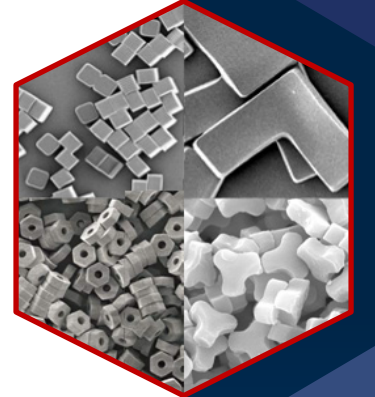




Corporate Overview

October 2019



Forward-Looking Statements

This presentation includes, and our response to various questions may include, forward-looking statements. All statements contained in this presentation other than statements of historical facts, including statements regarding our future results of operations and financial position, our business strategy and plans and our objectives for future operations, are forward-looking statements. The words “anticipate,” “believe,” “continue,” “estimate,” “expect,” “intend,” “may,” “will” and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives and financial needs. These forward-looking statements, including statements regarding clinical trials, clinical studies and other clinical work (including the funding therefor, anticipated patient enrollment, safety data, study data, trial outcomes, timing or associated costs), regulatory applications and related timelines, including the filing of an NDA for LIQ861, are subject to a number of risks, uncertainties and assumptions. Moreover, we operate in a very competitive and rapidly changing environment and our industry has inherent risks. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, achievements or events and circumstances reflected in the forward-looking statements will occur. We are under no duty to update any of these forward-looking statements after the date of this presentation to conform these statements to actual results or revised expectations, except as required by law. This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk. This presentation includes long-term goals that are forward-looking, are subject to significant business, economic, regulatory and competitive uncertainties and contingencies, many of which are beyond the control of us and our management, and are based upon assumptions with respect to future decisions, which are subject to change. Actual results will vary and those variations may be material. Nothing in this presentation should be regarded as a representation by any person that these goals will be achieved and we undertake no duty to update our goals.

Novel products via precise control of drug particles

Late-stage clinical biopharmaceutical company focused on transforming the lives of patients

Preparing NDA

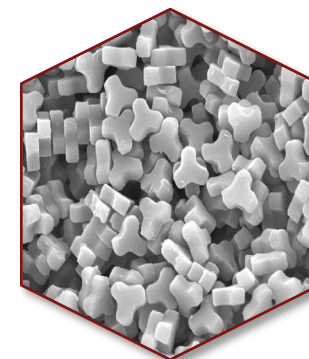
- LIQ861: inhaled dry powder targeting segment of PAH market (\$3.7B U.S.)
- Completed clinical program and preparing NDA submission

Pipeline Growth

- LIQ865: to manage local, post-operative pain for 3-5 days (Phase 1)
- Poised to expand PRINT Technology advantages into future products



Proprietary Technology

- Broadly applicable across therapeutic areas, modalities and routes of delivery
- Fully scaled PRINT[®] platform offers multiple product advantages



LIQ861

Pipeline

Product	Indication	Formulation & Route	Phase 1	Phase 2	Phase 3	Next Key Milestone	Worldwide Commercial Rights
LIQ861 ¹	PAH	Dry powder inhalation				Submit NDA early 1Q20	Liquidia
LIQ865	Local, post-operative pain	Sustained-release injectable				Phase 2 ready end of 2019	Liquidia

1. After consultation with the FDA, we advanced from a Phase 1 trial directly to a pivotal Phase 3 trial and will seek approval under the 505(b)(2) pathway.

Seasoned team with relevant commercial and disease area expertise



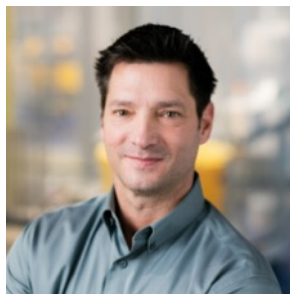
**Neal
Fowler**

**Chief Executive
Officer**



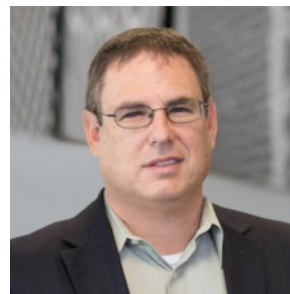
**Richard
Katz, MD**

**Chief Financial
Officer**



**Robert
Lippe**

**Chief Operations
Officer**



**Robert
Roscigno,
PhD**

**Senior VP
Product Dev**



**Ben Maynor,
PhD**

**Senior VP
R&D**



**Jeri
Thomas**

**Senior VP
Commercial**

Management Employment History Highlights



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL



LIQ861 for PAH

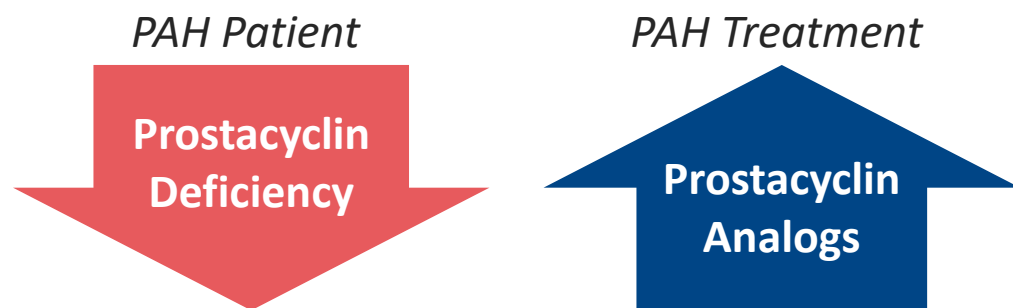
PRINT[®] treprostinil, dry powder inhalation

