



# Company Presentation

September 8, 2017

## FIRST-IN-CLASS DRUG CANDIDATES

With dermatology, oncology, anti-inflammatory, and antibiotic applications

**NEWSMAKERS**  
IN THE BIOTECH INDUSTRY

BIOCENTURY

Sept 8, 2017  
New York City

100 Cummings Center, Beverly, MA

Ticker: IPIX

# Safe Harbor; Forward-Looking Statements

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This presentation contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 that involve risks, uncertainties and assumptions that could cause Innovation's actual results and experience to differ materially from anticipated results and expectations expressed in these forward-looking statements. Innovation Pharmaceuticals has in some cases identified forward-looking statements by using words such as "anticipates," "believes," "hopes," "estimates," "looks," "expects," "plans," "intends," "goal," "potential," "may," "suggest," and similar expressions. These forward-looking statements include, but are not limited to, statements concerning future drug development plans and projected timelines for the initiation and completion of preclinical and clinical trials; the potential for the results of ongoing preclinical or clinical trials and the efficacy of Innovation Pharmaceuticals' drug candidates; the potential market opportunities and value of drug candidates; other statements regarding future product development and regulatory strategies, including with respect to specific indications; any statements regarding Innovation Pharmaceuticals' future financial performance, results of operations or sufficiency of capital resources to fund its operating requirements; any statements relating to Innovation Pharmaceuticals planned uplisting or use of proceeds; and any other statements that are not statements of historical fact. Forward-looking statements involve risks and uncertainties, which may cause Innovation's actual results, performance or achievements to be materially different from those expressed or implied by forward-looking statements. Such forward-looking statements are based upon current expectations that involve risks, changes in circumstances, assumptions and uncertainties. Among other factors that could cause actual results to differ materially from those expressed in forward-looking statements are Innovation Pharmaceuticals' need for, and the availability of, substantial capital in the future to fund its operations and research and development, including the amount and timing of the sale of shares of common stock to Aspire Capital; Innovation Pharmaceuticals' ability to continue to fund and successfully progress internal research and development efforts and to create effective, commercially-viable drugs; and the fact that Innovation's compounds may not successfully complete pre-clinical or clinical testing, or be granted regulatory approval to be sold and marketed in the United States or elsewhere. A more complete description of these risk factors is included in Innovation Pharmaceuticals' filings with the Securities and Exchange Commission. You should not place undue reliance on any forward-looking statements. Forward-looking statements speak only as of the date on which they are made. Innovation Pharmaceuticals undertakes no obligation to release publicly the results of any revisions to any such forward-looking statements that may be made to reflect events or circumstances after the date of this presentation or to reflect the occurrence of unanticipated events, except as required by applicable law or regulation.

# Innovation Pharmaceuticals Overview

## Value Proposition

INNOVATIVE SCIENCE AT THE CORE OF THE COMPANY

AN EXCEPTIONALLY STRONG CLINICAL PIPELINE

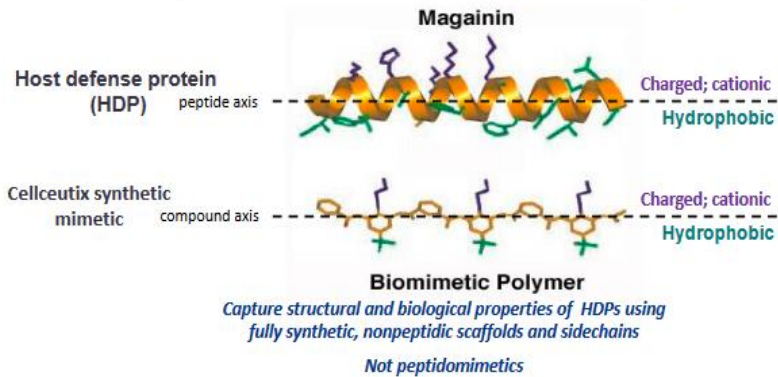
ADDRESSING \$BILLION MARKET OPPORTUNITIES

### Novel Mechanisms of Action

e.g., Brilacidin

#### Design Approach

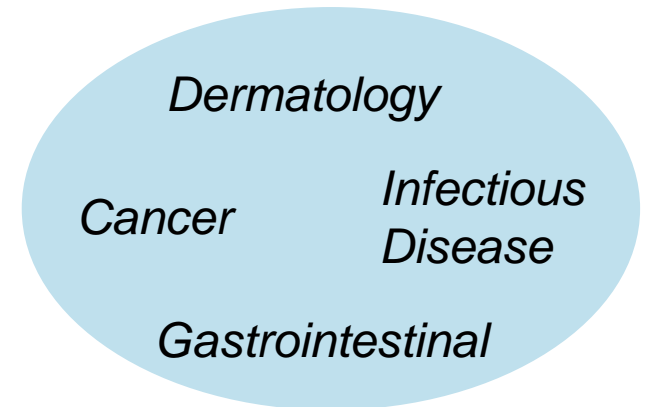
The biological activities of host defense proteins depend on an *amphiphilic helix*



### Mid-Late Stage Candidates



### Multiple Therapeutic Areas



# Innovation Pharmaceuticals Pipeline

## Drug Candidates

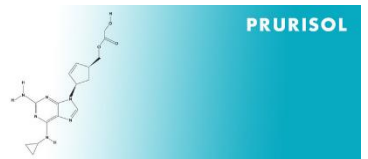
Innovation has **three drug candidates**, each with first-in-class potential, advancing in clinical trials under various special FDA designations.

