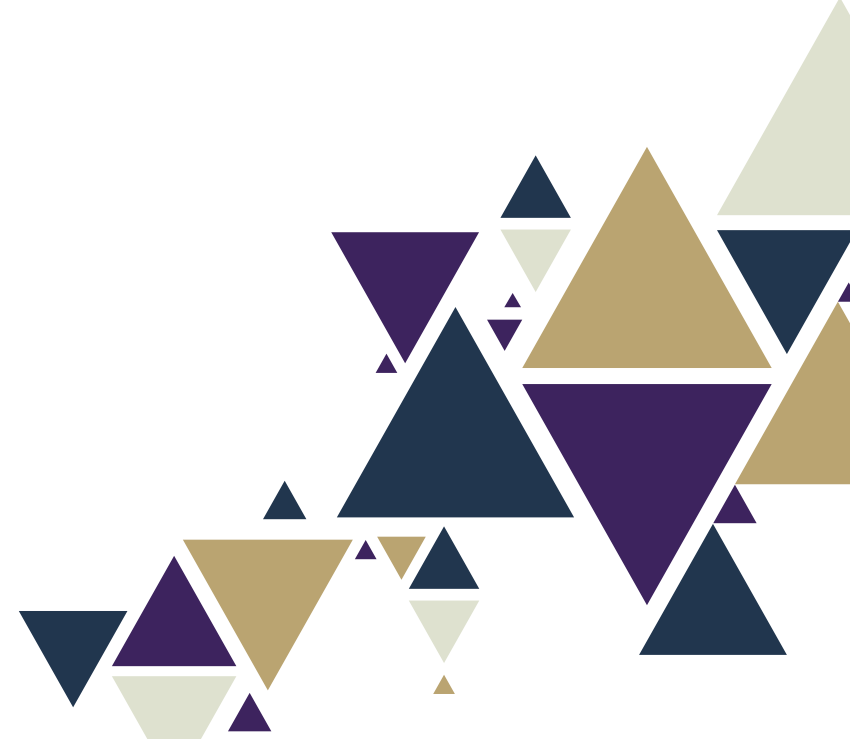


# aero therapeutics

**Every breath matters.**





# Aero Therapeutics

## Leadership



Jamison Langguth MPH, MSED  
CEO & Co-founder



Alex Woods MD, MPH, BSE  
VP Business & Clinical Dev.