PAH is a rare, progressive disease that results in right heart failure

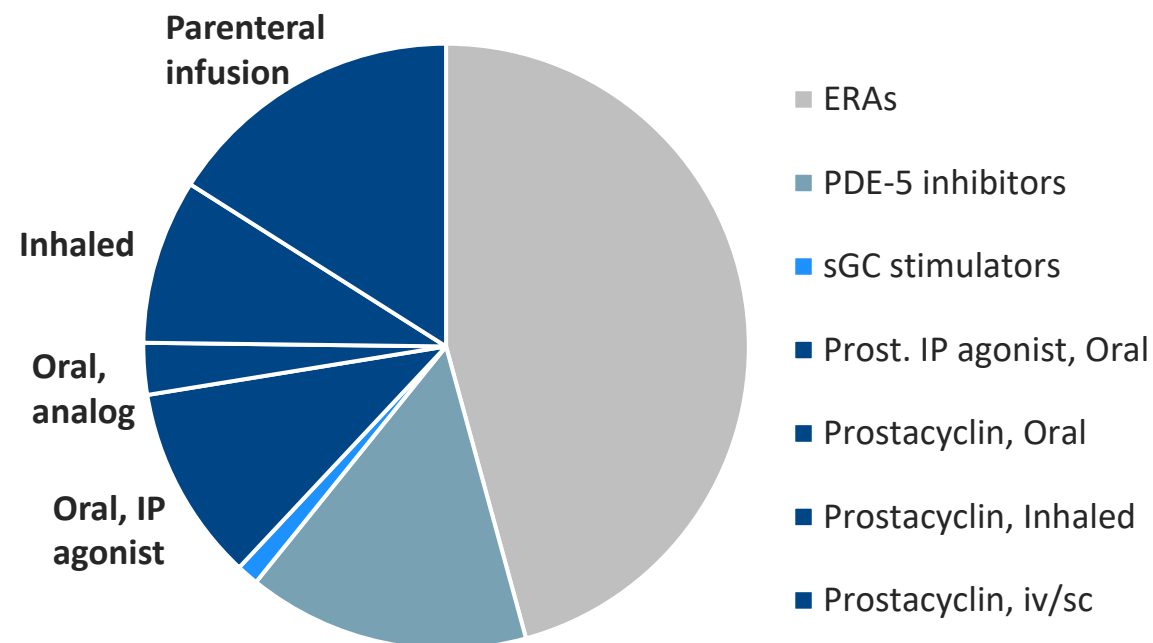
Abnormal changes in arteries of the lungs increase pressure in pulmonary arteries

Prostacyclin is essential to normal lung function

- Continually released by lungs to bind local receptors
- Vasodilates the pulmonary arteries
- Relaxes smooth muscle
- Inhibits platelet aggregation



\$1.4B of \$3.7B market in prostacyclin pathway in 2017



Goal of prostacyclin therapy is to maximize exposure to highest tolerable level

Local delivery generates fewer off-tissue effects



Current prostacyclin products have clear tradeoffs

Oral = Convenient, but *with systemic toxicities and minimal symptom relief*

- Increases side effects in GI, Nervous and Vascular systems
- Requires up-titration that can be challenging given side effects

Nebulized = Targeted, but *provides limited dose range*

- Limits max dose due to throat irritation, adverse events
- Requires water, power, supplies, cleaning and time to dose

Infusion = Effective, but *systemic toxicities & site pain, limits on lifestyle*

- Delivers continuously via i.v. or s.c. line, 24 hours a day
- Poses potential for infection risk

Choice of inhaled options is driven by convenience

Tyvaso® share was over 80% of the U.S. inhaled patient population in 2017



- **4x daily**, titrated to target of **54 mcg/dose (9 breaths)**, the maximum recommended dose in label
- Most common AEs - **cough**, headache, nausea, dizziness, flushing, **throat irritation, pharyngolaryngeal pain**, diarrhea
- **Wash daily** in warm soapy water (mouthpiece assembly and filter shells)
- **Proprietary nebulizer + 13 additional accessories** listed in patient starter kit

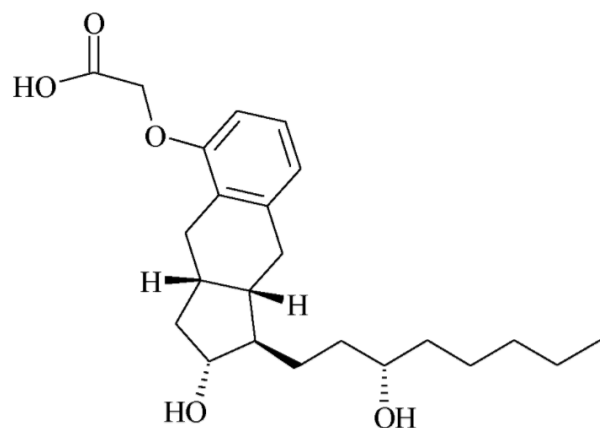


- **4-10 mins, 6-9x daily**, titrated to target of **5 mcg/dose**
- Most common AEs - flushing, **cough**, headache, trismus, insomnia, nausea, hypotension, vomiting, alkaline phosphatase increased, flu syndrome, back pain, tongue pain, palpitations, syncope, GGT increased, muscle cramps, hemoptysis, pneumonia
- **Wash after each use** in warm soapy water & **boil weekly**
- **Proprietary nebulizer + 10 additional spare parts** listed in patient user guide

