Innovators in the development & commercialization of

INJECTABLE COLLAGENASE

BioSpecifics

July 2016
Forward-Looking Statements

This presentation includes “forward-looking statements” within the meaning of, and made pursuant to the safe harbor provisions of, the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact, including statements regarding the Company’s strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, expected revenue growth, and the assumptions underlying or relating to such statements, are “forward-looking statements”. The forward-looking statements include statements concerning, among other things, the revenue growth opportunities emerging from a robust clinical development pipeline for XIAFLEX; the timing of BioSpecifics beginning the clinical program in uterine fibroids; the Company’s ability to bring new indications to early proof-of-concept, the timing of presenting such indications to Endo for potential opt-in, and Endo’s willingness to opt-in; the timing of Endo beginning a registration trial in Dupuytren’s nodules; the expansion of the market for XIAFLEX through future growth initiatives; the timing of the initiation of the Phase 2b trial in adhesive capsulitis; the timing of reporting top-line data from recently initiated Phase 2b trial in cellulite; the timing of the initiation of the studies in uterine fibroids, lateral hip fat and plantar fibromatosis; Endo’s interest in currently unlicensed indications, including uterine fibroids, human lipoma, capsular contracture of the breast, Dercum’s disease, knee arthrofibrosis, urethral strictures, hypertrophic scars and keloids; whether XIAFLEX will be the only FDA approved nonsurgical therapy for adhesive capsulitis, canine lipoma and human lipoma; the projected receipt of payments from Endo, including, among others, sublicense income payments based on Endo’s partnerships; and the strength of the Company’s IP portfolio. In some cases, these statements can be identified by forward-looking words such as “expect,” “plan,” “anticipate,” “potential,” “estimate,” “can,” “will,” “continue,” the negative or plural of these words, and other similar expressions. These forward-looking statements are predictions based on our current expectations and our projections about future events and various assumptions. There can be no assurance that we will realize our expectations or that our beliefs will prove correct. There are a number of important factors that could cause BioSpecifics’ actual results to differ materially from those indicated by such forward-looking statements, including the timing of regulatory filings and action; the ability of Endo and its partners, Asahi Kasei Pharma Corporation, Actelion Pharmaceuticals Ltd. and Swedish Orphan Biovitrum AB, to achieve their objectives for XIAFLEX in their applicable territories; the market for CCH in, and timing, initiation and outcome of clinical trials for, additional indications, which will determine the amount of milestone, royalty, mark-up on cost of goods sold, license and sublicense income that BioSpecifics may receive; the potential of CCH to be used in additional indications; Endo modifying its objectives or allocating resources other than to XIAFLEX; and other risk factors identified in BioSpecifics’ Annual Report on Form 10-K for the year ended December 31, 2015, Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 and its Current Reports on Form 8-K filed with the Securities and Exchange Commission. All forward-looking statements included in this Report are made as of the date hereof, are expressly qualified in their entirety by the cautionary statements included in this Report and, except as may be required by law, we assume no obligation to update these forward-looking statements.
Company Overview (NASDAQ: BSTC)

Originator of collagenase based-therapies

Profitable biopharma company with lean corporate structure and stock buy-back program

Receives revenues from XIAFLEX® milestones, royalties on net sales, mark-up on COGS and sublicense income by partner Endo

Future revenue growth opportunities from robust clinical development pipeline for XIAFLEX®

BioSpecifics developing XIAFLEX for medically necessary indications, clinical program in uterine fibroids to begin in 2H 2016
Unlocking Vast Potential of XIAFLEX®

- **XIAFLEX**: First-in-class, minimally invasive nonsurgical treatment for conditions caused by collagen accumulation with limited current treatment options

- BioSpecifics has positive clinical results in **12** indications

- **Drive R&D in new indications** to early proof-of-concept and present to partner Endo for potential opt-in

- Endo interested in **several currently unlicensed indications** – uterine fibroids, human lipoma, capsular contracture of the breast, Dercum’s disease, knee arthrofibrosis, urethral strictures, hypertrophic scars and keloids*

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*Based on most recent public statements made by Endo International plc
Marketed XIAFLEX Indications:
First, Effective Nonsurgical Treatment Options
Definition & Key Complications

- Deforming condition of the hand in which one or more fingers contracts toward the palm
- Limits range of motion and impairs quality of life
- Affects between 3-9% of adult Caucasians

