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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

FORM 8-K

CURRENT REPORT PURSUANT  
TO SECTION 13 OR 15(D) OF THE  
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): **December 4, 2014**

**PLASMATECH BIOPHARMACEUTICALS, INC.**  
(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of incorporation)

**0-9314**  
(Commission File Number)

**83-0221517**  
(I.R.S. Employer Identification No.)

**4848 Lemmon Avenue, Suite 517, Dallas, TX 75219**  
(Address of principal executive offices) (Zip Code)

**(214) 905-5100**  
(Registrant's telephone number, including area code)

**ACCESS PHARMACEUTICALS, INC.**  
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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**Item 7.01. Regulation FD Disclosure**

**Item 8.01. Other Items**

On December 4, 2014, presentations relating to our technology, business and corporate financial structure were made to investors. Further presentation will be made to investors during December 2014. The presentation is attached as Exhibit 99.1 and is incorporated herein.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits.

99.1 Presentation entitled "PlasmaTech Biopharmaceuticals"

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## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PlasmaTech Biopharmaceuticals, Inc.  
(Registrant)

By: /s/ Harrison Wehner  
Harrison Wehner  
President and  
Chief Financial Officer

Date: December 4, 2014

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## EXHIBIT INDEX

### Exhibit Number

99.1 Presentation entitled "PlasmaTech Biopharmaceuticals"

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PLASMA TECH  
BIOPHARMACEUTICALS

*Investor Presentation*  
*December 2014*

## ***Safe Harbor Statement***

*This presentation contains certain statements that may be forward-looking within the meaning of Section 27a of the Securities Act of 1933, as amended, including statements relating to the product portfolio and pipeline and clinical programs of the company, the market opportunities for the Plasma Technologies fractionation technology, MuGard, ProctiGard, and the other mucoadhesive hydrogel products, and the company's goals and objectives. These statements are subject to numerous risks and uncertainties, including but not limited to the risks detailed in the Company's Annual Report on Form 10-K for the year ended December 31, 2013, and other reports filed by the company with the Securities and Exchange Commission.*

*This presentation does not constitute an offer or invitation for the sale or purchase of securities or to engage in any other transaction with PlasmaTech or its affiliates. The information in this presentation is not targeted at the residents of any particular country or jurisdiction and is not intended for distribution to, or use by, any person in any jurisdiction or country where such distribution or use would be contrary to local laws or regulations.*

✓ **Commercial stage biopharmaceutical company with two proprietary platform technologies, addressing large unmet medical needs**

✓ **Patented, disruptive fractionation process generating multiple biosimilar protein therapeutics**

- Plasma protein market is large (>\$15 billion WW) and growing at 11% annually
- Critical Alpha-1 supply shortage looming in 2017; antiquated Cohn fractionation process limits yields
- Significant yield improvements address supply constraints, expand margins
- Initial product target – Alpha-1 Antitrypsin for COPD; follow-ons in IVIG and Ultra-orphan proteins

✓ **Polymer Hydrogel Technology – Commercial Products Launching 2014/15**

- MuGard®, for oral mucositis, addressing \$1 billion market opportunity
- Four commercial partners launching 2014/15: US – AMAG Pharmaceuticals, Europe – Norgine BV, China – RHEI / Jian An Pharmaceuticals, and Korea – Hanmi Pharmaceuticals. Additional partners in discussion.
- ProctiGard™ recently received marketing clearance (July 2014) for treatment of radiation proctitis; business development efforts ongoing.
- Additional follow-on products being reviewed at FDA

✓ **Focus on Business Development – Partnering / M&A**

## Management & Board of Directors

### Management

**Scott Schorer - CEO**

- 18+ years leadership- healthcare biologics, devices, healthcare IT
- President, CEO: CentriMed, IST
- President: Systagenix Wound Management
- US Army: 82<sup>nd</sup> Airborne platoon leader

**Harrison Wehner - President & CFO**

- 20+ years healthcare & biotech IB, financial advisory, M&A
- Senior positions: Canaccord Genuity, CitiGroup, UBS
- Series 7, 24, 63 FINRA licenses

**David Nowotnik, Ph.D. - SVP R&D**

- 40+ years experience pharmaceutical R&D, quality systems, regulatory affairs
- Bristol-Myers Squibb, Amersham International, Guilford Pharmaceuticals, Tate & Lyle, Aspro-Nicholas.

