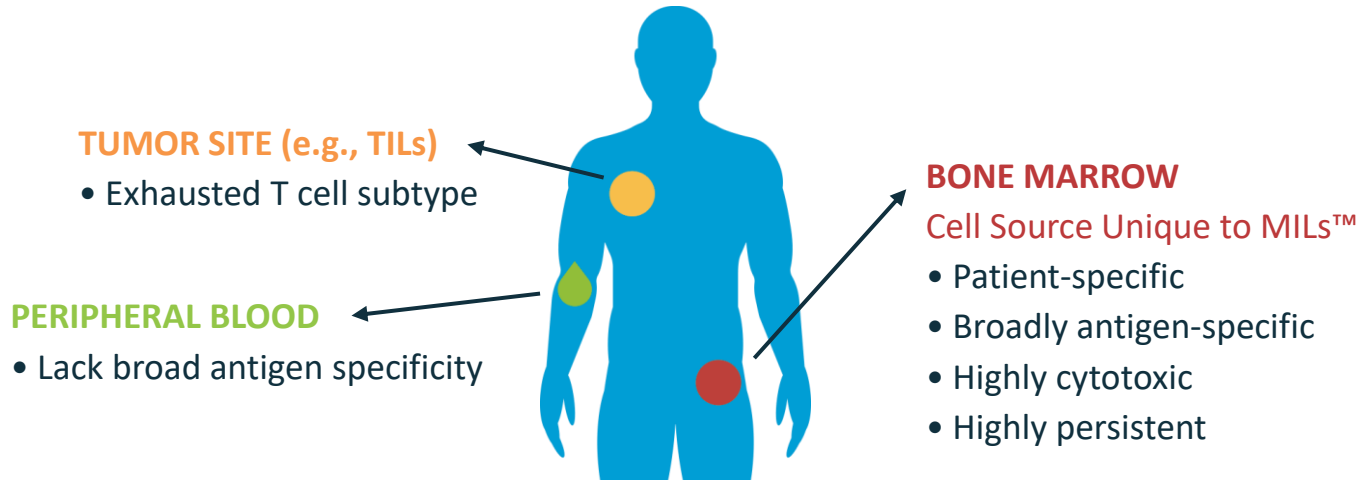
- Enhanced CAR-based cytotoxicity (rapid tumor cell killing)
- Continued native TCR activity against residual tumor cells (antigen escape variants)
- Improved persistence
- Use in high-burden tumors or later lines of treatment

