

Quanovate

The 1st IoT Home Health Testing Platform

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And the team

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Management & Advisory Team

Founding team has complementary skillsets and leads the R&D, Production, Regulation, and Business teams of 24



Zheng Yang
PhD, Biophysics
U. of Pittsburgh

- 10+ papers published
- Biotech startup experience
- Built the R&D, Production, and Business teams of 25 and production prototype in one year

Business team



Sylvia Kang
MBA, Cornell U.
MS, Bioengineering
Columbia U.

- Marketing
- Sales
- Business Development

Business Director at fortune 500 life science company, responsible for \$70M+ global P&L.

Technical team



Bin Miao
PhD,
U. of New Hampshire

- Hardware design

Professor of Physics at University of Science & Technology of China



Xing Chang
PhD,
Ohio State U.
Yale U.

- Biomedical assay research & development

Professor of Immunology at Chinese Academy of Sciences

Advisory team



Fred Toney

- Business Advisor
- CEO of Launchpad Digital Health

20+ years in the technology, medical and digital health markets
15+ years in investment banking, portfolio management with 100+ companies funded or sold



Meirong Du
MD
U. of. Ottawa

- Medical Advisor
- Expert in Reproductive Endocrinology

Doctor of the Ob & Gyn Hospital of Fudan University
Doctor of Shanghai Red House Ob & Gyn Hospital



Allen Reed
BS
UC Davis

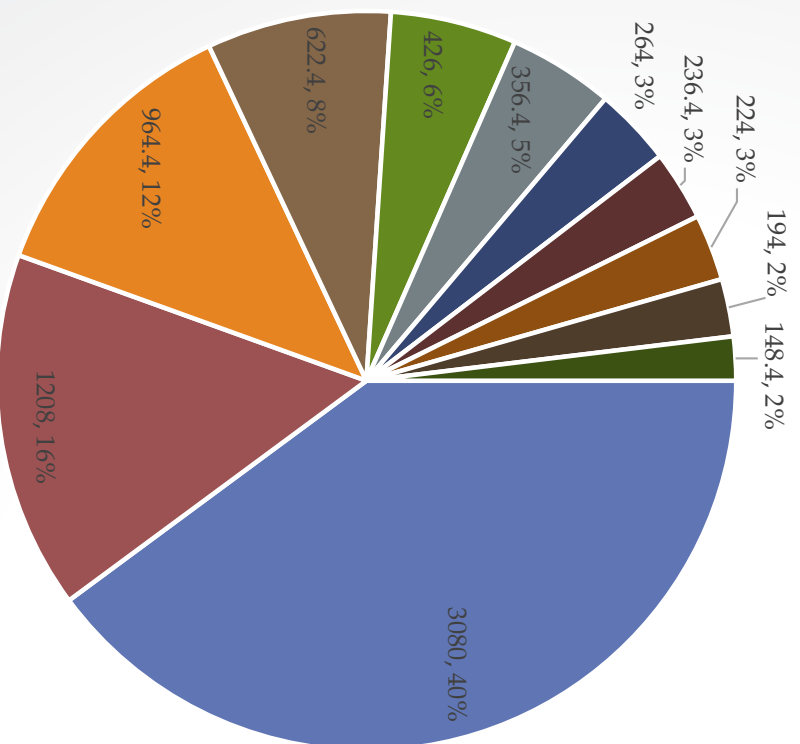
- Financial Advisor

Investment Banking Associate at Mavericks Capital, LLC

Market overview

The \$7.7B global point-of-care home testing market grows at a CAGR of 8%

2016 \$7.7B POCT Home Testing Market (\$M)



- Glucose monitoring
- Blood chemistry and electrolyte
- Cardiac markers
- Infectious disease
- Drugs and alcohol
- Pregnancy and fertility
- Hemoglobin/hemostasis
- Cholesterol
- Urine chemistry
- Tumor marker
- Other tests

Key Drivers

- ✧ **Social:**
 - ✧ Growing patient population
 - Advanced maternal age
 - Growing infertility rate
 - US 6%
 - China 15%, 70M infertility
- ✧ **Technological:**
 - ✧ Technology advancement
 - Convenient testing
 - Clinically relevant and accurate results
 - Data interpretation
- ✧ **Economic:**
 - ✧ Cost containment
 - Rising healthcare cost
 - Shortage of healthcare resource

Unmet needs during pregnancy journey

Test accuracy, personalized health insights, and fetal monitoring are top unmet needs due to technical barriers