### Board of Directors

**Steven Rouhandeh, Chairman**

- SCO Capital Partners
- Founder SCO Financial Group
- Deutsche Bank, Cravath

**Mark Alvino**

- Bradley Woods, Griffin Securities

**Stephen Howell, M.D.**

- UCSD, UCSD Cancer Center
- Miliken Foundation prize: cancer chemo

**Jeffrey Davis**

- Former CEO Access (PlasmaTech)
- PlasmaTech consultant
- Phillips Medical Systems, Deutsche Bank

**Mark Ahn, Ph.D.**

- Genentech, Galena Biopharma, Bristol-Myers Squibb, Amgen



## Scientific Advisory Board *Leaders in Alpha-1 and Mucositis*

### **Eugene Zurlo, BS, MS Pharmacy, Chairman**

- 56 years experience
- Founder/Chairman/ Inventor Plasma Technologies, LLC (Licensor)
- Baxter Hyland, Millipore, NY Blood Center, Alpine Biologics, Ayerst Laboratories
- Launched first commercial AHF concentrate: Hemofil (Baxter)

### **Charles Heldebrant, PhD**

- CSO PSC Biotech
- Alpha Therapeutic Corporation,
- Grifols: development, regulatory clearance, production of AAT product (sold to Baxter)
- Extensive experience in biological & pharmaceutical product development, regulatory, quality, validation,
- Holds 14 patents, author/co-author of 31 scientific / technical papers, extracts

### **Stephen T. Sonis, DMD, DMSc**

- Clinical Professor of Oral Medicine, Harvard, Senior Surgeon, Brigham and Women's Hospital and Dana-Farber Cancer Institute
- Founder, Partner, CSO Biomodels
- Expert in epithelial injury due to cancer therapy
- Established basic basis of mechanistic paradigm for mucosal injury
- Author >200 original publications, 9 books, 5 patents



**YEARS OF ACCOMPLISHMENT** — Robert "Sandy" Sandhaus, MD, PhD, describes the accomplishments of Charlie Strange, MD, that led to Strange's receiving the "Grateful Patient Award."

### **Charlie Strange, MD**

- Professor Pulmonary, Critical Care, Allergy, and Sleep Medicine, University S Carolina, Charleston SC
- Director: Alpha-1 Foundation Research Registry
- Clinical trial design & rare diseases expert

### **Robert Sandhaus, MD, PhD**

- Professor of Medicine: National Jewish Health, Denver CO
- Clinical Director: Alpha-1 Foundation
- Medical Director, Founder: AlphaNet
- Extensive pharma industry expert: pathogenesis of emphysema.
- Extensive plasma therapeutics industry experience

## Product Pipeline Targeting > \$17B Market Opportunity by 2017

<u>SDF Process:</u> <u>Salt Dialfiltration Process</u>	<u>Complete</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2017 Market Opportunity</u>	
<b>SDF Alpha™</b> (Alpha-1)	Process validation, Patent	PTE License, Manufacturer Qualification	Process Scale Up	Regulatory	Commercial	> \$ 2.5B	
<b>SDF Gamma™</b> (IVIg)			Process Scale Up	Regulatory	Commercial	> \$11.5B	
PlasmaTech™ Ultra-Orphan			Discovery	TBD	TBD	> \$ 1B	
<i>Plasma Protein Addressable Markets</i>						<i>~\$15B</i>	
<hr/>							
<u>PH: Polymer Hydrogel</u> <u>Technology Platform</u>						<u>2015 Market Opportunity</u>	
<b>MuGard®</b>	510(k) US AMAG, China: PHE		Europe: Norgine, Korea: Hanmi	ongoing global commercial optimization		> \$1B	
<b>ProdiGard™</b>		510(k)	Commercial			> \$500M	
<b>BanzaGard™</b>			FDA Discussions towards 510(k)	Commercial			> \$500M
<i>Oncology Supportive Care Markets</i>						<i>&gt; \$2B</i>	