**Pre-treatment:**

![Pre-treatment image]

*Source: Endo International plc*

**Post-treatment:**

![Post-treatment image]
Commercial Highlights for Dupuytren’s Contracture

- ~6,634 demand vials in 1Q16
  - ~1.2 vials/patient
- Statistically significant results from Phase 2a study in Dupuytren’s nodules
  - Nodules are far more prevalent than contractures
  - Endo to begin registration trial in 4Q16*
- Updated U.S. label including recurrence and retreatment data approved in May 2015
- Ex-U.S. highlights
  - Also commercially available in Canada and Australia
  - First commercial sale in Japan in September 2015
  - E.U. label expansion approved in November 2015 for treatment of two concurrent cords in same hand during one office visit

Source: Endo International plc

*Based on most recent public statements made by Endo International plc
XIAFLEX® for Peyronie’s Disease

Definition & Key Complications

- Inelastic collagen causing penile curvature; penis can bend at 90° angle during erection in severe cases
- Associated with increased pain, painful erections, palpable plaque, penile deformity and erectile dysfunction
- Potential loss of self-esteem and depression for patients and partners
- Incidence between 3-9% of population

**Pre-treatment:**

**Post-treatment:**

Mean reduction in penile curvature deformity for XIAFLEX® subjects in IMPRESS I trial was 38°

Source: Endo International plc

Subject 1106-7852 from Phase 3 IMPRESS trial
Commercial Highlights for Peyronie’s Disease

- ~7,378 demand vials in 1Q16
  - ~4.5 vials/patient

- In May 2015:
  - The American Urological Association presented first ever treatment guidelines for PD, recommending the use of XIAFLEX® in combination with modeling in patients with stable disease
  - Positive data showing improvements in female sexual function presented by Endo at AUA Annual Meeting

Source: Endo International plc
XIAFLEX 1Q16 Sales and Future Growth Initiatives

- 1Q16 U.S. net sales were $44.0 million, a 57% increase vs. 1Q15

FUTURE GROWTH INITIATIVES:

- Broaden physician base with improved targeting to reach the most appropriate physicians
- Direct to consumer campaign traction
  - Dupuytren’s contracture print ads
  - Peyronie’s disease unbranded educational campaign “Ask About the Curve” with Jerry Punch, M.D. and Men's Health Network
- Working to improve convenience to physicians through its reimbursement support initiatives and product savings program.

Source: Endo International plc
XIAFLEX® Pipeline Indications
# XIAFLEX® Pipeline Programs
## Future Revenue-Generating Opportunities

<table>
<thead>
<tr>
<th>Indication</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Milestones</th>
</tr>
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<tbody>
<tr>
<td>Cellulite</td>
<td><img src="image" alt="endo" /></td>
<td></td>
<td></td>
<td></td>
<td>Phase 2b initiated in 1Q16</td>
</tr>
<tr>
<td>Adhesive Capsulitis</td>
<td><img src="image" alt="endo" /></td>
<td></td>
<td></td>
<td></td>
<td>Initiate Phase 2b in 3Q16*</td>
</tr>
<tr>
<td>Human Lipoma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Statistically significant Phase 2 top-line results reported in June 2016</td>
</tr>
<tr>
<td>Canine Lipoma</td>
<td><img src="image" alt="endo" /></td>
<td></td>
<td></td>
<td></td>
<td>Endo has license for further development</td>
</tr>
<tr>
<td>Uterine Fibroids</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Initiate trial in 2H16</td>
</tr>
<tr>
<td>Lateral Hip Fat</td>
<td><img src="image" alt="endo" /></td>
<td></td>
<td></td>
<td></td>
<td>Initiate Phase 2 in 4Q16*</td>
</tr>
<tr>
<td>Plantar Fibromatosis</td>
<td><img src="image" alt="endo" /></td>
<td></td>
<td></td>
<td></td>
<td>Initiate Phase 2 in 3Q16*</td>
</tr>
</tbody>
</table>

*Based on most recent public statements made by Endo International plc*
**XIAFLEX® for Adhesive Capsulitis**
Potential to be Only FDA Approved Nonsurgical Therapy

- Inflammation and thickening of shoulder capsule due to collagen
- Limits range of motion of shoulder
- Common available treatment options are often painful and can require anesthesia
- Long-term intensive physical therapy, corticosteroids, manipulation under anesthesia and/or arthroscopic release