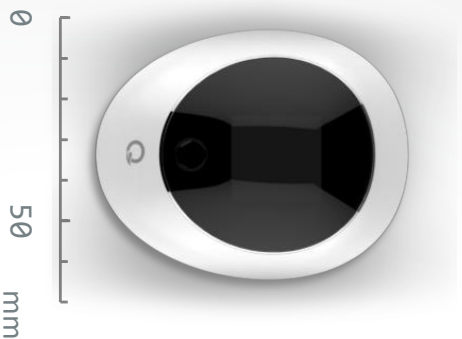
Life Stage	Customer Unmet Needs	Current Customer Solution	Gap in Current Solution
TTC (Trying to Conceive)	Ovulation prediction accuracy	OPK, BBT, App	- Hard to read - Unable to personalize - Cannot track long term
TTC	Cycle tracking convenience	Taking picture of OPK Manual enter in App	- Inconvenient - Subjective - Error prone
TTC	Personalized health insights	Google Ask support group	- Not personalized - Time consuming - Unreliable source
Pregnancy	Fetal status monitoring in the 1 st trimester	Hospital visit	- Takes long to see ob - Highly worry about miscarriage - No reliable source to answer questions

Major Technical Barriers:

- Size:
 - Small size for home testing.
 - 68mm wide, optimized for POCT.
 - Accuracy:
 - Optomechanical design of the device
 - Fluorescent quantitative immunoassay of the test strips
 - AI learning and optimization ability towards personal cycle variability
- Source: 50 customer interviews, 7 hospital visits, 15 obgyn conversations, 20+ new moms, 3000+ families from 5 major online forums
- 4

Product and solution

The 1st IoT home test platform that provides accuracy, long term tracking, personalization, and remote medical service



Size:

- 68mm wide, optimized for POCT.

Accuracy:

- High precision optomechanical design and fluorescence quantitative immunoassay.
- Sophisticated algorithms provide highly accurate analysis.



Tracking:

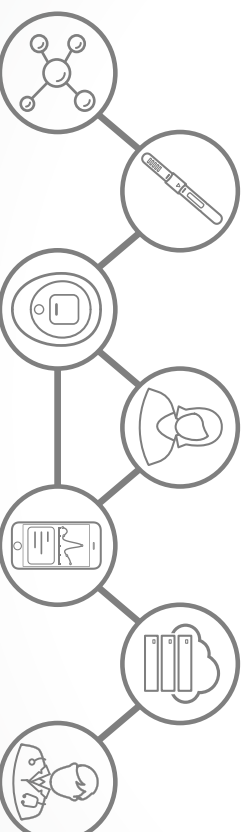
- Provide users and doctors a long term health overview through self-tracking instead of discrete data points.

Personalization:

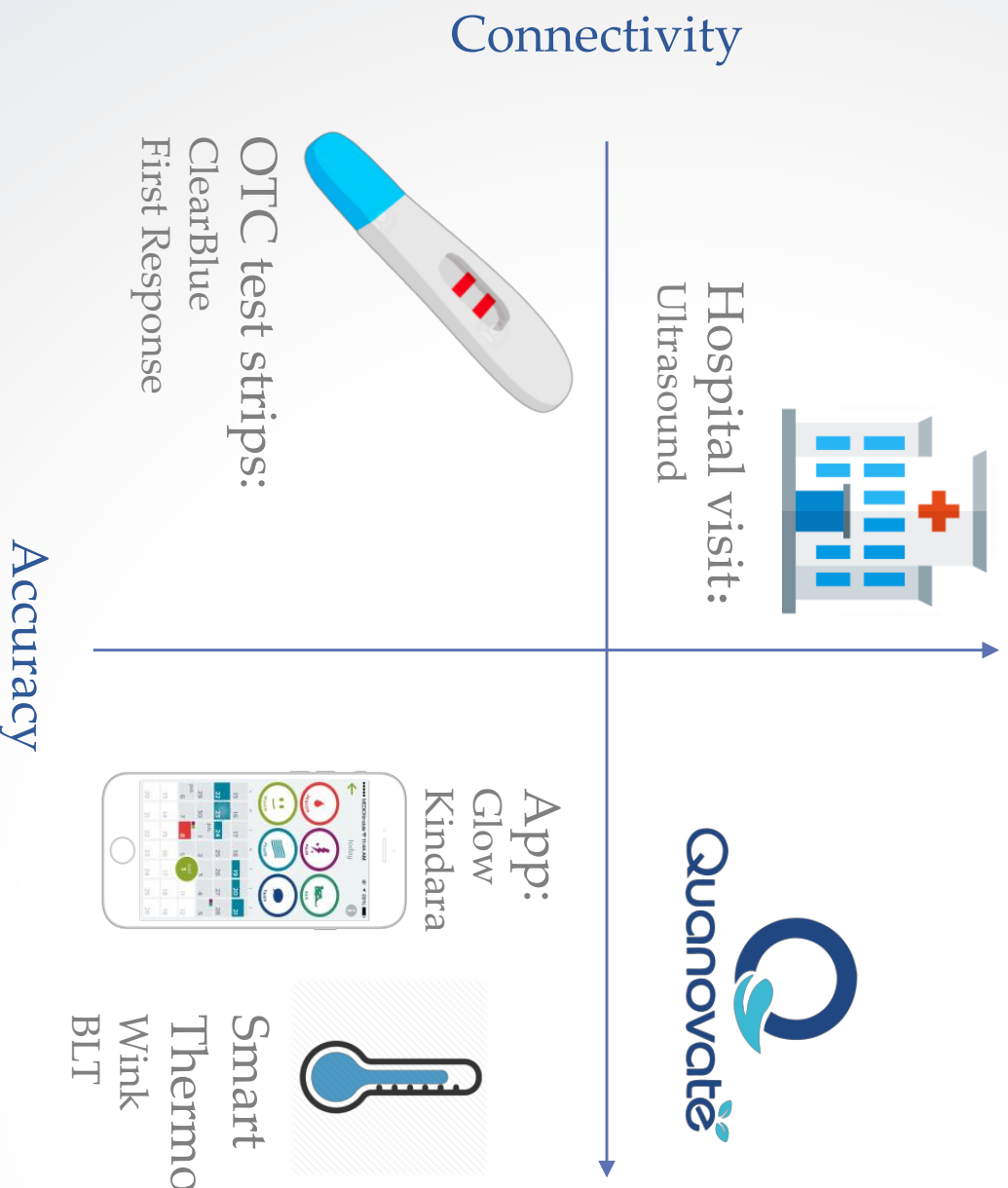
- Advanced cloud-based AI generates personalized health diagnostics directly to patients.