LIQ861 combines Effective + Targeted + Convenient into one product

Treprostinil = Proven efficacy

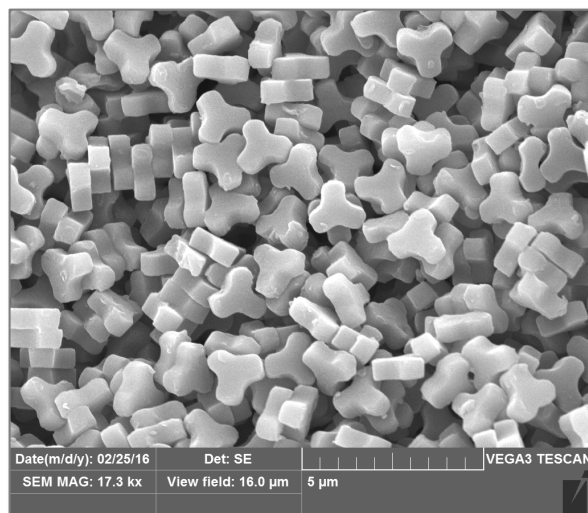
Trusted prostacyclin-analog



Proven compound with FDA approvals for i.v., s.c., inhaled and oral routes

PRINT® = Deep-lung delivery

Precise, Uniform, Trefoil



Delivers higher dose levels than approved inhaled formulations

Device = Simple, Disposable

Disposable & long track record



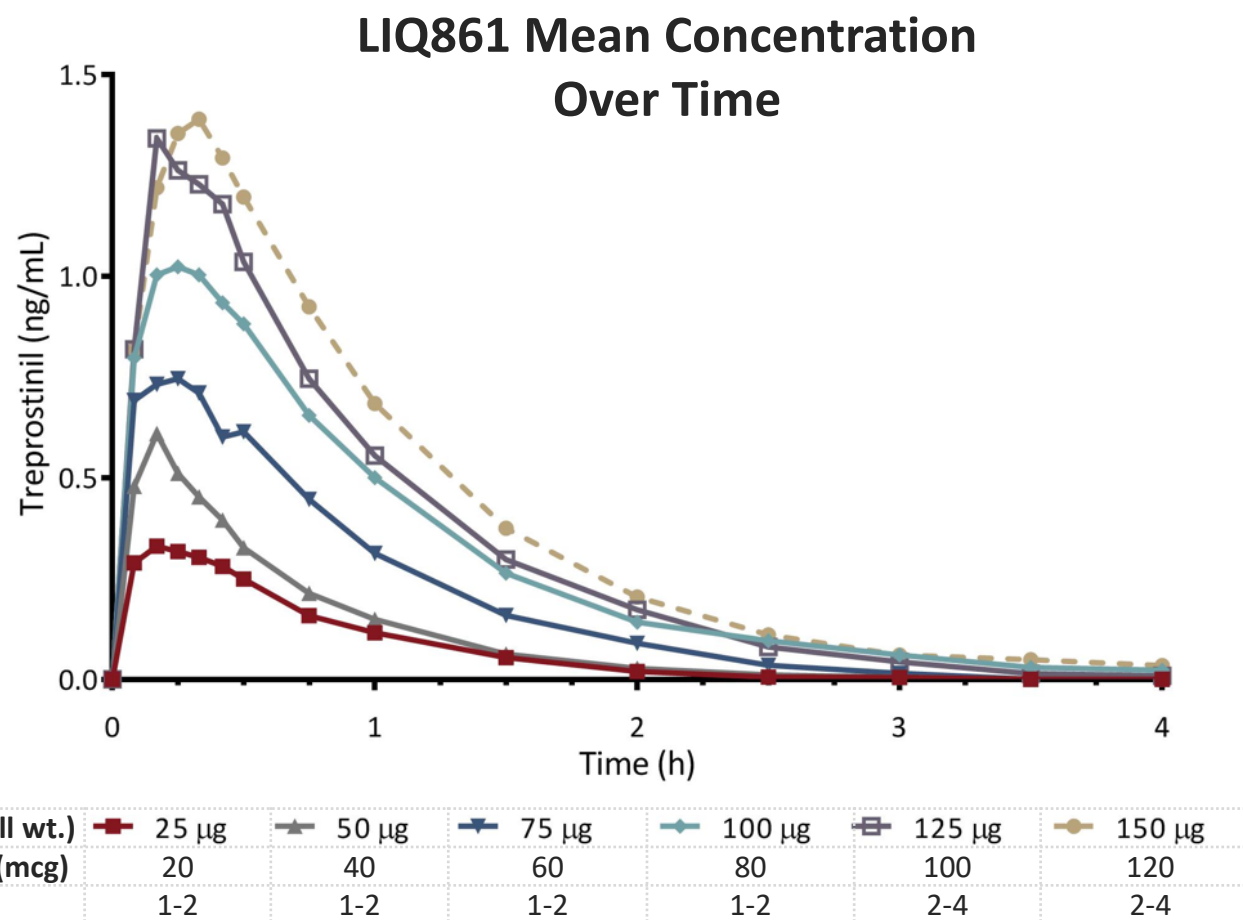
RS00 Model 8 (DMF # 18418)

Compact, easy inhaler with established commercial track record

LIQ861 well-tolerated in Ph1 with no reported SAEs, no MTD reached

Results supported moving directly to pivotal study

- n=57 healthy volunteers
- Single, ascending dose
- Dose proportional response
- No dose-limiting toxicities
- TEAEs related to treatment were mild
- No SAEs
- No MTD was reached



Sources: Ph 1 study design: 57 subjects enrolled; 43 on LIQ861, 14 on placebo; each cohort = 8 subjects in 3:1 ratio (LIQ861:placebo) – randomized, placebo-controlled; Royal M, Roscigno R, et al. Preclinical and Phase 1 Clinical Characterization of LIQ861, a New Dry Powder Formulation of Treprostinil [\[poster\]](#). In: PVRI Annual World Congress; 2018 January 21-24; Singapore, Asia.; treatment Emergent Adverse Event (TEAE), Serious Adverse Event (SAE), Maximum Tolerated Dose (MTD)

After consulting FDA, initiated Phase 3 INSPIRE pursuant to 505(b)(2)

Investigation of the Safety and Pharmacology of Dry Powder Inhalation of Treprostinil

