



REAL ESTATE DEVELOPMENT FOR LIFE SCIENCES IN SOUTH BOSTON

Phani Sukhavasi



Phani Sukhavasi

- Senior Manager – Global GXP Engineering
 - Vertex Pharmaceuticals - 4.5 years
 - Pharmaceutical-Biotech - Life Sciences- over 10 years
 - MS Chemical Engineering – University of South Alabama
 - BS Chemical Engineering – JNT University, India
 - Harvard University Extension School –Enrolled in Masters in Management



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South Boston — 1800s



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South Boston — 1900s

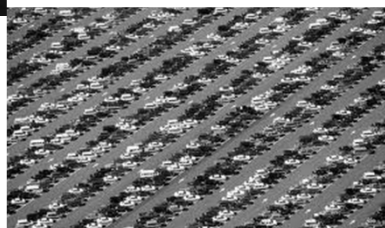


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South Boston — 2000-2011



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South Boston

A sea of parking lots needing revitalization

Vertex moving to Boston's Fan Pier Boston
Business Journal - Jan 24, 2011, 3:57pm EST

Drugmaker Vertex moving to Fan Pier -Boston
Herald - January 24, 2011

Biotech Giant Vertex Breaks Ground On Fan Pier Complex
CBS Boston - June 22, 2011 12:59 PM

Vertex and city celebrate topping off at Fan Pier
Jul 19, 2012, 2:05pm EDT



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South Boston — 2013-Vertex Opens World HQs



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Vertex Headquarters Overview

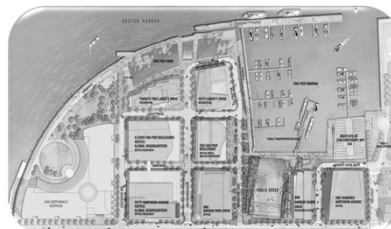
Located in Boston's Seaport District

- ❑ 50 Northern Ave (Vertex One)
- ❑ 11 Fan Pier Blvd. (Vertex Two)
- ❑ 95% of the buildings are leased by Vertex
- ❑ 5th year of a 15 year lease



Total of 1.1M SQFT of Office/Lab

- ❑ 60% Office
- ❑ 40% Laboratory
- ❑ Seating capacity of 2,250
- ❑ 150+ Conference Rooms
- ❑ Chemistry, Biology, Vivarium, Analytical
- ❑ 7,000 + Laboratory Assets



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ALL *in for* CF
SCIENCE, COMMITMENT & COMMUNITY UNITED

What is Cystic Fibrosis?

CF is caused by a defective or missing **cystic fibrosis transmembrane conductance regulator (CFTR)** protein resulting from mutations in the *CFTR* gene.

People with CF either have too few *CFTR* proteins at the cell surface, *CFTR* proteins that don't work properly, or both.

NORMAL CFTR PROTEINS lie on the surface of cells that line the lungs, digestive system and sweat glands, and are responsible for regulating the passage of salt and water into and out of cells.

DEFECTIVE CFTR PROTEINS result in poor flow of salt and water into and out of cells.

THE RESULT Abnormally sticky mucus forms and obstructs the lungs and airways, intestine, and the ducts of the pancreas.

Cl^- = chloride ions

CELL NUCLEUS

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How are we making a difference today?

ORKAMBI®
(lumacaftor/ivacaftor)
200/125 mg • 100/125 mg tablets

kalydeco
(ivacaftor) tablets 150 mg
oral granules 50•25 mg

Plan to make a difference tomorrow

- Target the underlying cause of CF and other serious diseases
- Gene Editing and MRNA Therapies
- Collaboration and partnering with companies, academia, research and non-profit organizations.
- Next generation compounds

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South Boston — Today



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Other Life Science Companies Joined South Boston

- INVICRO
- KERYX BIOPHARMACEUTICALS
- GINKGO BIOWORKS
- ORIG3N
- CELGENE (Formerly known as Acetylon Pharma.)
- EMULATE
- ALEXION PHARMACEUTICALS
- METASTAT, Inc.
- JNANA THERAPEUTICS



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South Boston — 2020 (Graphic)



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Vertex Manufacturing and Development Center

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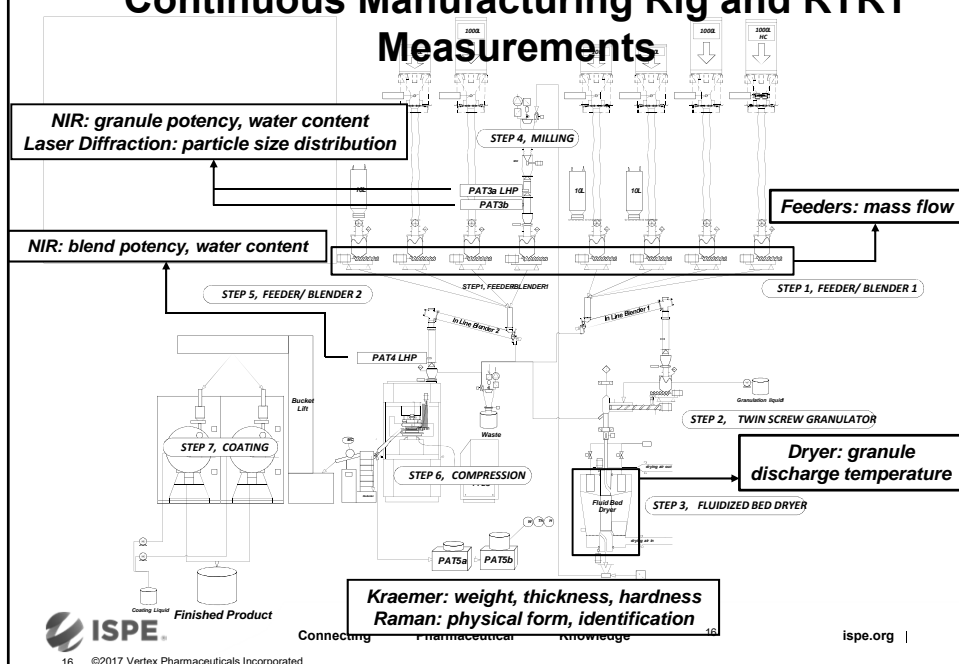
Continuous Manufacturing Rig



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Continuous Manufacturing Rig and RTRT Measurements



Vertex Innovation Partnership

Only space like this in the Seaport

To support the continued development of the Innovation District as a hub for life sciences, technology and lab-based.ovation.

Rented office and laboratory space for biotech startups (30,000 square feet; 7th floor, Vertex ONE)

Tenants get access to:

Vertex services and shared equipment
Café, Welcome Center, Fitness Center

First tenants (Jnana Therapeutics)

On May 1, 2017 started with four employees; currently at fourteen
18-month lease agreement (ability to renew once)
Two additional tenants under LOI, scheduled to move in Q1 & Q2 2018



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Questions?



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