

NASDAQ: **MEIP**



ME-401: A Highly Differentiated PI3K δ - Selective Inhibitor

June 2017

Forward-Looking Statements

These slides and the accompanying oral presentation contain forward-looking statements. Actual events or results may differ materially from those projected in any of such statements. Additional information concerning factors that may cause actual events or results to differ from those projected is contained in MEI Pharma's most recent annual report on Form 10-K and quarterly reports on Form 10-Q, as well as other subsequent filings with the SEC.

ME-401: A Highly Differentiated PI3K Delta-Selective Inhibitor

ATTRIBUTES

- Distinct chemical structure leads to differentiated binding and saturation of drug target
- Potential for wide therapeutic window and versatility for combination approaches

COMPARED TO IDELALISIB

- >30-fold improvement in on-target binding affinity
- 150-fold greater activity in biological activity
- Potential for a significant improvement in therapeutic window based on exposure margin

ME-401 Selectively Binds PI3K δ

PI3K Isoform	δ	α	β	γ
K_D (M)*	3.03×10^{-11}	1.48×10^{-08}	1.85×10^{-9}	5.29×10^{-9}
Fold Specificity		X488	X61	x175

*Dissociation constant (K_D) of ME-401 binding to purified protein was measured by surface plasmon resonance. A lower K_D indicates tighter binding.

ME-401 Demonstrates Selective Inhibition of PI3K δ

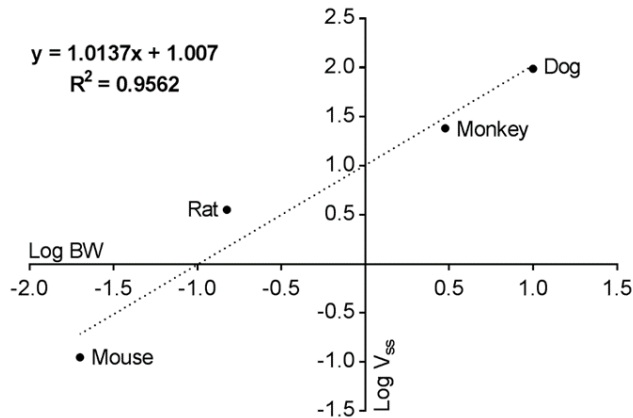
Parameter	ME-401 IC ₅₀ (nM)*			
	PI3K- δ	PI3K- α	PI3K- β	PI3K- γ
n	16	16	21	14
Mean (nM)	≤5	5491	335	2533
Fold Selectivity		>1000	>65	>500

*IC₅₀ values were determined using a biochemical luminescent assay

ME-401 did not significantly inhibit other kinases in the Kinomescan, nor other proteins in broad-spectrum selectivity screening

ME-401: Large Volume of Distribution

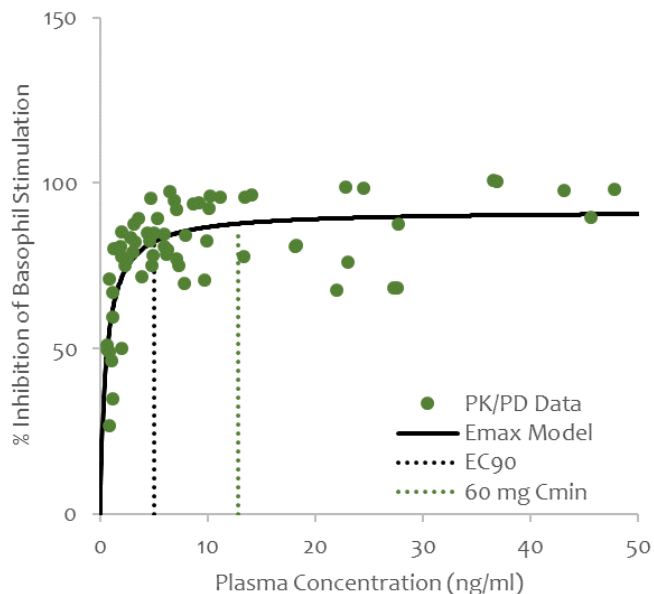
Potential for Better Distribution to Target Tissues



- Log/log plot of body weight (BW) vs volume of distribution at steady state (V_{SS}) from preclinical studies extrapolates to human $V_{SS} \sim 10$ L/Kg
- ME-401 V_{SS} is $\sim 100X$ larger than blood volume, indicating that it readily distributes out of the plasma

ME-401 Demonstrates High Biologic Potency: Results from a Healthy Subject Dose Escalation Study