Design	<ul style="list-style-type: none">• Open-label, U.S. multicenter
Population	<ul style="list-style-type: none">• At least 100 WHO Group I (PAH) patients; NYHA Class II, III and IV
Criteria	<ul style="list-style-type: none">• On stable dose of Tyvaso® for ≥3 months (or) taking ≤2 approved non-PGI oral PAH therapies
Primary endpoint	<ul style="list-style-type: none">• Incidence of TEAEs and SAEs at 2 months
Exploratory endpoints	<ul style="list-style-type: none">• 6 minute walk distance (6MWD)• Sustained treatment transition (Tyvaso® transitions)• NYHA functional class improvement• Quality of life using Minnesota Living with Heart Failure Questionnaire (MLHFQ)
PK Sub-Study¹	<ul style="list-style-type: none">• Transitions from Tyvaso® in a one-directional crossover to compare bioavailability and PK
Data collection	<ul style="list-style-type: none">• Baseline, Week 2, Month 1, Month 2 Visits, with bimonthly follow up for up to 30 months

 **We will continue to treat patients and collect data in a roll-over safety study**

Sources: <https://clinicaltrials.gov/ct2/show/NCT03399604>; PGI – prostacyclin; TEAEs – treatment-emergent adverse events; SAEs – serious adverse events; Quote from Nicholas Hill, MD, Chief Pulmonary, Critical Care & Sleep Division and Professor of Medicine at Tufts University School of Medicine and INSPIRE Principal Investigator.

1. Adjusting dose levels to comparable Tyvaso® emitted dose

Enrollment suggests LIQ861 is attractive across disease severity

Faster than expected enrollment driven primarily by interest from Functional Class II add-on patients

		No. Subjects (% of Study) at Month 2 timepoint*		
		Tyvaso® Transitions (N=44)	LIQ861 Add-Ons (N=65)	Overall (N=109)
NYHA Functional Class at Screening	Class II	36 (82%)	36 (55%)	72 (66%)
	Class III	8 (18%)	29 (45%)	37 (34%)
Sustained Therapy at Month 2^		42 (95%)	59 (91%)	101 (93%)

► Suggests that LIQ861 may have utility as a first-line prostacyclin

*Preliminary data from INSPIRE at Month 2; ^Patient withdrawals due to: Adverse Events, Patient Choice, Investigator Decision, Lost to Follow Up; no withdrawals due to clinical worsening

LIQ861 met primary endpoint at Month 2 in pivotal INSPIRE study

TEAEs observed are consistent with inhaled prostacyclins

- No SAEs related to LIQ861 at Month 2
- TEAEs in $\geq 4\%$ patients all mild to moderate
- Have not yet reached an MTD
 - At Month 2, dosed up to 150mcg capsule strength^
- 93% of patients completed 2-months*
- Most TEAEs observed during first 2-weeks
- Most TEAEs in Add-On patients at 25mcg
- Positive trends in exploratory endpoints from initial data at Month 2

TEAEs at Month 2* in $\geq 4\%$ of Patients Receiving LIQ861	LIQ861 (tresprostinil)		
	Transitions (n=44)	Add-ons (n=65)	All Treated (n=109)
Cough	13.6%	46.2%	33.0%
Headache	20.5%	16.9%	18.3%
Throat irritation	9.1%	16.9%	13.8%
Dizziness	9.1%	10.8%	10.1%
Diarrhea	4.5%	10.8%	8.3%
Oropharyngeal pain	2.3%	7.7%	5.5%
Nausea	4.5%	6.2%	5.5%
Dyspnea	6.8%	4.6%	5.5%
Flushing	2.3%	7.7%	5.5%
Chest discomfort	2.3%	6.2%	4.6%

*Preliminary data from INSPIRE at Month 2; Serious Adverse Events (SAEs); Treatment Emergent Adverse Events (TEAEs) deemed related to LIQ861; Maximum Tolerated Dose (MTD)

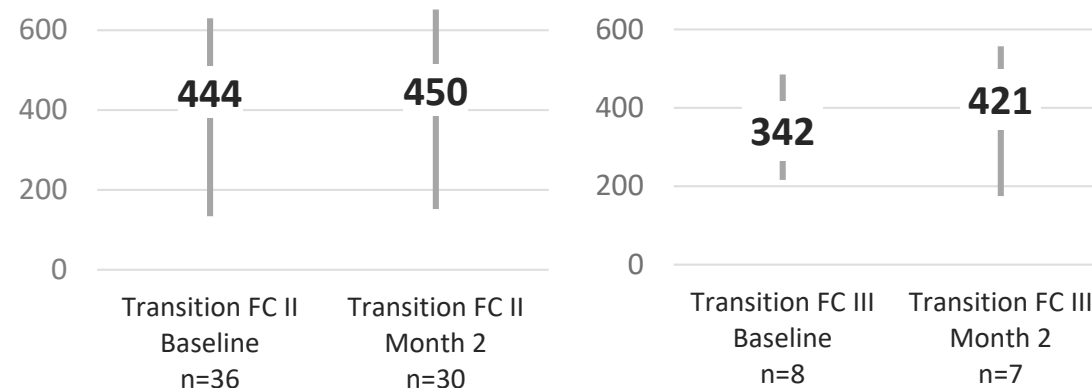
^LIQ861 capsule strength doses 125 mcg and 150 mcg are two capsules but if approved, they could be developed as single capsules.