# Significant Plasma Therapeutics Opportunity

## ✓ **Large, Fast-Growing Market**

- Plasma protein therapeutics derived from blood plasma
- WW market >\$15 billion, growing at approximately 11% annually
- Growth driven by greater awareness of therapeutic potential plasma proteins, better and earlier diagnostics
- Alpha-1, Alpha-1 antitrypsin ("AAT"), Alpha-1 proteinase inhibitor ("A1PI")

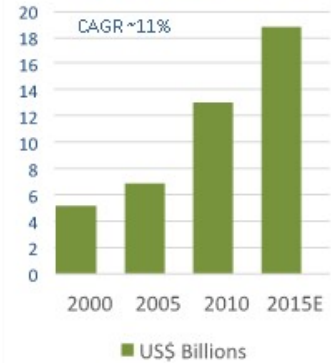
## ✓ **Unmet Medical Need – Supply Constraints Hampered by Cohn Process**

- Antiquated Cohn fractionation damages proteins, is ripe for innovation
- Large fractionators slow to alter current process; plasma shortages looming & prices rising
- PlasmaTech SDF™ Process greatly enhances yields, enhancing margins
- "Kinder, gentler" SDF Process yields commercial quantities of ultra-orphan proteins (new product opportunities)

## ✓ **Considerable M&A, Strategic Activity – Exit Strategy**

- Plasma processing: Grifols acquires Talecris, Bain Capital acquires PRUK
- Baxter licenses Kamada Glassia™
- Biologics deals: Roche/Intermune \$8.3B, Sanofi/Genzyme \$20B, Teva/Sicor \$3.4B, Teva/CoGenesys ~\$400M
- China Biologics: CBPO launched in 2010, currently trading at ~\$54

### Global Plasma Therapeutics Market



# Highly Optimized PlasmaTech SDF™ Process

***Enhancing Yields Drives Significant Value Per Liter of Plasma***

<b><i>PlasmaTech SDF Process</i></b>	<ul style="list-style-type: none"> <li>✓ <b>Simple 2-Stage Sodium Citrate Precipitation + Diafiltration</b></li> <li>✓ No ethanol or PH changes vs. Cohn Fractionation</li> <li>✓ Significantly decreased adoption risk; reduced cost</li> </ul>
<b><i>Benefits of PlasmaTech Process</i></b>	<ul style="list-style-type: none"> <li>✓ <b>Alpha-1 yield increase ~10X</b></li> <li>✓ IVIG yield increase ~ 20%</li> <li>✓ Similar yields on Factor VIII</li> <li>✓ <i>Potential for multiple ultra-orphan proteins</i></li> </ul>
<b><i>Positive Margin Impact</i></b>	<ul style="list-style-type: none"> <li>✓ <b>Yield improvements could drive 80% product margins versus 40% Cohn process margin</b></li> <li>✓ Addresses anticipated shortages in key target proteins</li> </ul>
<b><i>Shorten Pathways to Regulatory Approvals</i></b>	<ul style="list-style-type: none"> <li>✓ <b>Abbreviated biosimilar approval pathway under Section 351(k)</b></li> <li>✓ Bio-equivalence and safety studies – fewer patients</li> </ul>
<b><i>Proprietary Intellectual Property</i></b>	<ul style="list-style-type: none"> <li>✓ Three issued US and WW patents, foreign counterparts pending; additional patent filings anticipated</li> </ul>

***“The Cohn ethanol process utilizes multiple pH changes away from neutral which generates untoward side reactions which can alter (denature) the desired bio molecules.”***

***Gene Zurlo***

PlasmaTech will be the *only* company focused on  
"Alpha-1 First"



✓ **Alpha-1 Antitrypsin – Serving Large Underserved Medical Need**

- Alpha-1 Antitrypsin Deficiency ("AATD"): Genetic condition whereby insufficient AAT protein made in the liver

✓ **Driving Growth in Alpha-1 Market**

- Focus on early detection; newborn screening in NY, MA
- Enhanced awareness of therapeutic potential of Alpha-1
- Expanding global usage of plasma proteins, especially emerging markets

✓ **Looming Alpha-1 Supply Shortage**

- Large fractionators slow to alter current processes
- Cohn fractionation does not selectively target Alpha-1; terrible Alpha-1 yield