## Scientific and Clinical Advisory



Anjelica Gonzalez PhD  
Co-founder



Sten Vermund MD, PhD, DRPH



Wally Carlo MD



## Regulatory Advisory



Brian Harvey MD, PhD



Jun Chen MBA  
Business Development



Teresa Saraswati  
Business Development



Vatsal Patel M.Sc  
Engineering Team Lead



Nathaniel Boyd  
Preprocessing Intern

## Team

# Respiratory Distress Treatment Options in the Neonatal Setting



**Full Mechanical Ventilator**



**CPAP**



**Our Intended  
Device**

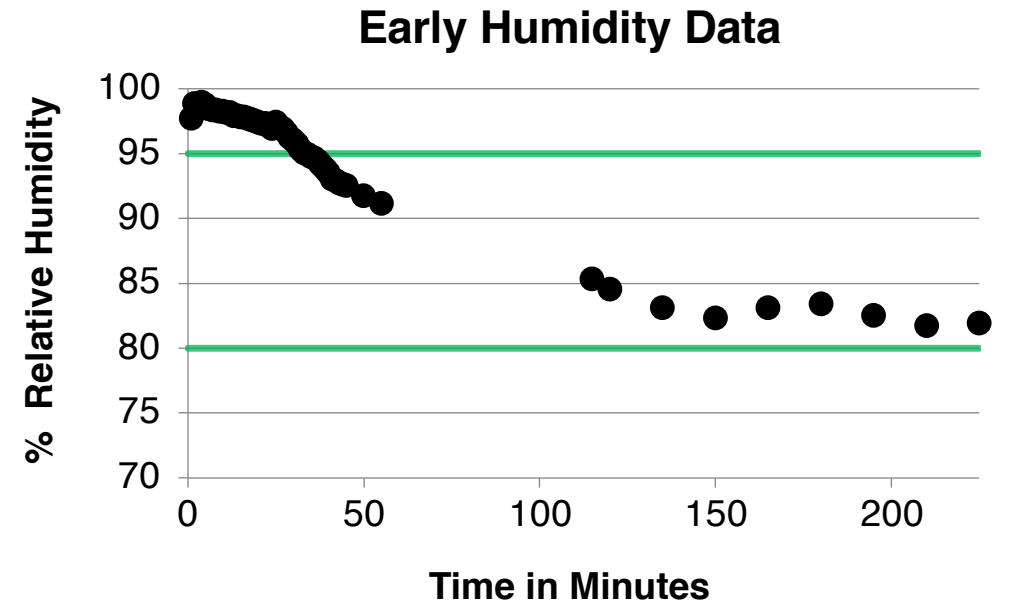
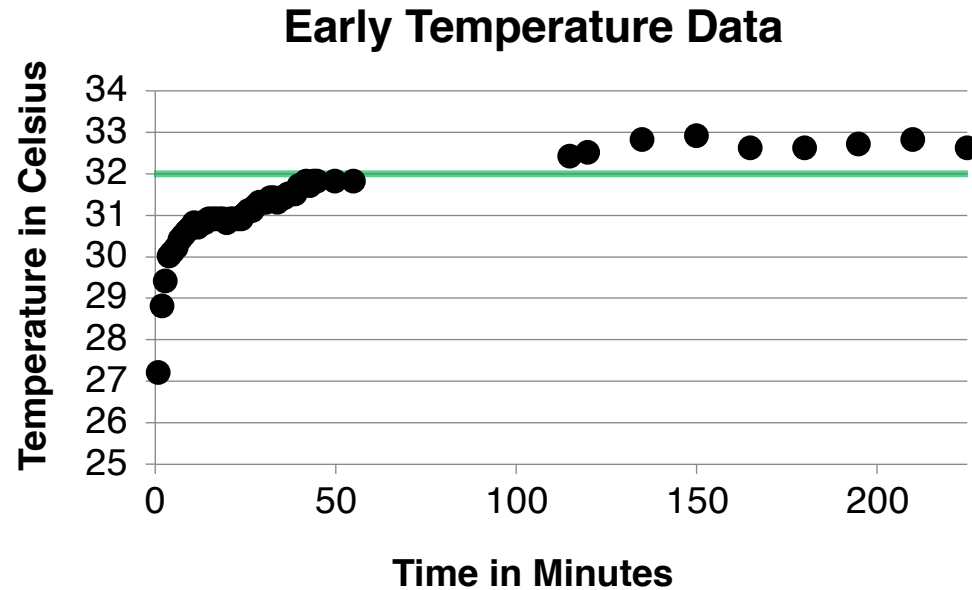
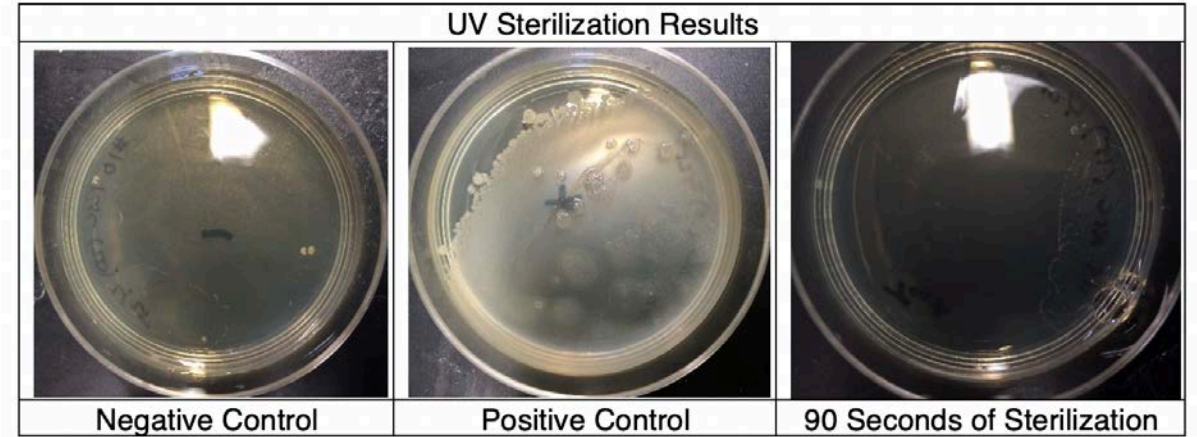
**Intellectual Property:**