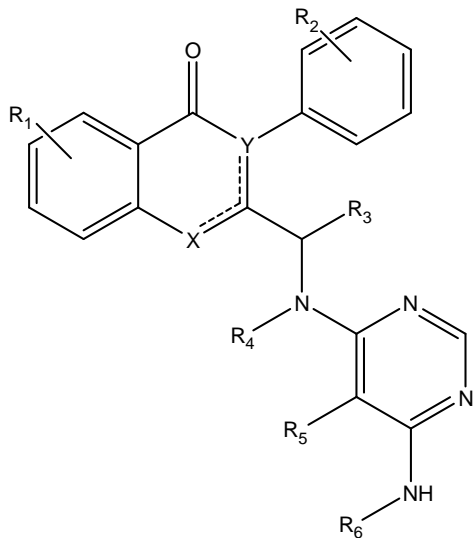
Inhibition of basophil activation (BAT) by FcεR1 antibody



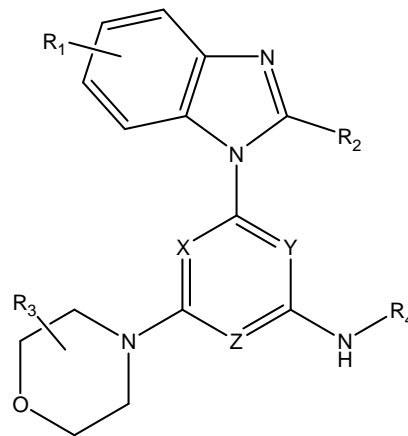
- PK/PD data was fit to E_{\max} model
 - $EC_{50} = 0.6$ ng/ml (1.0 nM)
 - $EC_{90} = 5.2$ ng/ml (8.9 nM)
- Half-life ~ 28 hours
- Daily dosing of 60 mg to patients resulted in trough levels (C_{\min}) above the EC_{90}

ME-401: New Structural Class of PI3K δ Inhibitor

Zydelig, Duvelisib & TGR-1202



ME-401



ME-401 Demonstrates Higher Avidity and Biologic Activity for PI3K δ Compared to Idelalisib

Binding kinetics to isolated protein measured by surface plasmon resonance:

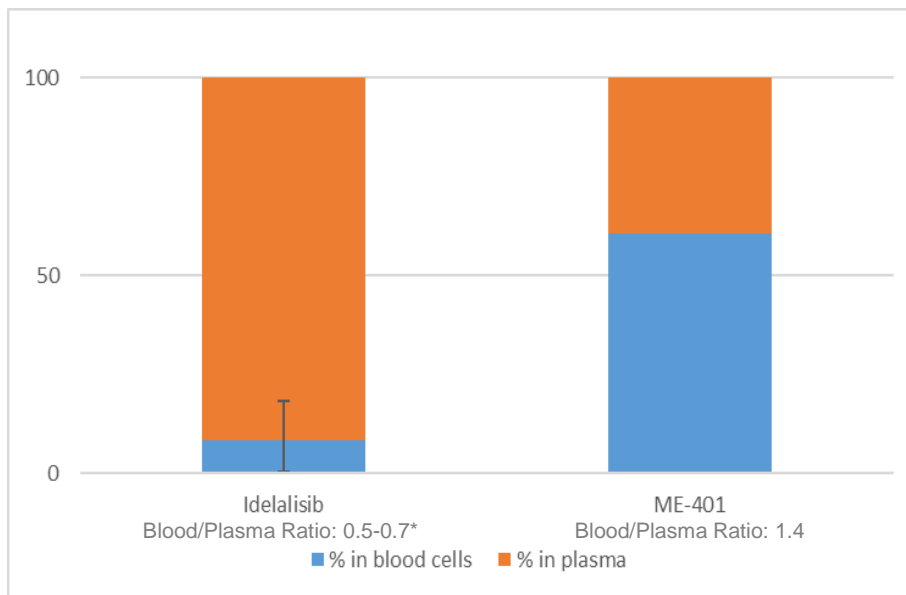
Compound	k_a (1/Ms)	k_d (1/s)	K_D (M)	$t_{1/2}$
ME-401	1.72×10^6	5.20×10^{-5}	3.03×10^{-11}	3.7 h
Idelalisib	6.53×10^6	7.25×10^{-3}	1.11×10^{-9}	1.6 min

Inhibition of basophil activation, a marker for PI3K- δ inhibition, in humans:

Compound	BAT Inhibition	
	EC_{50} (nM)	EC_{90} (nM)
ME-401	~1 nM	8.9 nM
Idelalisib	150 nM	>500 nM