WindMIL Pipeline



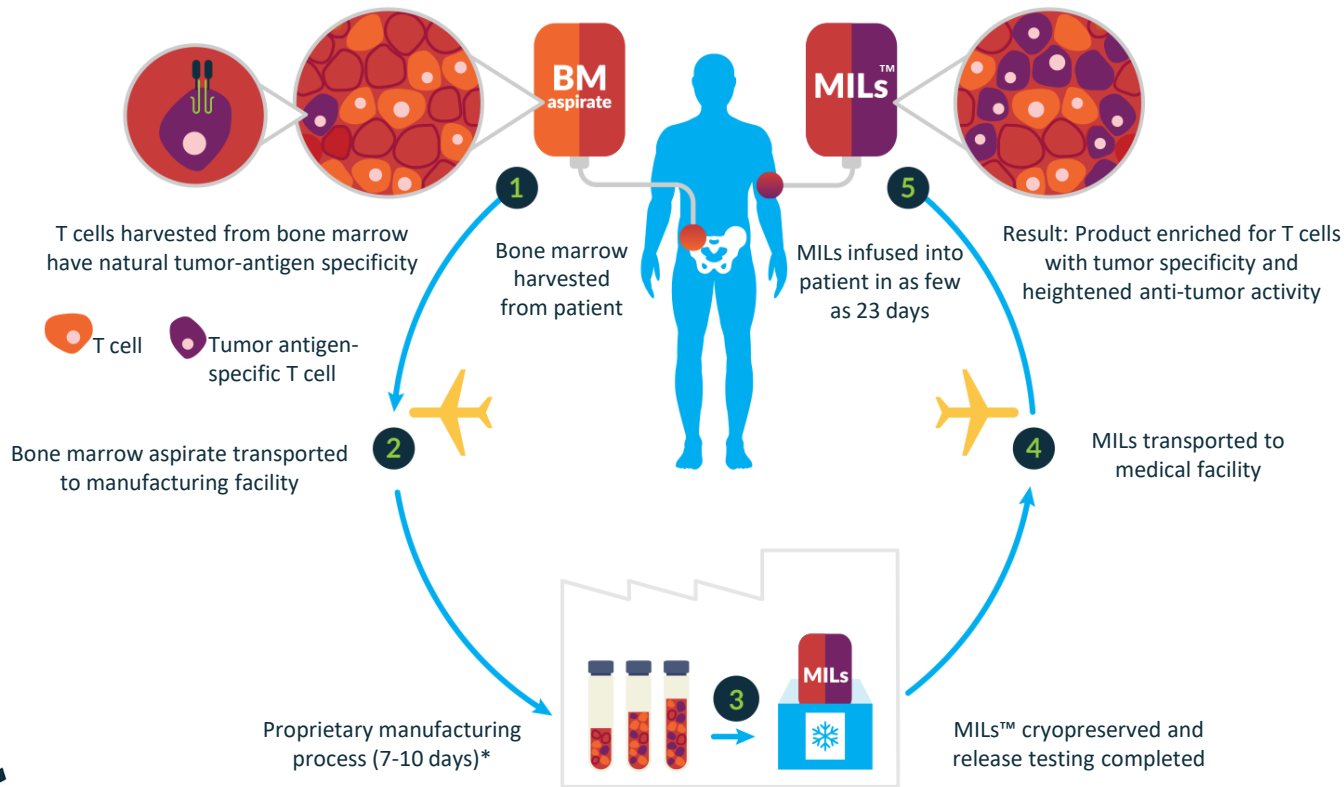
* Investigator-sponsored Phase 0 trials

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WindMIL is the only company that can activate, transform and expand a natural source of tumor-specific, memory T cells found in the bone marrow

MILs™ Manufacturing: Patient-Friendly, Reliable, and Scalable



Patient Friendly:
30-minute outpatient
BMA collection

Reliable:
90%+ manufacturing
success rate with
current Gen 3 process

Scalable:
Cost-efficient
manufacturing plan in
place

MILs™ Compare Positively to TILs

	T Cell Biology		T Cell Collection			Product Manufacturing			Clinical Considerations		
	Antigen Specificity	Phenotype	Source of T cells	Presence of T cells	Ease of Acquisition	Manufacturing Process Time	Culture Cytokine Requirements	Time from Collection to Dosing	Post Infusion Cytokine Requirements	Persistence	Cell Source for CAR-T Therapy
MILs	High	Memory	Bone marrow	100%	Outpatient <i>(exam room bone marrow procedure)</i> Conscious sedation Time: 30 minutes	7-10 days (Gen 3 MILs Process)	Low-dose cytokines	In as few as 23 days	No cytokines	At least 7 years*	Yes
TILs	High	Effector "exhausted"	Tumor	~50%	Inpatient <i>(operating room surgery)</i> Anesthesia Time: hours	16 days (Gen 3 Process)	High-dose IL2	Data not public	IL2 infusions required	Data not public	No

* Noonan et al ASH 2016

MILs™ in Solid Tumors: A Compelling Preclinical Profile

- Immune models indicate a single antigen-specific encounter generates a population of memory T cells
- Memory T cells naturally home to and persist in the bone marrow
- Tumor-specific T cells in bone marrow proven to exist in:
 - Non-small cell lung cancer (NSCLC) ¹
 - Breast cancer ¹
 - Head and neck cancer ²
 - Melanoma ³
 - Other solid tumors ^{4,5,6}

¹ Feuerer et al., Int J Cancer. 2001 Apr 1;92(1):96-105

² WindMIL (unpublished)