Transitioning to LIQ861 may build on known benefits of inhaled treprostinil

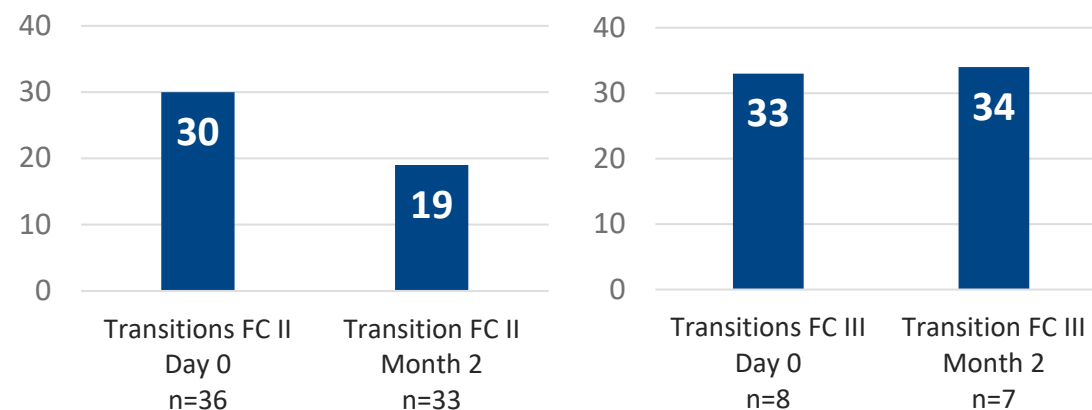
Exploratory endpoints presented at ISHLT 2019 and ATS 2019

Tyvaso Transitions	NYHA Class II	NYHA Class III
Physical Activity 6MWD	Maintained	Increased
Quality of Life MLHFQ	Improved	Maintained

Median
6MWD
meters



Median
MLHFQ
QOL
score



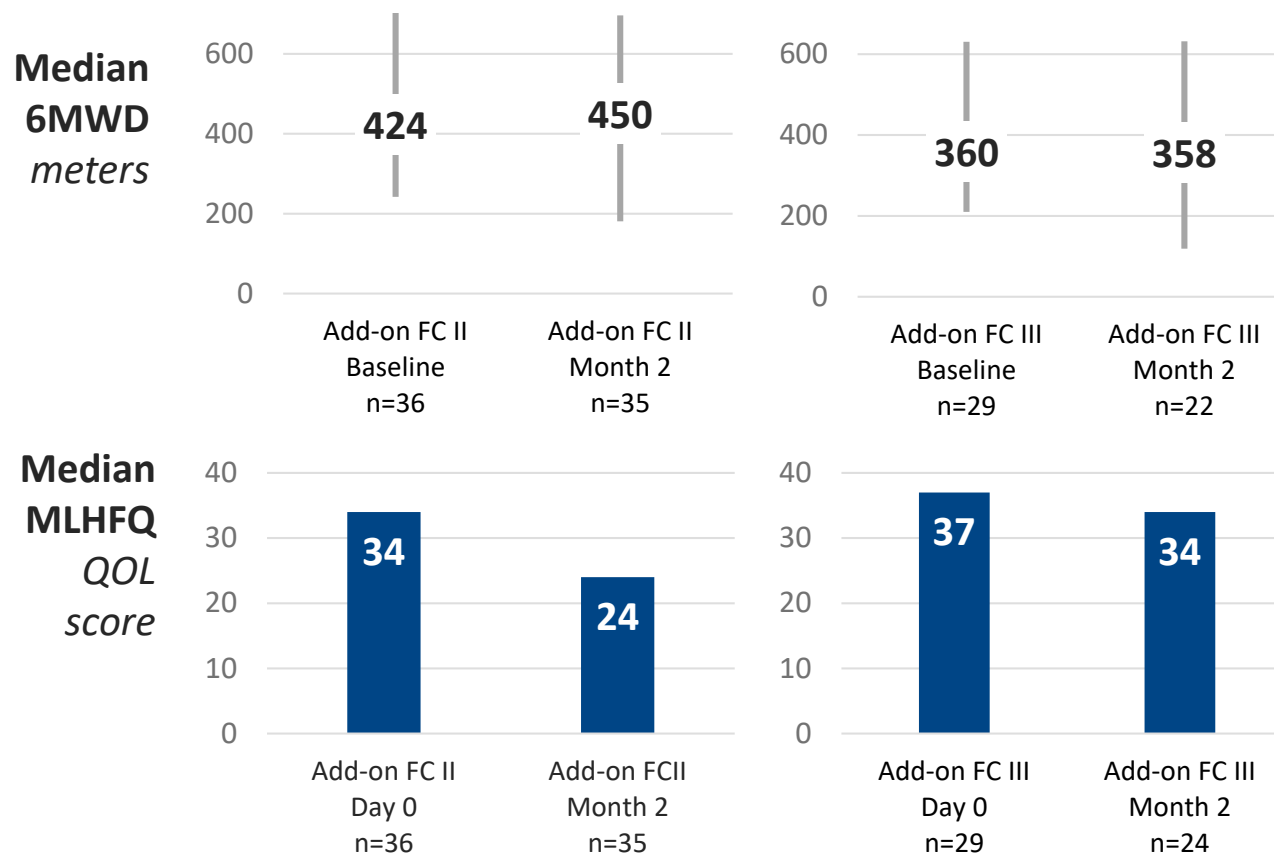
A five (5) point change in score is the minimal clinically important difference

*Preliminary data from INSPIRE at Month 2; Minnesota Living with Heart Failure Questionnaire (MLHFQ); 6 Minute Walk Distance (6MWD); Quality of Life (QoL)
 ISHLT 2019 Presentation: Hill N. S., et al. INSPIRE: A Phase 3 Open-Label, Multicenter Study to Evaluate the Safety and Tolerability of LIQ861 in Pulmonary Arterial Hypertension (PAH)
 ATS 2019 Poster: Hill N. S., et al. INSPIRE: A Phase 3, Open-Label, Multicenter Study to Evaluate the Safety and Tolerability of LIQ861 in Pulmonary Arterial Hypertension (PAH)