• **Market Data**

- ~\$900m ww
- ~400k potential patients in US & Europe
- ~3-5% penetrated
- Potential: \$16-30bn fully penetrated

• **Revenue Dynamics**

- ~100k / patient per year
- \$100m per 1k patients
- ~22 years/patient

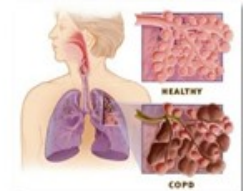
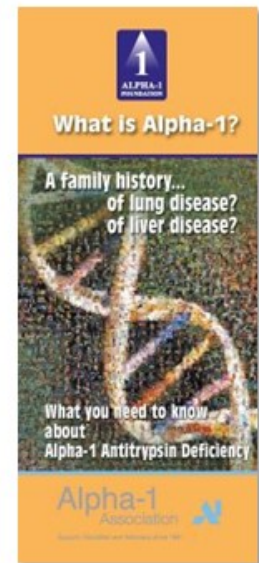
***"There is dramatic, continued increase in demand for plasma derived products globally; between 2017 and 2020, demand will outpace supply"***

***Robert Sandhaus, M.D., Ph.D.***



## COPD is a large and under-treated disease

- ✓ **AATD is an under-diagnosed hereditary condition**
  - Alpha-1 Antitrypsin Deficiency ("AATD"): Genetic condition whereby insufficient AAT protein made in the liver
  - Alpha-1 protects lungs from inflammation and damage caused by infection and inhaled irritants
  - AATD may lead to liver disease
- ✓ **Prevalence – need to diagnose and treat**
  - AATD has been identified in nearly all populations and ethnic groups
  - Roughly 1 in every 2,500 Americans have AATD
  - Up to 3% of all people diagnosed with COPD may have undetected AATD
  - The World Health Organization (WHO), American Thoracic Society (ATS), and the European Respiratory Society (ERS) recommend that everyone with COPD be tested for AATD



***"The incidence of COPD could be as high as 30 million in the US alone"***  
***Charlie Strange, M.D.***

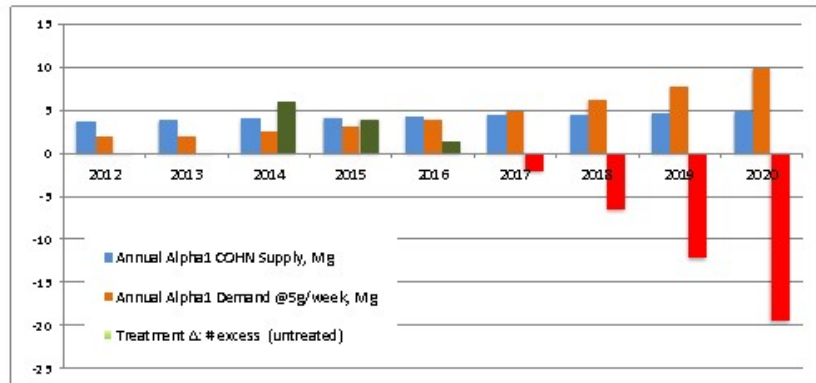
# Looming Alpha-1 Supply Shortage

*“This is an underappreciated problem that will affect the entire alpha-1 community.*

*There is no current solution with the current systems and approach*

*These numbers are accurate and make a compelling case for PlasmaTech’s approach”*

*Robert Sandhaus, MD PhD*



		2012	2013	2014	2015	2016	2017	2018	2019	2020
Market	Alpha1 Market Size, \$m	600	700	900	1,215	1,640	2,214	2,989	4,036	5,448
	# Patients ww	7,189	7,839	9,419	11,884	14,993	18,917	23,867	30,112	37,992
Alpha1 Supply	Liters sourced for A1, M L	21.4	22.1	22.8	23.5	24.3	25.0	25.8	26.7	27.5
	A1 treatment capacity: # patients	14,401	14,862	15,338	15,829	16,335	16,858	17,397	17,954	18,529
	Treatment Δ: # excess (untreated)			5,919	3,945	1,342	(2,059)	(6,470)	(12,158)	(19,464)
	Missed Revenue Opp, \$m						(241)	(810)	(1,629)	(2,791)
if PTBI treated all patients who were not served by Cohn Process										
Plasma Tech	A1 Revenue, \$m						241	810	1,629	2,791
	IVIg Revenue, \$m						109	355	693	1,154
	Total Revenue, A1, IVIG						350	1,165	2,323	3,946