³ Letsch et al., Cancer Res. 2003 Sep 1;63(17):5582–5586

⁴ S-Winnenthal et al., Cancer Res. 2005 Nov 1;65(21):10079-87

⁵ Karoline et al., Clin Cancer Res. 2018 June 26; OF1-11

⁶ Fecci et al., Nature Medicine. 2018 Aug 13; 24:1459–1468

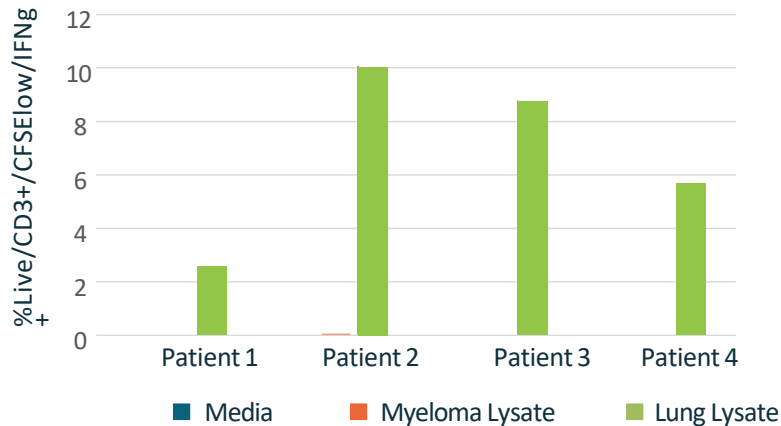
First Solid Tumor Clinical Target: NSCLC

Biological, Clinical, and Regulatory Rationale

Biology

- NSCLC is highly immunologic
- Tumor-specific, memory T cells consistently found in NSCLC patient bone marrow

Preclinical Data Demonstrate MILs™ Specifically Recognize NSCLC Shared Antigens



Clinical

- High unmet medical need -- limited options after progression on PD1-containing regimen
- Open-label study with ORR primary endpoint allows for efficacy 'answer' within 6-12 months

Regulatory

- 30% ORR in PD1 relapsing patients should support discussion of expanded registration trial with FDA

External Perspective

- SAB and KOLs view NSCLC as best initial solid tumor target for MILs

MILs™ + nivolumab Phase 2 NSCLC Study Actively Enrolling

MILs™ safety in NSCLC established; combination therapy portion of the study opened 2Q 2020



- Patients who have progressed on an anti-PD-1 containing regimen (refractory/relapsed)
- Locally advanced and unresectable, or metastatic NSCLC



- Open label, single-arm, multi-center study; 20 patients



- Allows for cohort expansion(s) and rapid transition to a pivotal trial

Study Summary:

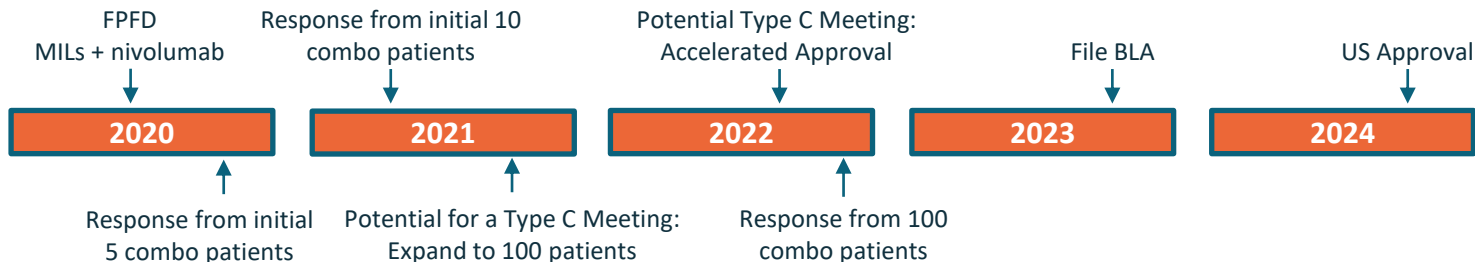
Title: Marrow Infiltrating Lymphocytes - Non-Small Cell Lung Cancer (MILs – NSCLC) Alone or in Combination With Nivolumab in Advanced Unresectable or Metastatic NSCLC

Study ID Number: CLN-P18001

Status: Recruiting

Study PI: Martin Edelman, MD (Fox Chase)