PORTABLE AND COMPACT SYSTEM FOR DELIVERY OF HUMIDIFIED HIGH FLOW NASAL CANNULA (HHFNC) THERAPY IN NEONATES AND INFANTS” Docket Number PCT Filed 23Aug2019: 047162-5227-P3US



# Earlier Design Testing

- Data collected over N=37 tests of an earlier prototype signal that our device is comparable to commercially available high-flow devices in many aspects: it can warm, humidify, oxygenate and self-sterilize.
- Upgraded design since these tests were run.







# Accelerators, Awards, Funding & Partners

Offered San Diego JLABS Slot



INNOVATION | JLABS



USAID

newchip



VENTUREWELL™  
idea to impact



SAVING LIVES AT BIRTH:  
A GRAND CHALLENGE FOR DEVELOPMENT



## Sustainable Health Initiative

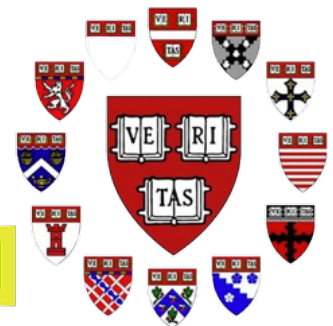
Yale Institute for Global Health



HARVARD | BUSINESS | SCHOOL

Alumni Angels Association

HBS ALUMNI  
NEW VENTURE  
COMPETITION





# Relevant Market Data: Pre-pandemic

## Nasal Cannula High Flow Delivery Market Size



USD **9.8** BN By 2025  
N=3, SD=1,167M



## Global CAGR



**~10.5%**  
N=5, SD=1.6%

**There is a sizable market** for this kind of technology that is growing.

# Competition

	<b>Improvised Care</b> 	<b>LMIC STANDARD</b> Bubble CPAP <i>Pumani</i>	<b>HIC STANDARD</b> Humidified Nasal Cannulas: <i>Vapotherm HVNI</i>	<b>PremieBreathe</b> 
Humidified	X	X	✓	✓
Warmed	X	X	✓	✓
Auto H2O Sterilization	X	X	X	✓
Mixes O2	X	X	✓	✓
Price (USD)	<b>Low</b>	<b>~\$900</b>	<b>&gt;\$1,500- \$5,000</b>	<b>\$500 (COGS~\$300)</b>