- Alpha-1 CAGR: 35%, Other plasma protein CAGR: 11%
- Global plasma processing capacity assumed growth: 3.2%/year, 24.5 million liters ww in 2005, with only 70% of total capacity applicable for AAT processing
- Dose calculation: 5g/week

## Why is Alpha-1 a lower priority for fractionators?

2016 Price, \$/g process example:  k liters

	Plasma \$,'000	Alpha-1			IVIg	
		A1, kg	A1 \$,'000	Patients	IVIg, kg	IVIg \$,'000
<b>Cohn</b>	22,275	26	<b>11,045</b>	<b>101</b>	600	<b>46,800</b>
<b>SDF</b>	22,275	270	<b>113,607</b>	<b>1,038</b>	728	<b>56,768</b>
Difference	-	244	102,562	938	128	9,968

- ✓ **IVIg represents significantly larger opportunity for Cohn fractionators**
  - For above example of 150,000 L plasma processed, costing ~\$21m
  - Cohn produces ~\$9.8m Alpha-1 vs. ~195m for IVIg → IVIg represents a 20X larger opportunity
  - SDF produces ~\$100m Alpha-1, > 10x
- ✓ **Smaller Alpha-1 market (for now)**
  - Alpha-1 market is just beginning to grow
- ✓ **Cost, regulatory disruption of changing manufacturing facilities**
  - Most changes to plasma processing for one molecule change the process for many others
  - Any material change in process requires regulatory rework
  - No disruption in supply is tolerable by patients or governments

• 2014 Pricing / Costs: Plasma: \$149/L, Alpha-1: \$421/g, IVIg: \$78/g, processing: \$160/L





## PlasmaTech SDF Gamma Process produces IVIG: a high value protein

### ✓ **PlasmaTech IVIG – increases IVIG yield by ~20%**

- Intravenous immunoglobulin (IVIG) is the high value plasma protein with multiple uses in patients with decreased or abolished antibody production capabilities
- ~50% of the total \$15 billion plasma protein market

### ✓ **Multiple targets for IVIG**

Neurology	Hematology	Dermatology	Other
✓ Guillain Barre	✓ Immune thrombocytopenia	✓ Kawasaki Syndrome	✓ Primary antibody deficiencies
✓ Lambert Eaton Syndrome	✓ Post BMT	✓ Dermatomyositis	✓ Vasculitis
✓ Multifocal motor neuropathy	✓ Myeloma and CLL	✓ Toxic epidermal necrolysis	✓ Autoimmune uveitis
✓ Myastheniagravis	✓ Immune neutropenia	✓ Atopic dermatitis	✓ Birdshot retinochoroidopathy
✓ Stiff person syndrome	✓ Parovirus B19 associated aplasia	✓ Blistering diseases	✓ Mucous membrane pemphigoid

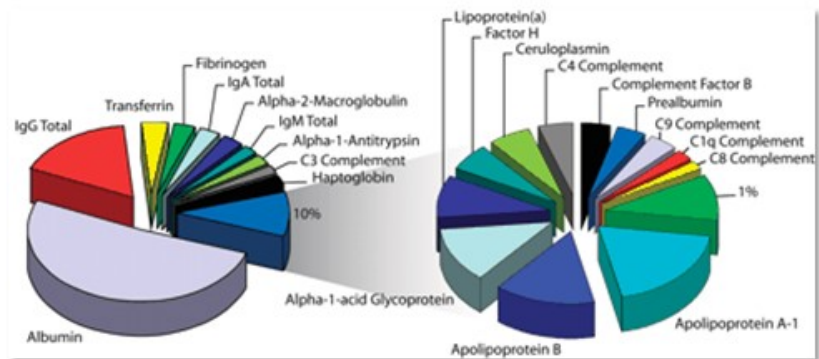
## Ultra Orphan Proteins

### ✓ *Multiple High Value Ultra-Orphan Protein Products*

- >200 additional proteins in human plasma with therapeutic potential
- Denaturing impact of ethanol in Cohn process could create multiple product opportunities for PlasmaTech