### Brilacidin



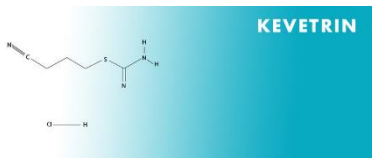
*Drug candidate in a **new immunomodulatory class** with anti-inflammatory and antibiotic properties advancing in clinical trials under Fast Track designations*

### Prurisol



*Orally-delivered **psoriasis** drug candidate in a Phase 2b trial utilizing advantages of the 505(b)(2) development approach*

### Kevetrin



*p53-modulating drug candidate with three Orphan Drug designations in a Phase 2a trial for **ovarian cancer***

## COMPANY APPROACHING KEY INFLECTION POINTS

**Brilacidin**, a Novel Immunomodulatory Agent...

**Prurisol** an Oral Psoriasis Medicine... and;

**Kevetrin**, a p53-Modulating Drug Candidate

All three **Clinical Assets targeting Multi-Billion Markets** in numerous therapeutic areas, across multiple clinical indications

**Near-Term Catalysts** by Year-End—trial completion, results reporting; collaboration/partnership opportunities

# Pipeline Potential

*Innovation: The Challenge and The Opportunity in Drug Development*

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**DRUG SAFETY**

**Are there adverse side-effects?**

**Could drug be Safer?**

**Even at Higher Doses**

**DRUG EFFICACY**

**What is the therapeutic effect?**

**Could drug be Better?**

**Improved Response Rates**

**DRUG DELIVERY**

**Is there a preferable way to administer?**

**Could drug be Easier?**

**Optimal Formulation**

# How We're Different

*Innovative Drug Candidates with Multi-Indication Potential*

**BRILACIDIN**

**PRURISOL**

**KEVETRIN**

**\*ABSSSI**

**ORAL  
MUCOSITIS**

**ULCERATIVE  
COLITIS**

**ECZEMA**

**CROHN'S**

**\*\*HS**

**ACNE**

**PSORIASIS**

**PSORIATIC ARTHRITIS**

**OVARIAN CA**

**RENAL CA**

**PANCREATIC CA**

**RETINOBLASTOMA**

**POTENTIAL FOR LIFE-CHANGING, LIFE-SAVING TREATMENTS**

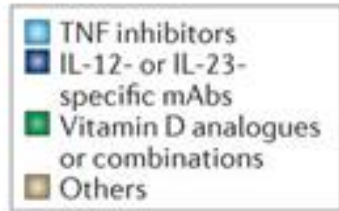
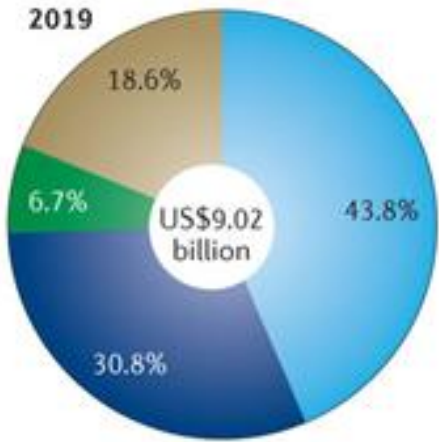
\* ABSSSI - Acute Bacterial Skin and Skin Structure Infection \*\* HS - Hidradenitis suppurativa

# Multi-Billion Market Opportunity

Innovative Products Will Merit Higher Premiums

## Prurisol

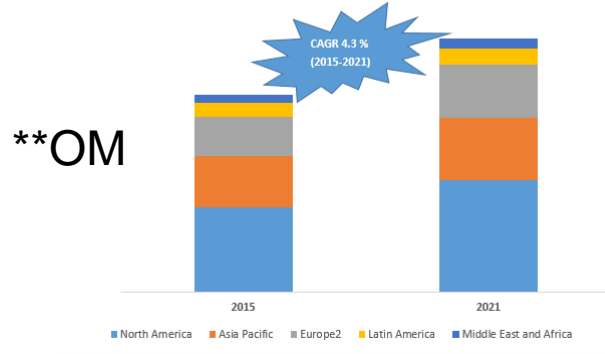
Psoriasis



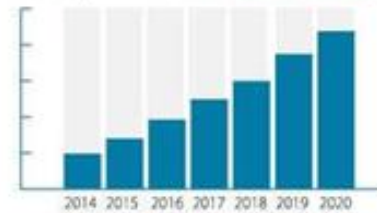
Nature Reviews | Drug Discovery

## Brilacidin

Global Cancer Supportive Care Products Market, Revenue By Region (US\$ Mn), 2015-2021



World Anti-Inflammatory Therapeutics Market, is expected to reach \$106.1 billion by 2020



IBD

Growing at a CAGR of 5.9% (2015-2020)