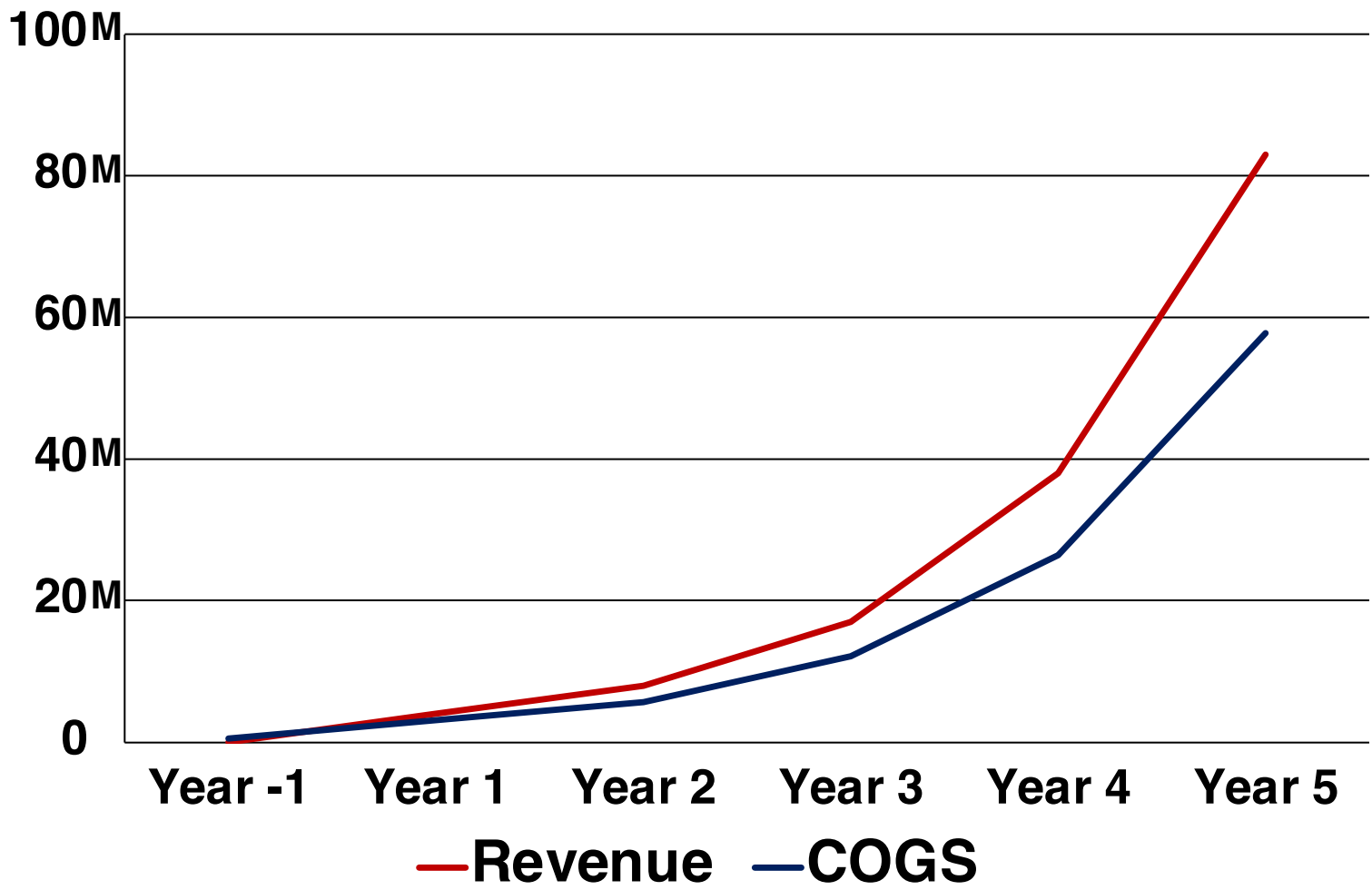
# Deploying Our Self-Sterilizing Respirator Beachhead Market: Ethiopia and India

**>3.5 million**

premature births in our beachhead market every year.

**20,200 Hospitals**

to sell 5+ respirators to.