### ✓ *Other Possible Plasma Products*

- C-1-esterase inhibitor
- Protein C
- Anti-thrombin III
- Alpha-2-Macroglobulin
- Transferrin
- Plasminogen
- Haptoglobin
- Plasma gelsolin



***Proprietary Mucoadhesive Hydrogel Delivery System***

- ✓ *Unique aqueous pseudoplastic liquid: beneficial in inhibition / treatment of mucositis & other oral cavity disorders*
- ✓ *Patented mucoadhesive hydrogel delivery system enables extended delivery of drugs to mucosal tissue*
- ✓ *System enables multiple products in patented delivery system - patent includes claims on formulations with actives against mucocutaneous disorders*
- ✓ *Broad patent coverage and claims (six patents granted, multiple pending). Patent extension opportunity for generic active drugs; multiple regulatory pathway via ANDA, 505(b)(2), 510(k) or IND/NDA pathways*



## MuGard for Oral Mucositis: unique and differentiated

**Significant Medical Issue**  
*Often Unrecognized, Undiagnosed and Undertreated*

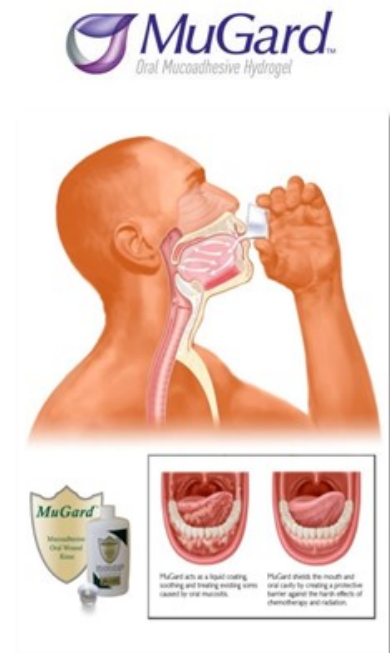
<b>Well-Being</b>	<ul style="list-style-type: none"> <li>✓ Pain</li> <li>✓ Problems with eating, drinking, speaking and swallowing</li> <li>✓ Weight loss</li> <li>✓ Impairment of quality of life (e.g. mood)</li> </ul>
<b>Infection</b>	<ul style="list-style-type: none"> <li>✓ Reduces infection barrier</li> </ul>
<b>Compromised Treatment</b>	<ul style="list-style-type: none"> <li>✓ Reduced dosage</li> <li>✓ Breaks or delays in therapy affecting treatment outcomes</li> </ul>
<b>Economic Impact</b>	<ul style="list-style-type: none"> <li>✓ Prolonged hospital stays</li> <li>✓ Increased use of resources (e.g. feeding tube placement)</li> </ul>
<b>The MuGard Patient Solution</b>	<ul style="list-style-type: none"> <li>✓ User-friendly ready to use rinse</li> <li>✓ Reduces pain</li> <li>✓ Improves speech</li> </ul>

**MuGard.**  
*Oral Mucoadhesive Hydrogel*



## MuGard for Oral Mucositis: Strong Progress

- ✓ **MuGard for Oral Mucositis ("OM")**
  - Received FDA Marketing Clearance / launching now
  - No competing products with demonstrated clinical benefit
- ✓ **\$1B+ Global Market Opportunity:**
  - > 400K diagnosed OM cases: US alone<sup>1</sup>
  - 90% of radiation patients / 40% of cycled chemo patients
- ✓ **Healthcare Cost Impact:**
  - Studies show OM costs \$17,000 to \$40,000 per patient<sup>2,3</sup>
- ✓ **Global Launch in 2014 & 2015**
  - US - AMAG Pharmaceuticals (AMAG)
  - European Union - Norgine B.V.
  - China - RHEI / Jian An
  - Korea - Hanmi Pharmaceuticals
  - Discussions ongoing in Japan, Australia, others