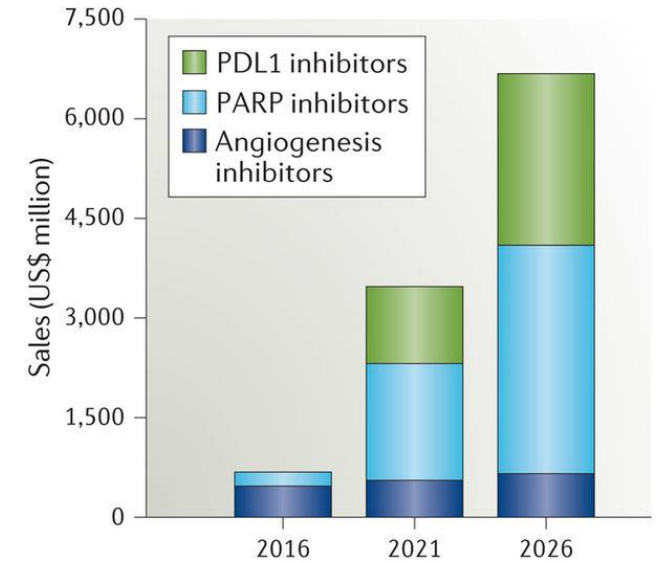
Table 10: Estimates of Total Market Size, by Indication (in \$ Million)

ESTIMATE	ABOM	ABSSSI	CABP	CIAI	CUTI	HABP/VABP
1	\$2,720	\$3,070	\$2,290	\$2,530	\$5,760	\$1,780
2	\$2,950	\$6,590	\$7,970	\$4,660	\$6,540	\$3,470
3	\$9,230	\$9,230	\$9,230	\$9,230	\$9,230	\$9,230

Source: (IMS Health, 2012)

## Kevetrin

Ovarian Cancer



Nature Reviews | Drug Discovery

\* ABSSSI = Acute Bacterial Skin and Skin Structure Infection

\*\* Oral Mucositis

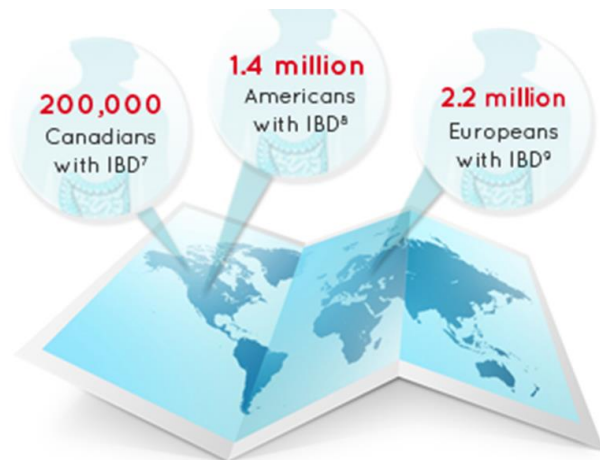
\*ABSSSI



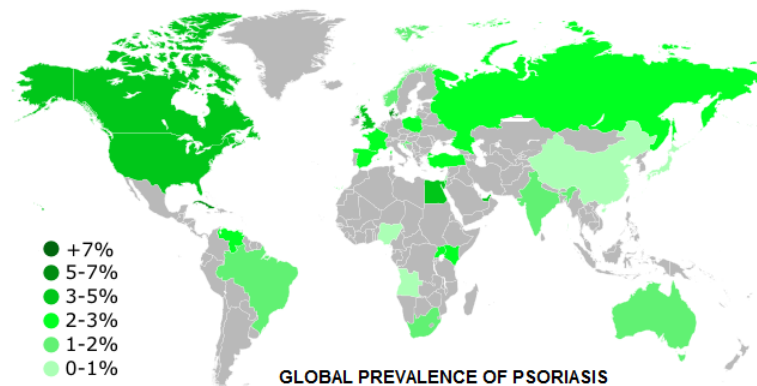
# Pipeline Potential

## Targeting Major Therapeutic Areas

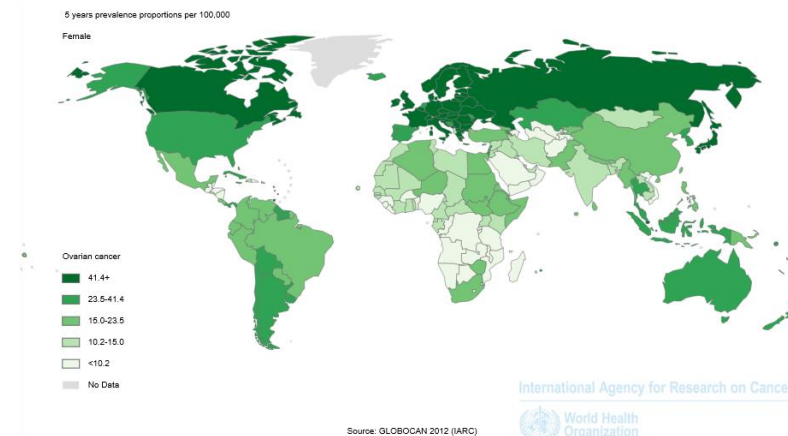
### INFLAMMATORY BOWEL DISEASE



### PSORIASIS



### OVARIAN CANCER



### Recent Deals / Market Potential

**\$7.2bn**

receptos

S1P modulation

**\$2.5bn**

nograPharma

Smad7 inhibition

**\$2.075bn**

GILEAD Galapagos

JAK1 inhibition

**\$2.6bn**

Salix PHARMACEUTICALS, INC. SANTARUS, INC.

corticosteroids (budesonide)