Connectivity:

- Enable mobile based telemedicine through cloud server.
- App connected with device through Bluetooth 4.0. Seamless data synchronization.



We differentiate by cycle prediction accuracy optimized by AI and on time connectivity with reliable health information

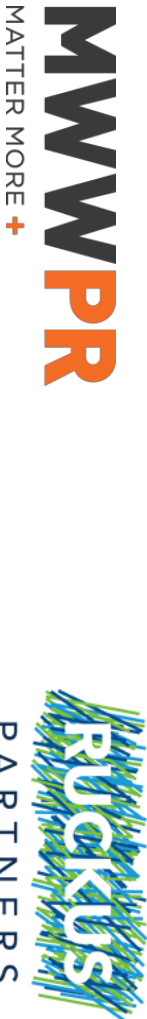


- Accuracy:
 - Quantitative hormone measurement
 - AI optimizes cycle prediction towards personal variability
 - Automatic long term tracking and charting to eliminate user error
- Connectivity:
 - Personalized and on time health insights
 - Mobile based telemedicine service

Revenue streams

The revenue streams come from consumer sales and will be enhanced by mobile App and remote medical service

Channels	Objectives	Approaches	Timeline
Crowdfunding	<ul style="list-style-type: none">• Marketing• Revenue return	<ul style="list-style-type: none">• Kickstarter• Indiegogo	2017 Q2
Online sales	<ul style="list-style-type: none">• Generate volume• Generate market awareness	<ul style="list-style-type: none">• Quaanovate website• Amazon• eBay• Online fertility stores	From 2017 Q3
Retail	<ul style="list-style-type: none">• Scale up	<ul style="list-style-type: none">• Supermarket: Target, Walmart, Costco• Pharmacies	From 2017 Q4
Doctor's recommendation	<ul style="list-style-type: none">• Effectively targeting customer base• Endorsement	<ul style="list-style-type: none">• Ob/gyn• Fertility clinics	From 2017 Q3



Revenue Enhancement

- Remote doctor
- Reimbursement
- App
- Ads
- Tailored advertisement featuring customer behavior and health/cycle condition
- Data mining
- Customer data collection and integration

Progress

We are FDA registered; We have a production prototype, a team of 24 people, and a 11k sqft GMP which meets ISO 13485

Product

- Production prototype is ready
- FDA registered, FCC certification ongoing
- CE in Q2 2017, CFDA in Q1 2018

Performance

- Benchmarking results showed equivalent performance vs. Qiagen LFA reader

IP

- 14 utility and design patents filed; 3 approved
- WSGR: FTO and IP strategy

Team

- Team of 24 people
- R&D, Production, Quality, Regulation, and Marketing & Sales