Adding LIQ861 as first prostacyclin earlier in disease may be a viable option

Exploratory endpoints presented at ISHLT 2019 and ATS 2019

Add-on patients	NYHA Class II	NYHA Class III
Physical Activity 6MWD	Increased	Maintained
Quality of Life MLHFQ	Improved	Maintained

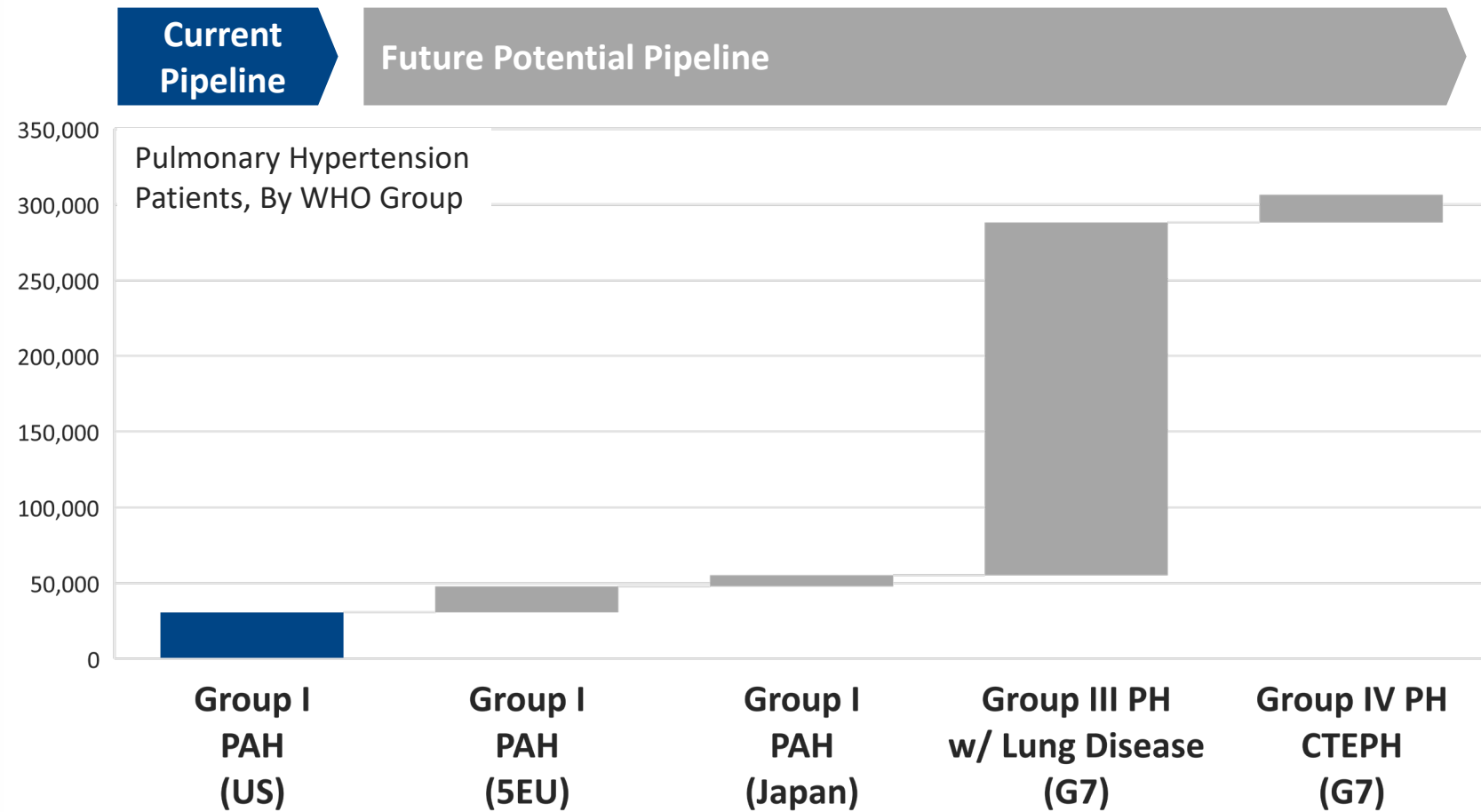
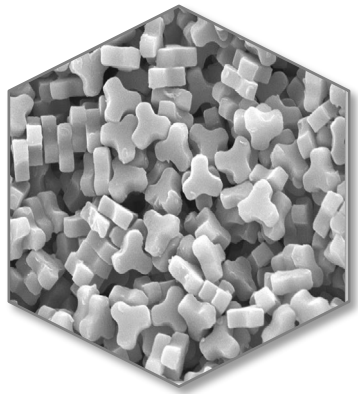


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LIQ861 = Pipeline in a PRINT[®] particle