**\$640 million**

Allergan vitae Pharmaceuticals

RORyt IL-17 modulation

**\$790 million**

PURDUE excure

SNA-based therapeutics

**\$490 million**

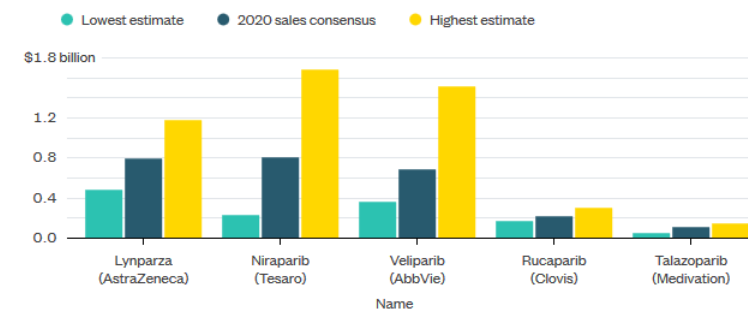
Dr.Reddy's Xenoport

Monomethylfumarate prodrug

**\$595 million**

Boehringer Ingelheim abbvie

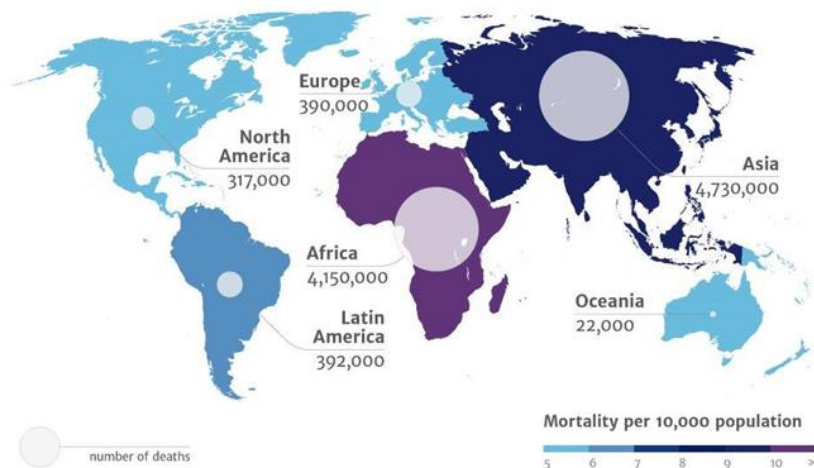
Anti-IL-23 mAb



# Pipeline Potential

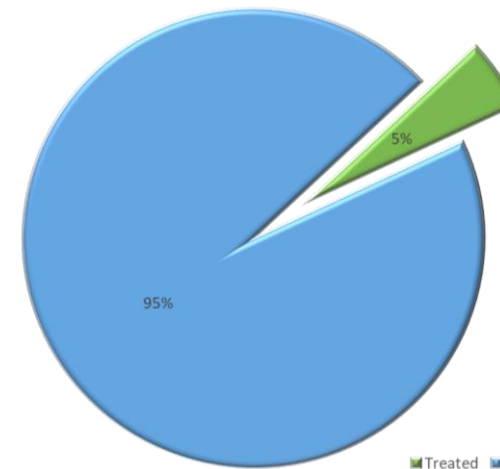
## Targeting Major Therapeutic Areas (continued)