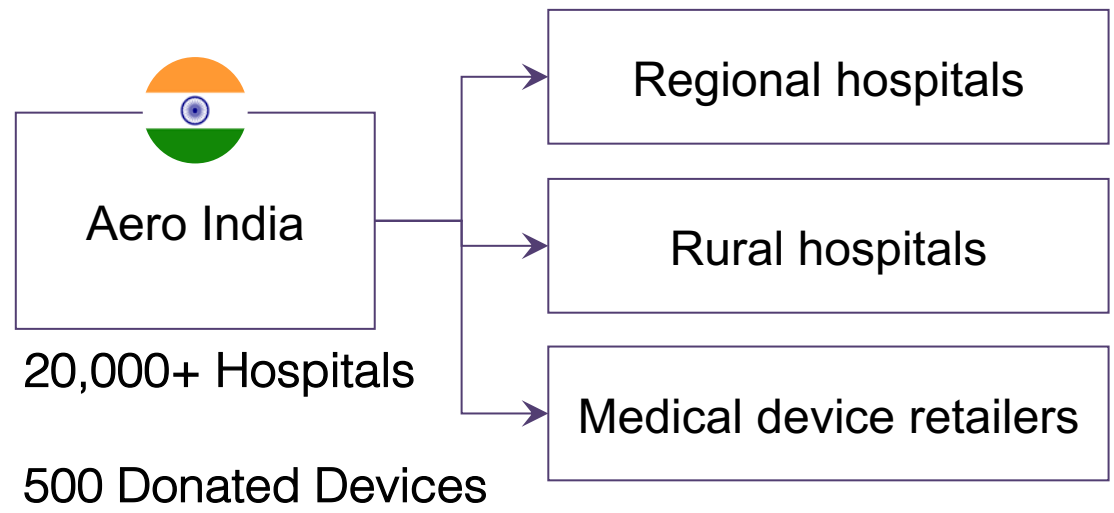
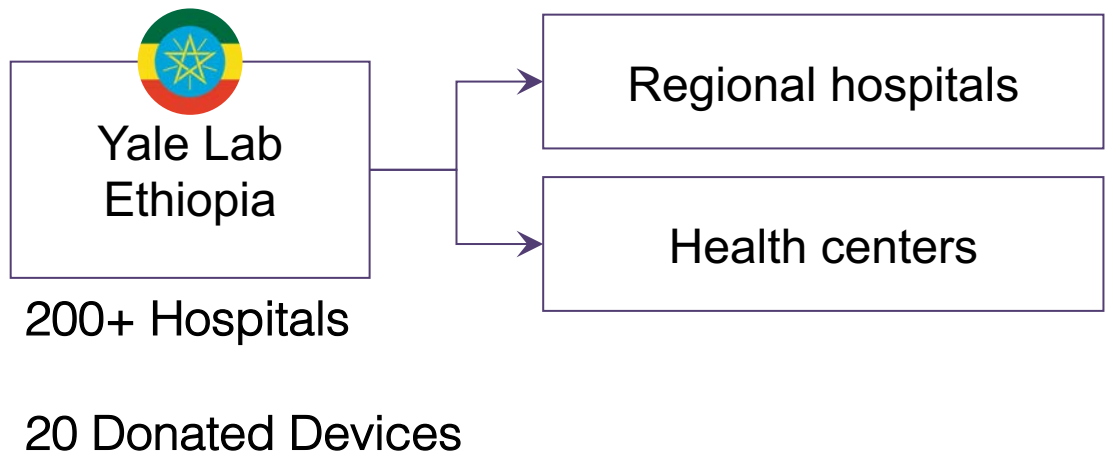






# LMIC: \$50M in Revenue by Year 5

	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Revenue (USD Million)	0	4	8	17	38	83	181
COGS (USD Million)	0.54	3.12	5.66	12.19	26.47	57.80	126.77
Devices Sold		892	1,618	3,483	7,562	16,515	36,219
Cume. Devices Sold		892	2,511	5,102	11,045	24,077	52,734
Devices Donated	520						





# Blavatnik Aims – Apply for 510k Approval

- Per FDA, we do NOT need to run in human clinical trials for regulatory approval.
- Only bench testing is needed.

## AIM 1 – Evaluate Upgraded Design

- 1) assess the efficiency of the new reservoir
- 2) assess the reconfigured airflow path, and
- 3) assess the new air pump.

**Duration:** Up to two months.

**Cost:** \$50,000

**Agreements in place to outsource to the following:**  
[Cadence](#) / [Synectic](#), & [Tangible Design](#).

**Criteria for acceptance:** The design will prevent bacteria from being transferred into the humidified air, the design will mix up to 97% O<sub>2</sub> in output air mixture, and the design will be able to deliver 10 L/min for 300 minutes.

## AIM 2 – Establish Performance & Safety Data

- 1) efficiency of humidification & temperature control
- 2) environmental impact (rainout testing), and
- 3) effectiveness of UVC components preventing pathogenic accumulation.