ClinicalTrials.gov Identifier: NCT04069936



Phase 2 NSCLC Study: Current Status

Sites

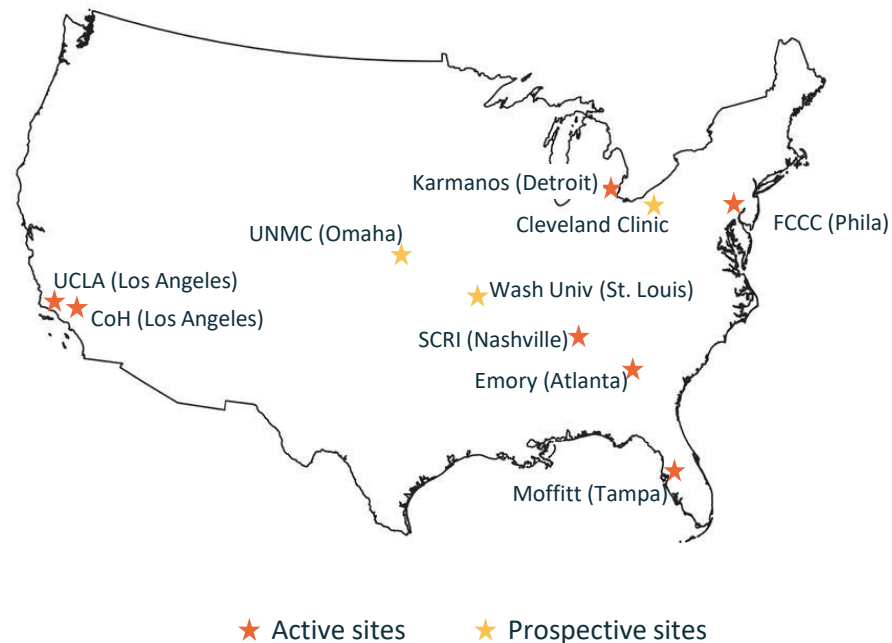
- Seven sites currently active
- Additional sites will become active early Q4

Patients

- First MILs™ / nivo patient dosed May 26
- Second patient dosed Aug 10
- Third patient product manufactured; dosing planned mid-Sept
- Additional patients scheduled for bone marrow collection

Data

- 8-wk data available on patient #1
- Expect response data for 3-5 patients by mid-Q4
- Response data for 20 patients by mid-2021



CAR-MILs™:

Data Show MILs™ to be a Superior Cell Source for CAR T Therapy

Limitations of CAR T Therapies

Antigen escape variants

Suboptimal trafficking

Persistence

Advantages of MILs as a Cell Source for Gene-Modified T Cell Therapy

Retain non-CAR-based tumor specificity through the native TCR

- Remains functional both after transduction and CAR engagement
- Can recognize tumor, even when the CAR's cognate antigen is lost

Home to the tumor site via increased CXCR4 expression

- Expression of SDF-1 in the stroma of solid tumors acts as a beacon for MILs™

Persist over the long term

- MILs are detectable up to 7 years post-infusion (ASH 2016 poster)
- MILs display superior efficacy over repeated challenge (ASH 2019 poster)

Further, at lower effector to target ratios, CAR-MILs are more effective than CAR T therapies derived from peripheral blood lymphocytes ('CAR-PBLs')

WindMIL / University of Pennsylvania CAR-MIL™ Collaboration



- With Penn's Center for Cellular Immunotherapies (CCI), under the direction of Dr. Carl June
- World-class partner to rapidly advance CAR-MIL platform
- Collaboration directly comparing specific CAR-PBL vs. CAR-MIL using novel hematologic and solid tumor CAR constructs
- Leverages Penn and WindMIL expertise, resources and science
- WindMIL retains full control of all rights to CAR-MIL platform

- **Q1 2021:** Preclinical *in vitro* Data: CAR-MIL vs. CAR-PBL (w/ heme and solid tumor CARs)
- **Q3 2021:** Preclinical *in vivo* Data: CAR-MIL vs. CAR-PBL (with selected CAR)
- **2H 2022:** FPF in a CAR-MIL vs. CAR-PBL clinical trial



Research will substantially expand and further validate CAR-MIL preclinical data in advance of comparative clinical trial