### INFECTIOUS DISEASE



### ORAL MUCOSITIS

~450,000 patients/year in U.S. alone



Less than 5% of patients currently prescribed any OM treatment

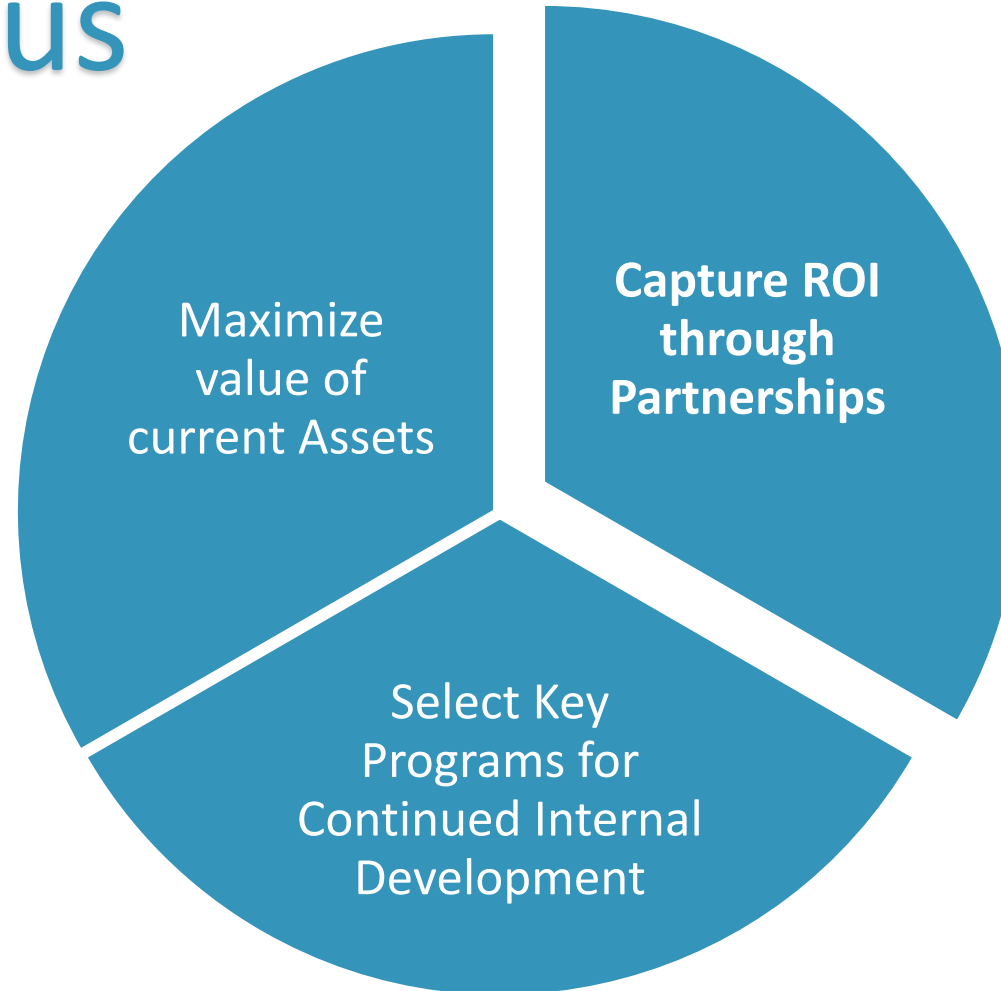
### Recent Deals / Market Potential



**CUBICIN**<sup>®</sup> \$1.087bn sales in 2016  
(daptomycin for injection) 500 mg

Product	Company	Phase	Indication	Comment / Issue
Kepivance	Amgen	Approved (drug)	Prevent OM-HSCT	Inconvenient IV dosing 3x pre + 3x post chemo, over priced
Gelclair	DARA	Approved (device)	Palliation	Poor reimbursement, poor data
Mucotrol	Edwards Pharmaceutical	Approved (device)	Palliation	Poor reimbursement, poor data
Caphosol	EUSA	Approved (device)	Palliation	Poor reimbursement, poor data
Episil	Camurus	Approved (device)	Palliation	
Mugard	Access	Approved (device)	Palliation	Poor reimbursement; recent controlled study confirmed activity as a palliative agent

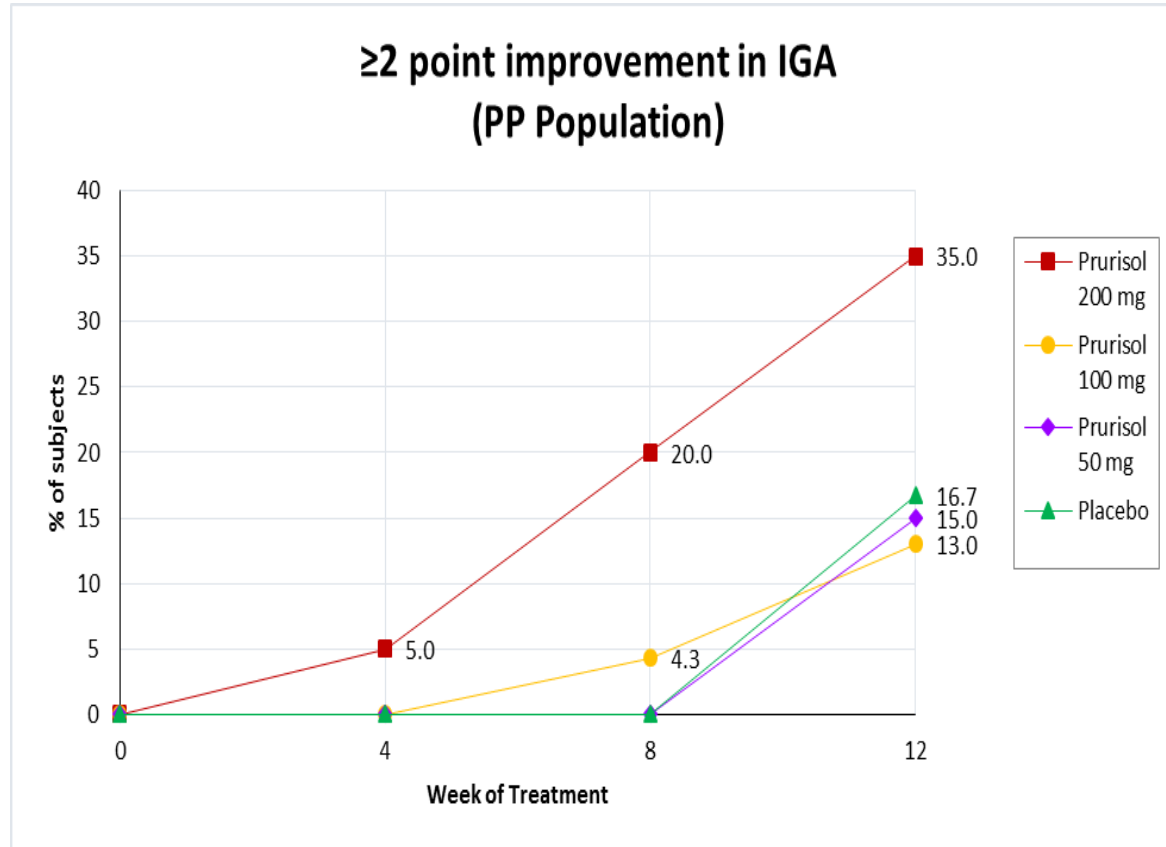
## Strategic Focus



# Prurisol: Phase 2a Mild-Moderate Plaque Psoriasis Trial

## Positive Results

Psoriasis Affects Over 125 million People Worldwide



Source: Table 14.2.1.1.2 and Table 14.2.1.2.4



- ≥ 2-point Investigator Global Assessment (IGA) improvement (200 mg group) at Week 12 was 35.0% subjects (PP)  
[Provided basis to proceed to next study]