**Duration:** Up to two months.

**Cost:** \$100,000

**Agreements in place to outsource to the following:**  
[Ximedica](#) & [Tangible Design](#).

**Criteria for acceptance:** the design will humidify water up to 95% within 5 mins, output air temperatures will remain stable between 30-34 deg C, condensation will be prevented for environmental temperatures as low as 20 deg C, and UV-C components will eliminate bacteria from water solution within 90 seconds.



# 2021 Blavatnik Execution Timeline



**Preparation**



**AIM 1**



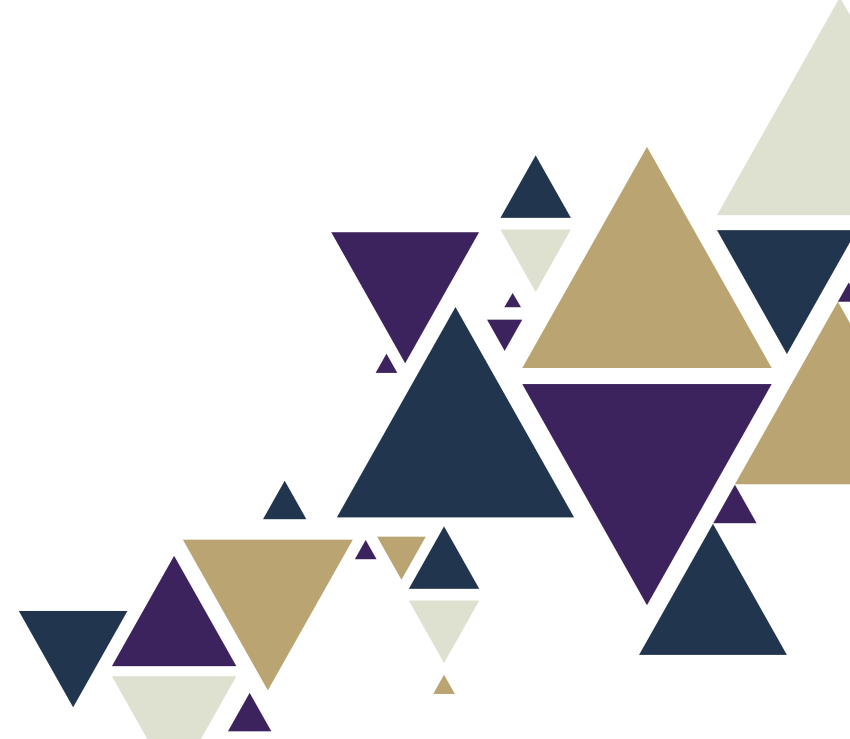
**AIM 2**



**Blavatnik Summary &  
Regulatory Application**

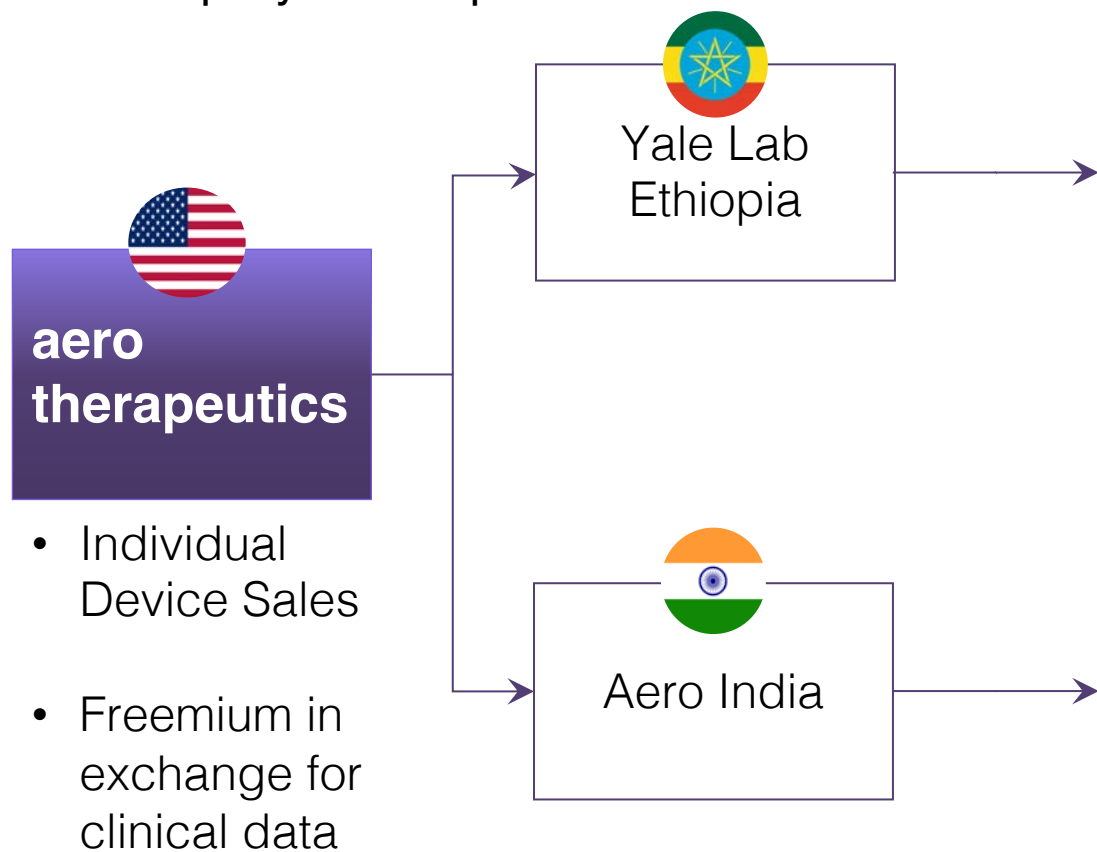