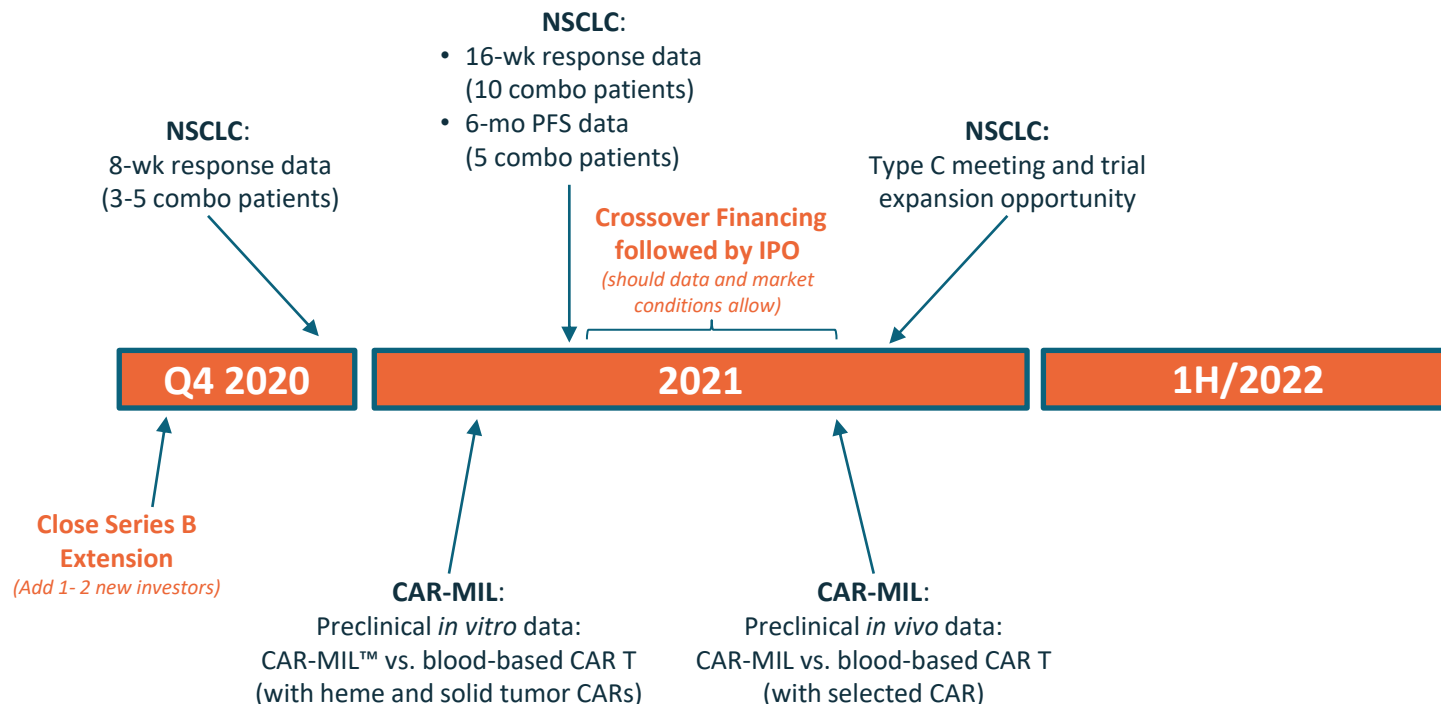
WindMIL Raised \$43.5M in Two Venture Rounds to Support Execution of a Capital Efficient Plan

- \$11M Series A closed Q2 2016
- \$32.5M Series B closed Q2 2018
- Lead investors to date:



- With capital invested to date, WindMIL has:
 - ✓ Developed comprehensive MILs™ preclinical data
 - ✓ Completed Phase 1 and Phase 2 trials of MILs in heme malignancies (100+ patients)
 - ✓ Initiated a Phase 2 NSCLC trial
 - ✓ Developed a robust, scalable manufacturing process; tech transferred to CMO
 - ✓ Developed comprehensive CAR-MIL™ preclinical data
 - ✓ Established initial CAR-MIL partnership

Series B Extension Funds Numerous Value Creating Milestones Building a Strong Foundation For Crossover Financing and IPO in 2021



Additional Materials

Strong IP Position Protects our MILs™ Products and Platform

- Broad IP portfolio on marrow infiltrating lymphocyte products
 - Composition of ex vivo expanded MILs™ products
 - Methods of manufacture / product by process
 - Methods of use, including “method of treating a subject having cancer with MILs” (issued)
- Foundational IP licensed from Johns Hopkins University
 - Includes extensive protection for our 3rd generation manufacturing process
- IP estate broadened and deepened by WindMIL
 - Additional methods associated with manufacture
 - Gene modification of MILs (CAR-MILs™, etc.)
 - Use in patient subpopulations
 - Use in combination