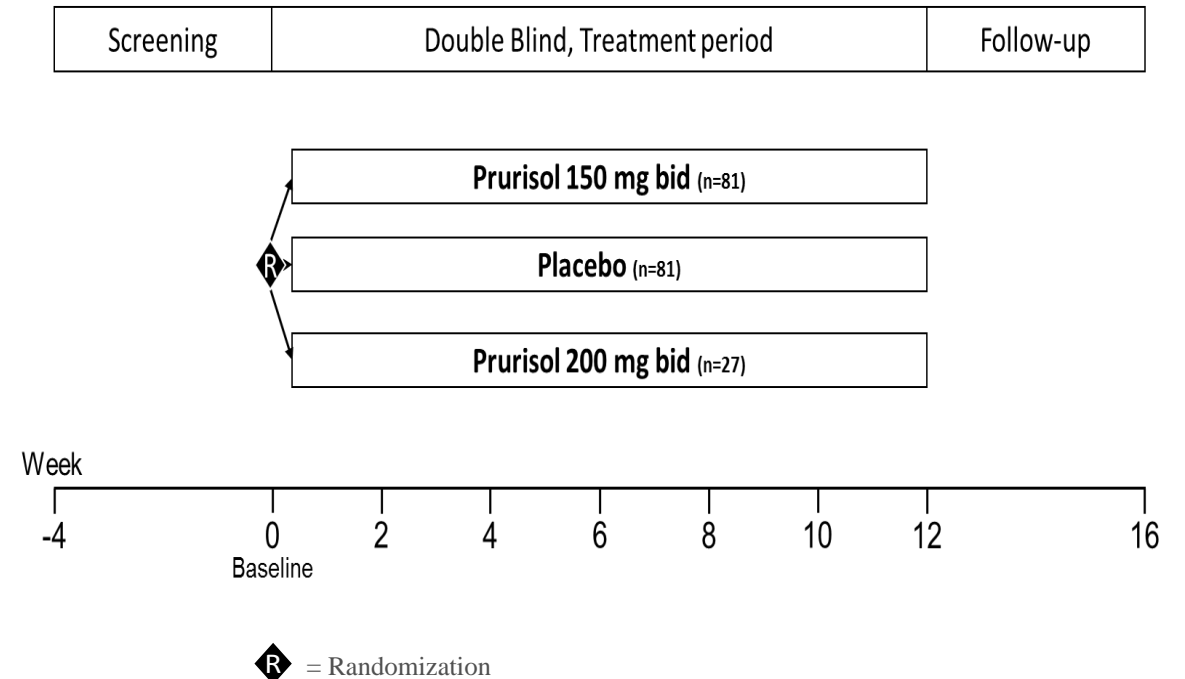
# Prurisol: Phase 2b Moderate-Severe Plaque Psoriasis Trial

Ongoing

*Anticipated Completion 4Q2017*

- **Randomized, double-blind, parallel-group, placebo-controlled**
- **Treatment Groups**
  - Prurisol 300 mg: Pbo: Prurisol 400 mg
  - 3:3:1
- **Number of Subjects**
  - ~189
- **Treatment Duration**
  - 12 weeks
- **Number of Sites (U.S.)**
  - ~30

## Study Design Schematic



# Brilacidin: Phase 2a IBD Trial (Ulcerative Proctitis/Proctosigmoiditis)

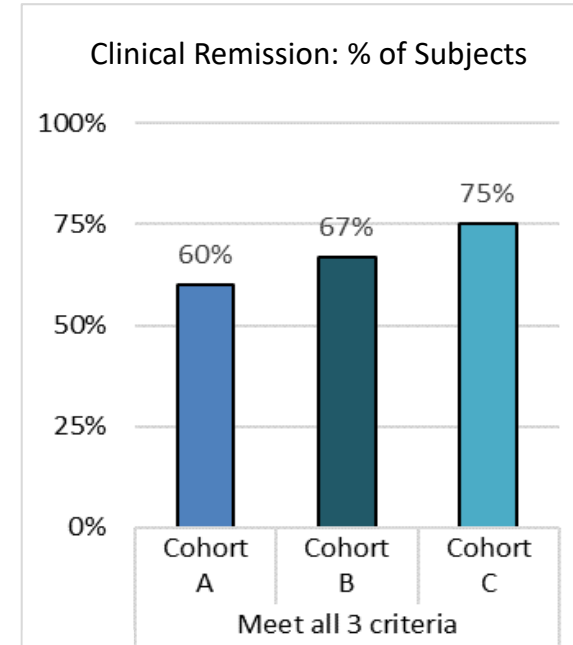
Primary Efficacy Endpoint, Topline Results (Recently Completed)

## Clinical Remission in > 50% subjects (Day 42)

Similar across cohorts

- 60% Cohort A (3 of 5)
- 67% Cohort B (4 of 6)
- 75% Cohort C (3 of 4)

Analysis population: Includes subjects with Endoscopy, Rectal Bleeding and Stool Frequency subscores at baseline and Day 42; one subject in Cohort A and one subject in Cohort C are not included due to no Day 42 endoscopy (subjects declined)