**www. breatheaero .com**



# Beachhead Market Entry

1. Target overlooked segments of the global market: Ethiopia and India are neglected segments.
2. Gain a foothold: sell quality at a lower price than competitors.
3. Rapidly move up-market.





# High Income Country Expansion



**aero  
therapeutics**

- Individual Device Sales
- Freemium in exchange for clinical data



**Established  
Clinical Data**



**Established  
Clinical Data**

## US/EU Expansion

Higher pricing = profitability

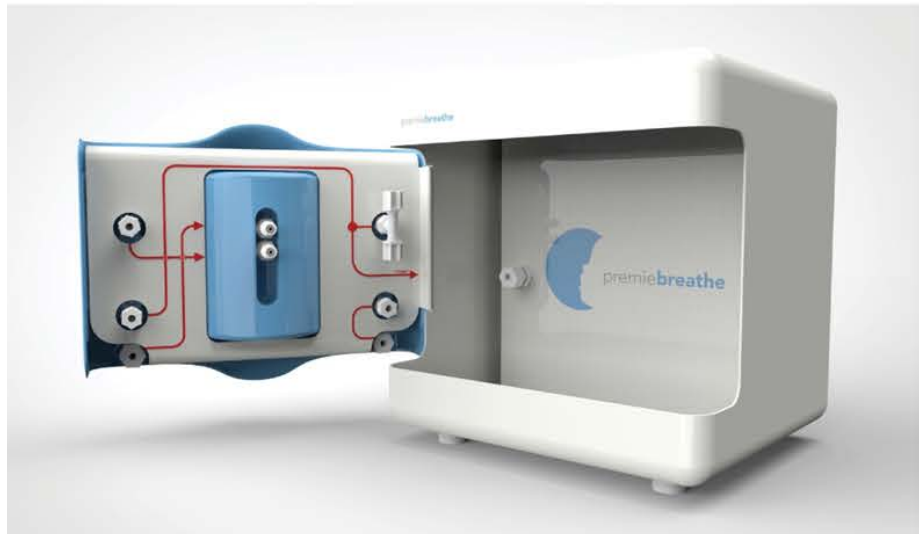
New revenue sources in HIC:

1. Direct / indirect customers
2. Consumables
3. Outcomes-based pricing
4. Licensing
5. Servicing agreements
6. Other indications

# Earlier Generations of PremieBreathe



Ver. 3.0



Ver. 4.0