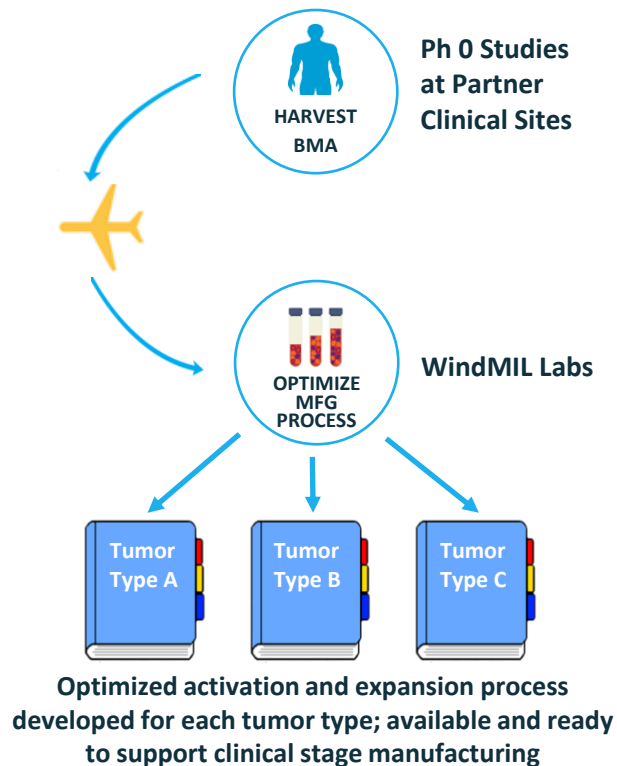
Three issued U.S. patents

Eleven additional patent families with **fourteen** pending U.S. applications

Extensive ex-U.S. filings

MILs™ in other Solid Tumors

Multiple Phase 0 Studies Underway to Ensure Clinical Study Readiness



- WindMIL has initiated multiple Ph 0 Investigator Sponsored Trials to collect bone marrow aspirate (BMA) from patients with various solid tumors
 - Head & Neck (University of Michigan)
 - Breast (Providence Cancer Center, OR)
 - Glioma (University of California, Irvine)
 - Renal and Urothelial (University of Oklahoma)
- BMA collected is used to confirm presence of tumor-specific T cells and optimize the proprietary activation and expansion process for that tumor type
- Phase 0 work ensures WindMIL can move into the clinic rapidly in other solid tumors should a positive signal be seen in NSCLC

Strong, Experienced Management Team

Don Hayden, Jr.

Chairman and Chief Executive Officer

- BMS, REGENXBIO, Inmed, Amicus, Gloucester, Vitae

Pat Fabbio

Chief Financial Officer

- Progenics, NPS, Sanofi

Patrick Dougherty

SVP, Strategy, Planning & Operations

- GSK, L.E.K.

Vashi Patel, PhD

VP, Regulatory and Quality Systems

- Precision for Medicine, Janssen, Elan

Kim Noonan, PhD

EVP & Chief Scientific Officer

- Founder, Johns Hopkins University

Monil Shah, PharmD

Chief Development Officer

- BMS, Celgene, Fibrogen, Amgen, Novartis

Karen LaRochelle

SVP, Corporate & Business Development

- BMS, PsiOxus

Sanjin Zvonić, PhD

VP Product Development & Manufacturing

- PCT / HCATS, Novartis

Experienced Board of Directors

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- Qiming Venture Partners

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- Prostate Cancer Foundation

Anna French, PhD

- Qiming Venture Partners

Daniel O'Donnell

- FO XKISER

Distinguished Scientific Advisory Board

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- Johns Hopkins University

Martin J. Edelman, MD

- Fox Chase Cancer Center

Marcela V. Maus, MD, PhD

- Massachusetts General Hospital; Harvard Medical School

Drew Pardoll, MD, PhD

- Johns Hopkins University

Howard Soule, PhD

- Prostate Cancer Foundation

Jeffrey Weber, MD, PhD

- New York University



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