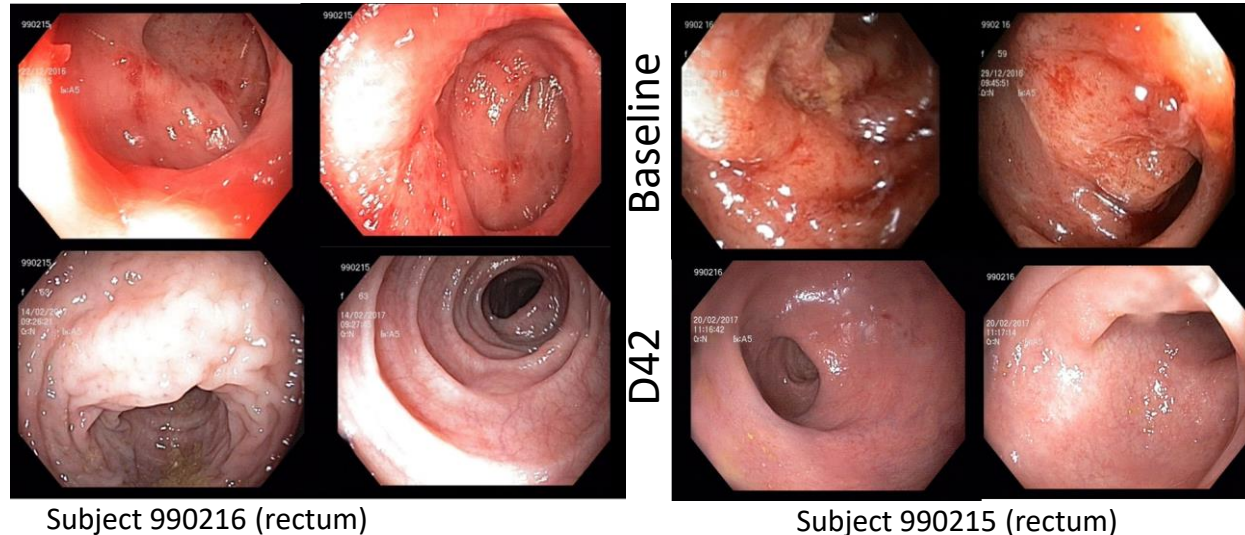


### Examples Clinical Remission

*Treated with Brilacidin 100mg  
(Cohort B) per retention enema*

Clinical Remission is defined as:

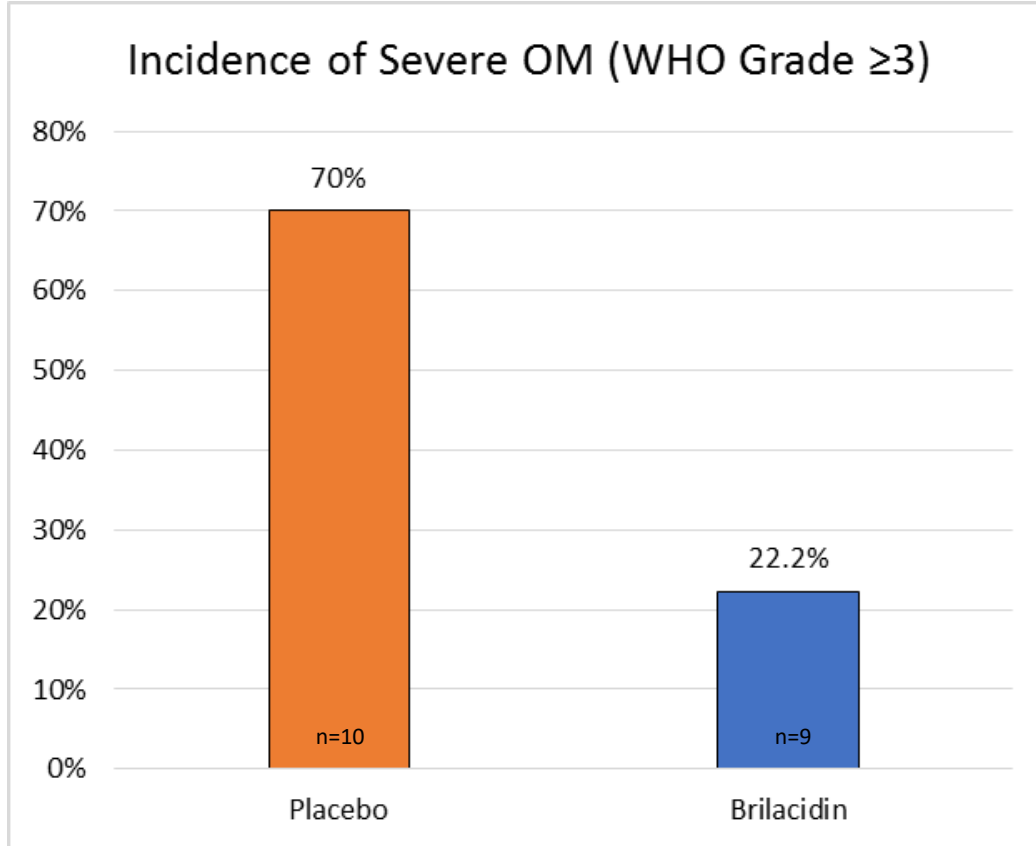
- Endoscopy subscore  $\leq 1$
- Rectal Bleeding subscore of 0
- Stool Frequency subscore improvement or no change from baseline



# Brilacidin: Phase 2 Oral Mucositis Trial

## Positive Results: Ad-Hoc Interim Analysis

Anticipated Completion 4Q2017



A Painful and Common Complication of Chemoradiation



Photo: courtesy of S. Sonis

- **Brilacidin markedly reduced the Incidence of Severe OM (WHO Grade  $\geq 3$ )** experienced during chemoradiation therapy by subjects with Head and Neck Cancer