Potential addressable PH patient populations over time



LIQ865 for Local Post-Operative Pain

PRINT[®] bupivacaine, sustained-release injectable

Significant unmet medical need for extended, non-opioid pain relief

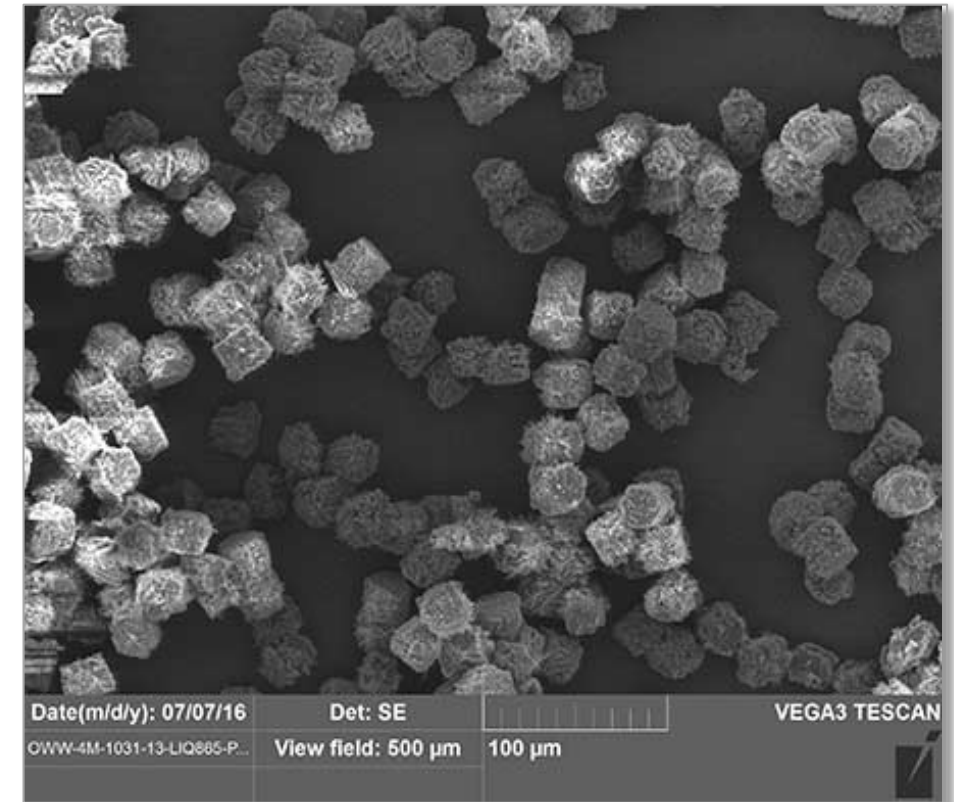
- ~50%+ of patients report inadequate local post-operative pain relief
- Reducing opioids is a priority for hospitals, payors and FDA
- Improved pain relief and reduced opioid use can drive key metrics, such as faster recovery and time to discharge
- Local anesthetics have known efficacy profile but are limited to 8 hours
- EXPAREL® demonstrates demand for longer acting relief
 - Provides 24-36 hours as reported in practice
 - Generated \$331M in 2018 net sales and reportedly used in ~5M patients to date
- Physicians desired 3 to 5 days of pain relief in market research



LIQ865 offers the potential for an optimal product profile

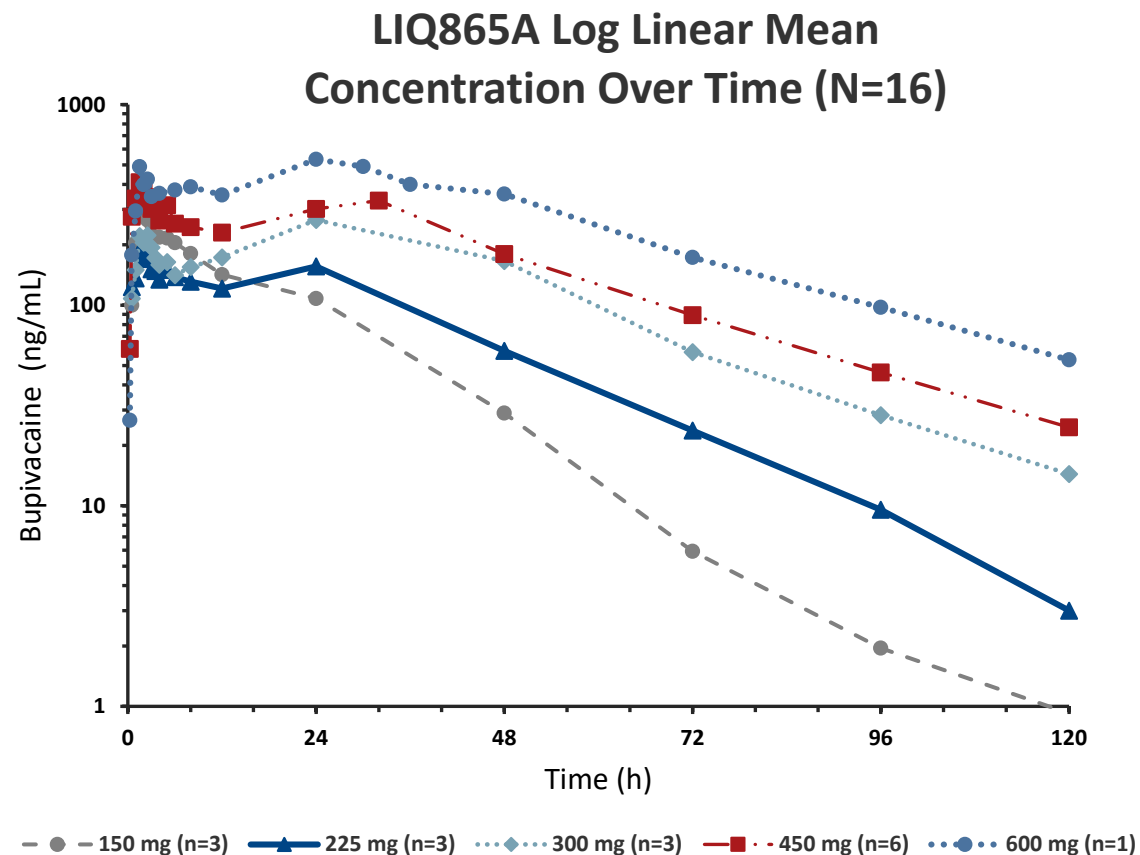
- **Target 3 to 5 days duration of action**
 - Supported by PK & PD data from Ph 1 studies
- **Simple, uniform particles of a single active**
 - Easy reconstitution from a powder
- **Flexible application at the surgical site**
 - Adjustable concentration range to deliver the dose
 - Enables instillation or injection around incision
- **Limited potential for dose dumping**
 - Compatible with co-administration of instant-release local anesthetics