1. Co wley MM, Benson LM. Current trends in managing oral mucositis. *Clin J Oncol Nurs.* 2005;9(5):584-592  
 2. Sonis ST, Oster G, Fuchs H, et al. Oral mucositis and the clinical and economic outcomes. *J Clin Oncol* 2001;19:2201-2205.  
 3. Barasch A et. Al. Palifermin for oral mucositis *Biologics: Targets & Therapy* 2009;3 111-116



### Published in *CANCER* – May 1, 2014

- ✓ **Protocol** – Multi-center, randomized, placebo controlled study in 120 head and neck cancer patients
- ✓ **Positive** - MuGard was **statistically significant** with regard to:
  - Primary endpoint of reduction in mouth and throat soreness (p=0.034)
  - Reduction in OM disease severity by WHO score at end of radiation treatment (p=0.038)
- ✓ **Secondary Endpoints** – Clinically important trends for MuGard
  - 10.0 day decrease in opioid use; duration of opioid use <50% less in MuGard arm
  - MuGard patient weight loss 3.9kg less
  - Delayed onset of oral mucositis by 9 days
  - Overall MuGard very well tolerated with no SAEs
- ✓ First trial to show clinical benefit in oral mucositis for tough-to-treat head and neck cancer patients.

### Novartis / UCLA MuGard Trial

- ✓ Novartis' Afinitor (everolimus), approved in various breast, pancreatic, renal and brain cancers
- ✓ Approximately 70% of Afinitor patients experience severe (painful, ulcerative) stomatitis that presents like oral mucositis
- ✓ Initiated by UCLA breast cancer clinician who have had success with MuGard in Afinitor patients experiencing OM; trial supported by Novartis, PlasmaTech, and AMAG
- ✓ Afinitor's approval in breast cancer should drive revenues by an additional \$1.5 billion (analyst estimates for 2018 exceed \$3.5 billion); reducing mucositis side effect could be an important value driver

*Mucoadhesive Oral Wound Rinse (MuGard) in Preventing and Treating Stomatitis in Patients with ER- or PR-Positive Breast Cancer Receiving Everolimus*

Cancer



# ProctiGard for Radiation Proctitis

## Received FDA Marketing Clearance – July 2014

### ✓ Radiation Proctitis - Large Unmet Medical Need

- Inflammation & damage to the lower portion of the colon post exposure to x-rays or ionizing radiation as part of radiation therapy. Most common after treatments for cancer such as cervical, prostate & colon cancer
- Rectal mucositis, a broader condition, may be caused by bacterial or viral infections, parasites, food or contact allergies, & surgery
- >250k new cases of prostate, cervical, rectal, testicular, bladder, and endometrial cancer diagnosed annually
- ~50% of these patients require radiation therapy, ~75% of patients undergoing pelvic irradiation experience radiation proctitis<sup>1</sup>; addressable market of over 100,000 potential patients annually in US alone.

### ✓ ProctiGard™ - 90 Days from Filing to Marketing Clearance

- Product line extension highlights potential for mucoadhesive polymer hydrogel patented technology
- Developed in response to feedback in oncology market, where oncologists were using MuGard in off-label applications on mucosal tissue outside of the oral cavity
- PlasmaTech retains global commercialization rights; has had preliminary discussions with potential global marketing partners

### Radiation Proctitis



1. Hayne D, Waizey CJ, Boulos P B. Ano rectal injury following pelvic radiotherapy. Br J Surg. 2001;88:1037-1045.



## Numerous Valuable Near-Term Milestones

Events & Milestones	Estimated Timing
Global roll-out of MuGard for oral mucositis - ongoing	✓
FDA 510(K) marketing approval: <b>ProctiGard™</b>	✓
<b>MuGard®</b> Partnerships: Norgine (Europe), Hanmi (Korea)	✓
SDF License Executed, New Management Team	✓
Norgine/Hanmi <b>MuGard®</b> commercial launches	1H 2015
<b>BenzaGard™</b> : anticipated FDA marketing clearance	2015
<b>SDF Alpha™</b> validation, characterization, CMC, IND	2015
<b>SDF Alpha, SDF Gamma</b> development and marketing partnership(s)	2015-16
<b>SDF Alpha, SDF Gamma</b> regulatory approvals and revenue	2016-17
Follow-on plasma product targets: ultra-orphan proteins, and additional hydrogel platform products	2016-17+