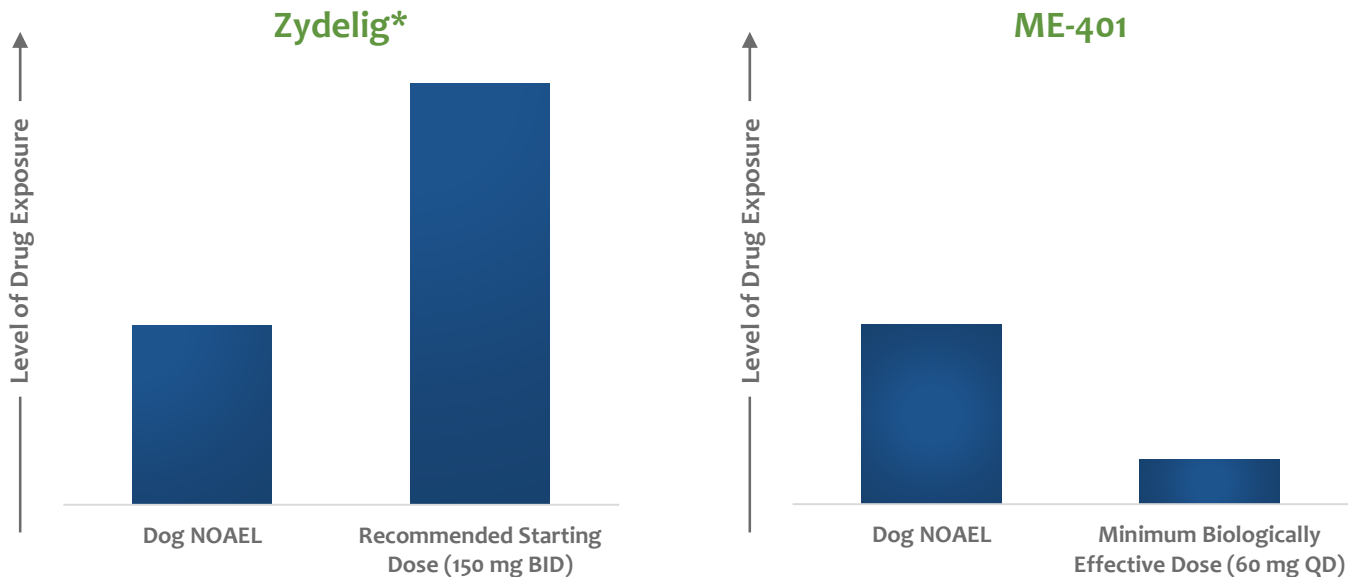
ME-401: Superior Drug Distribution to Blood Cells

% of drug in plasma vs blood cells based on blood/plasma ratios



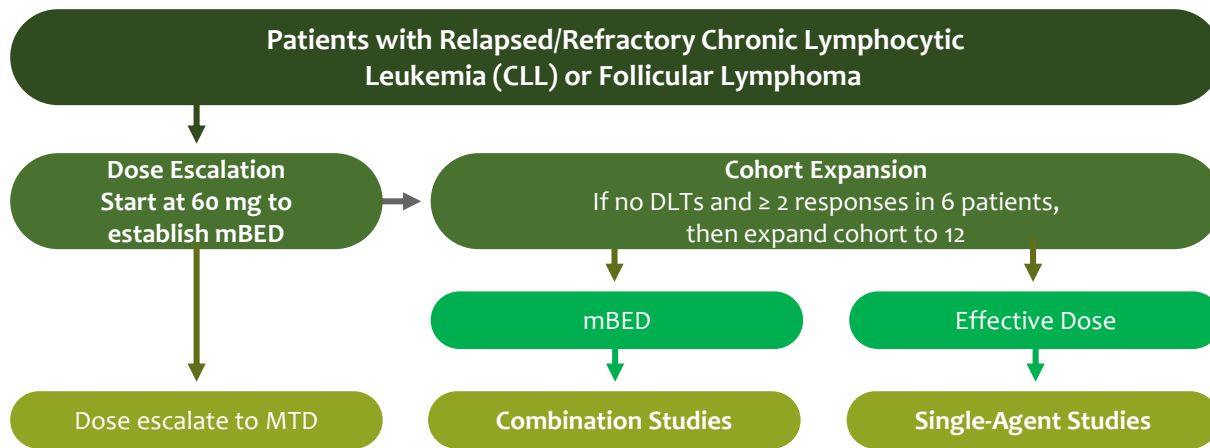
ME-401: Pre-Clinical & Clinical Data Suggest Wide Therapeutic Window

Exposure (AUC) in humans vs. No Observed Adverse Effect Level (NOAEL) in dogs



* Source: CHMP assessment report

ME-401: Phase Ib Dose-Escalation Study



Key objectives:

- Minimum Biologically Effective Dose (mBED)
- Effective Dose
- Maximum Tolerated Dose (MTD)