LIQ865: Bupivacaine + PLGA blend



LIQ865 was well-tolerated at all doses with dose proportional PK in Ph1

- Ph1a, healthy volunteers in Denmark
- Single, ascending dose
- No dose-limiting toxicities
- All adverse events were mild to moderate
- C_{max} well below reported thresholds for neurotoxicity and cardiotoxicity
- QST demonstrated pharmacodynamic effect for up to 5 days

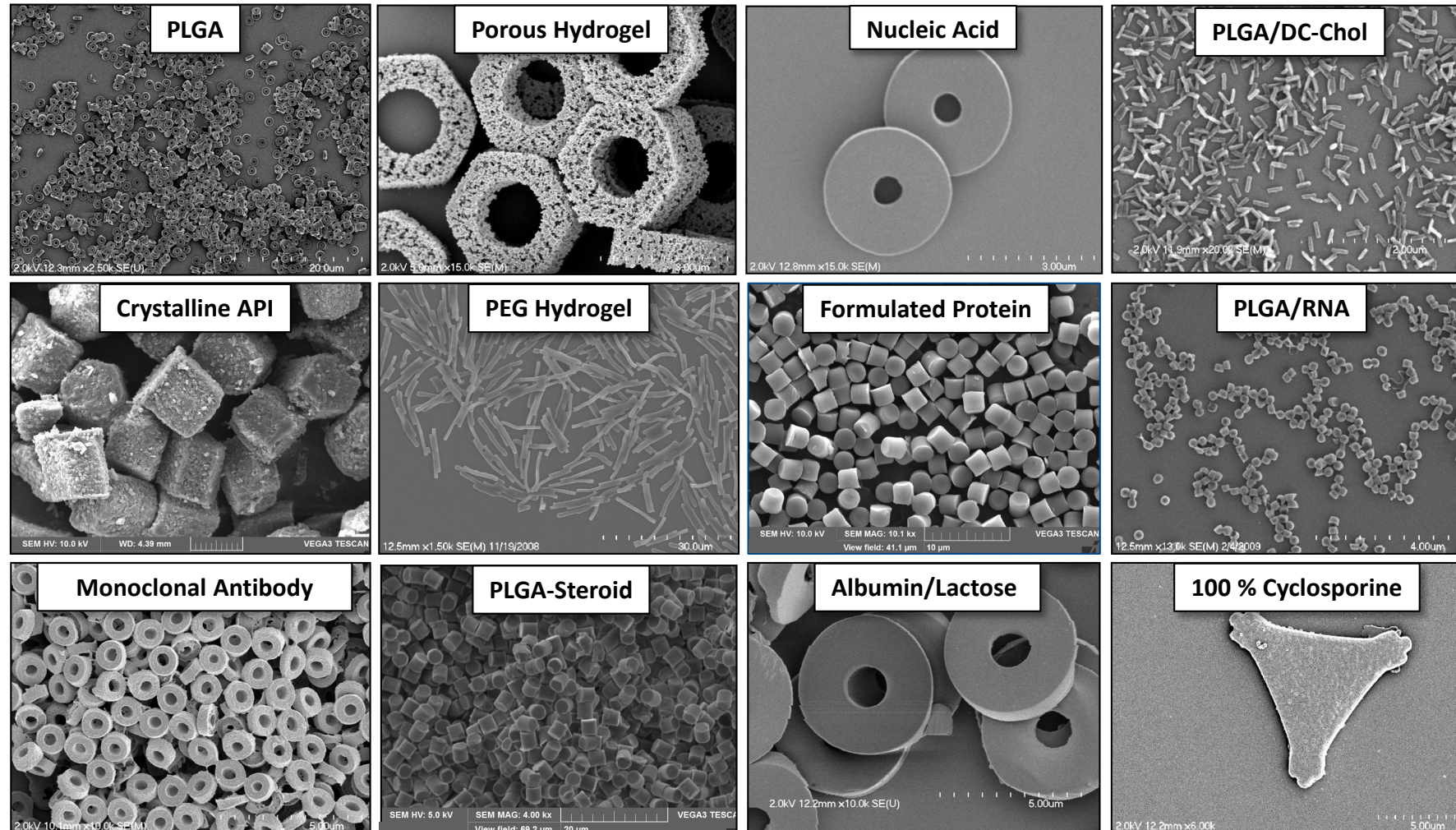


► Initiated Phase 2-enabling tox studies in March 2019 with Phase 2 trials planned for 2020

PRINT® Technology

Compatible with nearly any material, payload and route of delivery

Examples, not exhaustive



PRINT[®] production has been scaled for clinical and commercial demands

Preclinical and R&D *Highly versatile, flexible*



Lab Line 2 (2008)

- Highly agile platform enabling process experimentation
- Ideal for early stage process development

cGMP Process Development *Optimization, scale-up*



Lab Line 3 (non-cGMP 2015; cGMP 2017)

- Capable of larger batches with increased process control
- We believe Lab Line 3 is fully cGMP compliant to support product launch

cGMP Production *Repeatable and deployable*



Commercial Line 1 (expected 2019)

- Optimized drug substance production process
- Designed for continued market supply and scale

Conclusion

2019 Milestones

Milestone	Anticipated Timing	
Report LIQ861 Ph 3 two-week safety data from INSPIRE trial	1Q:2019	✓
Report LIQ861 Ph 3 primary endpoint from INSPIRE trial	1Q:2019	✓
Initiate LIQ865 Ph 2-enabling tox studies	1Q:2019	✓
Conduct pre-NDA CMC meeting with FDA	3Q:2019	✓
Report LIQ861 final PK results from healthy volunteer study	4Q:2019	
Conduct pre-NDA Clinical/Non-Clinical meeting with FDA	4Q:2019	
Target NDA submission to the FDA for LIQ861	Early 1Q:2020	



Thank You