Capacity and Quality

- GMP: 11,000 ft² area, 40+ functional units
- Meet the ISO 13485/ CE IVDD quality management system requirement

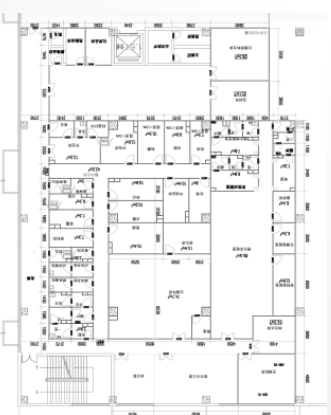
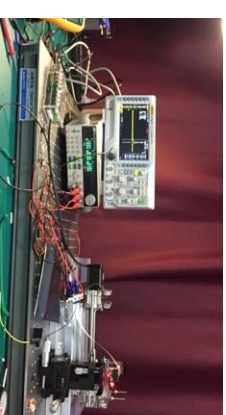
Funding and Advisory

- LaunchPad Digital Health company
- MedTech Innovator Top 100 company
- Innovation & Entrepreneurship International Competition 1st Place
- ¥5M RMB funding and 10,000 ft² office from Chinese government
- ¥10M RMB seed funding from HaiBang Venture



WSGR

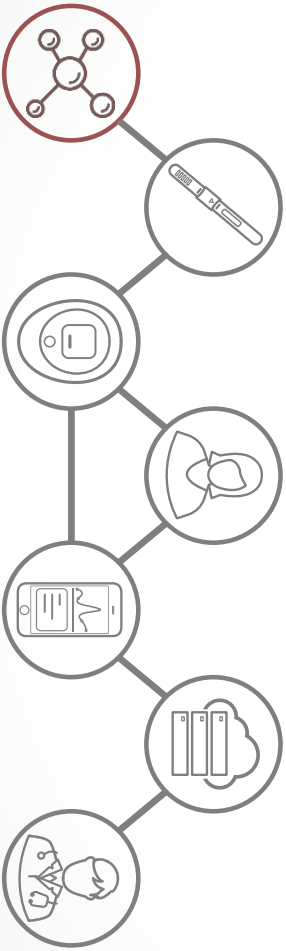
Wilson Sonsini Goodrich & Rosati
PROFESSIONAL CORPORATION



Future Applications

Highly expandable biomarkers address the most popular diseases, with first project focusing on reproductive health

Applications	Category	Biomarker	Sample type
TTC (Trying-to-conceive)	<u>Reproductive health</u>	LH, Estrogen	Urine
Pregnancy stage and fetal health	<u>Reproductive health</u>	hCG	Urine
Flu	Infectious disease	Influenza	Saliva
Vitamin D deficiency	Vitamin deficiency	VD	Urine
Thyroid disorder	Hormone testing	T3, T4	Urine/Blood
Allergy testing	Allergy	Allergens	Food/drink



Summary



The first IOT and digital health platforms



Highly expandable system



Tracking, connectivity, personalization, and accuracy



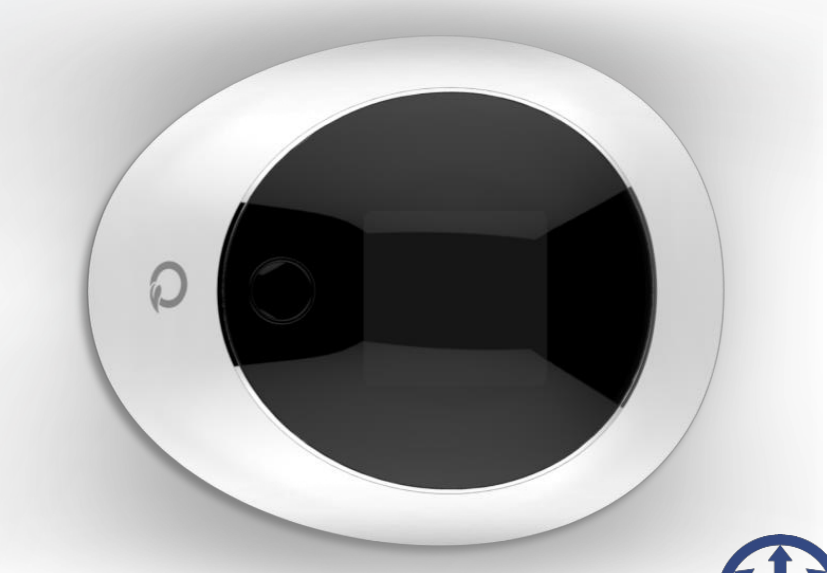
First application on reproductive health



Healthy and successful conception



Fetal health monitoring



Thank you!



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