- **7 of 10 subjects (70%) in the placebo treatment arm** experienced at least one score of WHO Grade  $\geq 3$
- **2 of 9 subjects (22.2%) in the Brilacidin treatment arm** experienced at least one score of WHO Grade  $\geq 3$

# Brilacidin: Phase 2b \*ABSSSI Trial

*Positive Results (Antibacterial; Completed)*

- Single Dose Brilacidin Efficacy comparable to 7-day regimen of robust comparator (Daptomycin x 7 days)

	Brilacidin 0.6 mg/kg IV x 1 day (N=53)	Brilacidin 0.8 mg/kg IV x 1 day (N=53)	Brilacidin x 3 days (N=53)	Daptomycin x 7 days (N=50)
<b>Number Assessed</b>	51	48	52	48
<b>Clinical Response (%)</b>	47 (92.2)	46 (95.8)	51 (98.1)	45 (93.8)
95% C.I.	(84.8, 99.5)	(90.2, 100)	(94.3, 100)	(86.9, 100)

## Active Skin Infection



\*Acute Bacterial Skin and Skin Structure Infection



# Kevetrin for Ovarian Cancer

## Program Summary

### A p53-modulating Drug Candidate

- **Ovarian Cancer (OC) Indication**
  - Supported by Phase 1 solid tumor trial
- **Ongoing Phase 2a Trial for Platinum-Resistant Ovarian Cancer**
  - p53 pathway modulation being measured in tumors
- **Oral Formulation Underway**
  - Better aligns with Kevetrin's PK profile (short half-life)
  - May provide for even better drug exposure and toleration
- **Granted Multiple FDA Orphan Drug Designations**



Source: [publichealthwatch](#)

# Proven Team With Deep Experience

## Senior Management, Key Advisors

<p><b>LEO EHRLICH</b> Co-Founder, CEO, CFO, Board Chairman</p>	<ul style="list-style-type: none"> <li>&gt;25 years of executive leadership experience in building and managing emerging growth companies</li> <li>Multiple C-suite roles at private and public companies</li> </ul>
<p><b>ARTHUR P BERTOLINO, MD, PHD, MBA</b> President and CMO</p>	<ul style="list-style-type: none"> <li>&gt;15 years of domestic and global drug development and management experience</li> <li>Extensive senior leadership (VP of Dermatology at Novartis)</li> </ul>
<p><b>KRISHNA MENON, PHD, DVM</b> Co-Founder, CSO, an Board Member</p>	<ul style="list-style-type: none"> <li>&gt;30 years of drug development experience</li> <li>Key pre-clinical oncology group leader (Gemzar and Alimta)</li> </ul>
<p><b>JANE HARNESS, MS, MP</b> Sr Vice-President, Clinical Sciences and Portfolio Management</p>	<ul style="list-style-type: none"> <li>&gt;20 years in domestic and international clinical drug development</li> <li>Extensive pharma leadership positions across entire career</li> </ul>
<p><b>Francis A Farraye, MD, MSC</b> Scientific Advisor</p>	<ul style="list-style-type: none"> <li>Professor of Medicine, Clinical Director, Section of Gastroenterology and Co-Director, Center for Digestive Disorders, at Boston University School of Medicine</li> </ul>
<p><b>Paul Ginsburg, PHD</b> Scientific Advisor</p>	<ul style="list-style-type: none"> <li>Patent expert in the pharmaceutical and biotechnology fields; former head of NY-based patent department at Pfizer</li> </ul>
<p><b>Stephen T Sonis, DMD, DMSC</b> Scientific Advisor</p>	<ul style="list-style-type: none"> <li>Recognized expert in cancer-related oral mucosal toxicities</li> <li>Professor of Oral Medicine at Harvard School of Dental Medicine, Senior Surgeon at the Dana-Farber Cancer Institute and Brigham and Women's Hospital</li> </ul>

Expertise

Pharma



Academic



# Commercial Expanse and Intellectual Property



## Intellectual Property Estate

### Prurisol

- #US Patents granted
  - 1
- Prurisol Mfg method
  - Prov. pending
- Countries Granted
  - Various EU
  - Japan
  - Others

### Brilacidin

- # US Patents granted
  - 9
- Brilacidin Mfg method
  - In-process
- Countries Granted
  - Various EU
  - Japan
  - Others

### Kevetrin

- # US Patents granted
  - 1
- # Patents pending
  - Others
- Countries Granted
  - Various EU
  - Japan
  - Others

## Prurisol

**Psoriasis-** Complete Ph2b trial

## Brilacidin

**Oral Mucositis-** Complete Ph2 trial

## Kevetrin

**Ovarian Cancer-** Preliminary p53 Modulation Results Ph2a trial

# Innovation Pharmaceuticals Strategic Direction

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- Leverage 2017 Milestones to Support Partnering Opportunities
  - Multiple CDAs Signed, Ongoing Interactions with Big Pharma and other Global Rx Companies
- Advance Formulation Work to Tailor Drug Delivery
- Continue to Build Value by Addressing Areas of Unmet Medical Need for the Benefit of Patients and Shareholders
- Anchor Each Drug Candidate in Additional Trials to Further Provide Favorable Return-On-Investment

# Innovation Pharmaceuticals Inc.

100 Cummings Center  
Beverly, MA

September 2017

Ticker: IPIX