# Valuation Comparables

## Relative Valuations of Drug Delivery Companies / Related Companies

### Market Analysis

(figures in millions, except per share data)

Company	Ticker	Price (1) @ 12/4/14	Price (1)			Revenue			Ent. Value / Revenue		
			Equity Value	Enterprise Value (2)	LTM	2014	2015	LTM	2014	2015	
GRIFOLS SA-ADR	GRFS	\$33.10	\$14,132	\$13,524	\$4,252	\$4,155	\$4,439	3.2x	3.3x	3.0x	
NEKTAR THERAPEUTICS	NKTR	\$12.67	\$2,005	\$1,899	\$212	\$200	\$264	8.9x	9.5x	7.2x	
CHINA BIOLOGIC PRODUCTS INC	CBPO	\$54.67	\$1,703	\$1,809	\$228	\$241	\$279	7.9x	7.5x	6.5x	
DEPOMED INC	DEPO	\$14.88	\$940	\$608	\$236	\$243	\$244	2.6x	2.5x	2.5x	
PROMETIC LIFE SCIENCES INC	PLICN	\$1.77	\$939	\$961	\$16	\$23	\$41	59.3x	41.9x	23.7x	
BIODELIVERY SCIENCES INTL	BDSI	\$15.90	\$750	\$678	\$40	\$42	\$90	16.8x	16.3x	7.5x	
AMAG PHARMACEUTICALS INC	AMAG	\$30.98	\$867	\$647	\$93	\$107	\$367	7.0x	6.1x	1.8x	
FLAMEL TECHNOLOGIES-SP ADR	FLML	\$12.68	\$644	\$721	\$30	\$39	\$203	23.7x	18.3x	3.6x	
ROCKWELL MEDICAL INC	RMTI	\$10.14	\$398	\$406	\$54	\$53	\$85	7.6x	7.6x	4.8x	
ANTARES PHARMA INC	ATRS	\$1.98	\$325	\$277	\$23	\$26	\$63	12.13x	10.6x	4.4x	
KAMADA LTD	KMDA	\$4.11	\$118	\$75	\$71	\$70	\$82	1.1x	1.1x	0.9x	
Mean			\$2,074	\$1,964	\$478	\$473	\$560	13.6x	11.3x	6.0x	

Source: Bloomberg and Wall Street Research

Note: LTM = Latest Twelve Months

(1) Stock price as of December 4, 2014

(2) Enterprise Value equals Equity Value plus debt less cash

## Capitalization Table

12/4/2014	Shares Outstanding	WAEP
Outstanding common shares	536,089	-
Warrants	577,756	\$46.50
Options	233,834	\$23.60
<b>Fully Diluted Total</b>	<b>1,347,679</b>	

*(in US\$ thousands)*

*September 30, 2014*

Cash (at 9.30.2014)

\$ 165

Dividends payable (convert into deal)

\$ 8,373

All Series A and Series B Preferred Shares convert into deal

No long term debt

## *Investment Highlights*

- ✓ ***Commercial stage biopharmaceutical company with two proprietary platform technologies, addressing large unmet medical needs***
- ✓ ***Patented, disruptive fractionation process generating multiple biosimilar protein therapeutics***
  - Plasma protein market is large (>\$15 billion WW) and growing at >10% annually
  - Critical Alpha-1 supply shortage looming in 2017; antiquated Cohn fractionation process limits yields
  - Significant yield improvements address supply constraints, expand margins
  - Initial product target – Alpha-1 Antitrypsin for COPD; follow-ons in IVIG and Ultra-orphan proteins
- ✓ ***Polymer Hydrogel Technology – Commercial Products Launching 2014/15***
  - MuGard®, for oral mucositis, addressing \$1 billion market opportunity
  - Four commercial partners launching 2014/15: US – AMAG Pharmaceuticals, Europe – Norgine BV, China – RHEI / Jian An Pharmaceuticals, and Korea – Hanmi Pharmaceuticals. Additional partners in discussion.
  - ProctiGard™ recently received marketing clearance (July 2014) for treatment of radiation proctitis; business development efforts ongoing.
  - Additional follow-on products being reviewed at FDA
- ✓ ***Focus on Business Development – Partnering / M&A***