Key eligibility:

- Relapsed/refractory CLL or follicular lymphoma
- No prior therapy w/ PI3K δ inhibitors
- No prior therapy w/ BTK inhibitors unless intolerant of BTK therapy

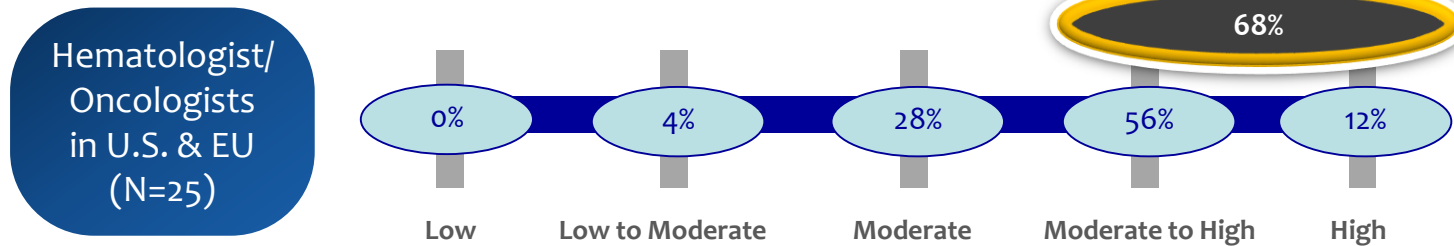
Preliminary Safety and Efficacy Results in Ph1b

6 evaluable patients with relapsed/refractory CLL and FL

- Pre-specified response rate exceeded
- Minimum biologically effective dose established at 60 mg once/daily
 - mBED = Safe dose with a minimum of 3 responses out of 6 patients
- Patients have been on study for a minimum of 10 weeks (10-28 weeks)
- No reports of ALT/AST elevation, colitis or pneumonitis
 - One patient experienced grade 3 neutropenia
 - All other drug-related adverse events were grades 1 and 2
- Dose escalation to 120mg once/daily recommended

Current Role of Idelalisib in Follicular Lymphoma*

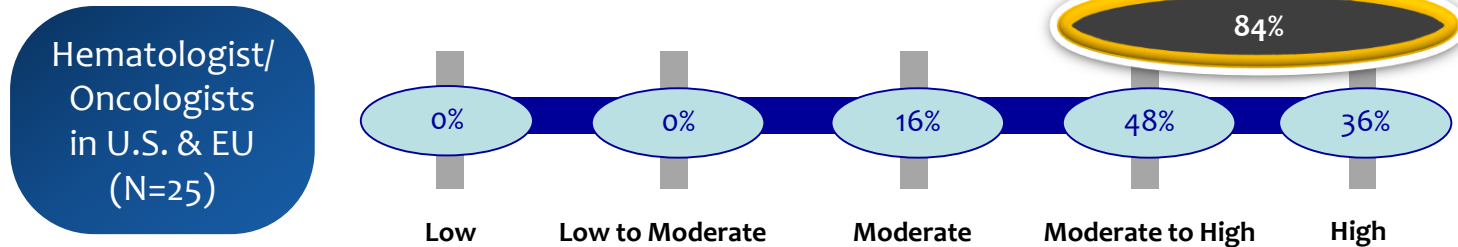
Importance of idelalisib (Zydelig[®]) in treating/managing relapsed/refractory follicular lymphoma patients



* Source: MEI Pharma Primary Market Research

Clinicians' Interest in a Potentially Safer & Efficacious PI3K δ Inhibitor in Follicular Lymphoma*

Viability of Product X for relapsed/refractory follicular lymphoma patients if available with the profile presented



* Source: MEI Pharma Primary Market Research

Straightforward CMC & Intellectual Property

CMC

- Drug Substance:
 - 4-step scalable GMP process, no special needs
 - Stable at room temperature
- Drug Product:
 - Straightforward formulation and process, GRAS excipients
 - Stable at room temperature

Intellectual Property

- 2 issued U.S. patent
 - 1 U.S. and 21 foreign applications pending
- Composition of matter to **December 2032** in U.S., excluding patent term restoration

Future Plans

ME-401

- ✓ Safety & efficacy data from first cohort of Phase 1b study in CLL & follicular lymphoma
- ✓ Established mBED/effective dose at 60mg once/daily
- Safety & efficacy data from dose escalation and expansion cohorts in Phase 1b study (December)
- ME-401 combination studies

NASDAQ: **MEIP**



Corporate Development

David Urso, JD
(858) 369-7126
urso@meipharma.com

Investor Relations

Pete De Spain
(858) 369-7104
pdespain@meipharma.com