**Market Opportunity**
- Affects 20 - 50 million people worldwide
- 300K cases diagnosed annually in the U.S.; 10% treated invasively
- Condition can last approximately 1 year to up to 3.5 years
- Estimated to occur in 20% of diabetics

*Source: Endo International plc*
Phase 2b Study Results of XIAFLEX®
in Adhesive Capsulitis/Frozen Shoulder Syndrome

- 321 patient double-blind, placebo-controlled study evaluating safety and efficacy in Stage 2 (frozen stage) unilateral idiopathic frozen shoulder
  - Primary endpoint: change in degrees from baseline to Day 95 follow-up in active forward flexion in affected shoulder compared to placebo

- Strong, similar drug effect for key measures including forward flexion, shoulder abduction, external and internal rotation across both Phase 2a and Phase 2b trials
  - Similar patient improvement in pain seen across both trials

- Increased and unexpectedly robust placebo effect in those patients who did not receive XIAFLEX®

- BioSpecifics-sponsored Phase 2 dose response study demonstrated statistical significance (p=0.02) in active elevation from baseline at highest dose

Source: Endo International plc
XIAFLEX® for Cellulite
Phase 2b Study Initiated in February 2016

- Skin dimpling as a result of collagen fibrous septae, occurring mainly on the buttocks, lower limbs, and abdomen
- Affects ~85-98% of post-pubertal females

Phase 2b Study Design

- Enrolling 350 women (18+ years)
- Up to 3 treatment sessions of 0.84 mg/session or placebo (12 injections per session) with each treatment session occurring 21 days apart
- Primary endpoint is proportion of composite responders at Day 71
  - Defined as patients with a 2-point improvement from baseline in the clinician and patient-rated Photonumeric Cellulite Severity Scale (PCSS) (5-point scale)
- Independent 5-member panel of trained aesthetic clinicians will also evaluate pre-treatment and end-of-study photos using the PCSS

Source: Endo International plc
Top-line data from Phase 2a study:

- 150 women received up to three treatment sessions of drug or placebo according to randomization (5 high-dose (0.84mg): 5 mid (0.48mg): 5 low (0.06mg): 3 placebo)
- Mid and high level XIAFLEX® doses demonstrated statistically significant improvement in cellulite across all endpoints
- 68% of mid and high dose groups reported being “Satisfied” or “Very Satisfied” with results of treatment
- Well-tolerated by all dose groups with mild-to-moderate adverse events, primarily limited to local injection area

Source: Endo International plc
**XIAFLEX® for Human Lipomas**

**Phase 2 Opt-In Study Managed by BioSpecifics**

<table>
<thead>
<tr>
<th><strong>Definition</strong></th>
<th>Encapsulated deposits of benign fat, often detected as bulges under the skin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potential to be Only FDA-Approved Pharmaceutical Therapy</strong></td>
<td></td>
</tr>
</tbody>
</table>
- No FDA-approved pharmaceutical therapies available  
- Offers an alternative to patients that may choose to avoid surgery, and avoid surgically-related complications (hematomas, sutures, restricted activity and general or local anesthesia) |
| **U.S. Market Opportunity** |  
- ~600,000 patients in the U.S. annually  
- 20% of patients have multiple lipomas |
| **Phase 2 Trial Design** |  
- Randomized, double-blind placebo-controlled study in 19 patients with ≥ 2 benign lipomas of similar size  
- Each patient acted as both treated and control group  
- Primary endpoint: reduction in visible surface area of target lipomas relative to placebo, by caliper, 6 months post injection |
Positive Top-Line Phase 2 Study Results
Single 0.58 mg Injection of CCH

- **Primary endpoint:** 81.3% reduction in visible surface area for CCH vs. 2.1% increase for placebo; 83.4% difference in favor of CCH (p<0.0001)

- 89.5% responder rate (showed a ≥50% decrease in lipoma visible surface area relative to baseline) vs. 0% for placebo (p<0.0001)

- 64.8% mean decrease in the length from baseline for CCH vs. 0.2% increase for placebo (p<0.0001)

- 62.5% mean decrease in visible surface area at 3 months vs. 0.4% increase for placebo (p<0.0001) and 26.8% decrease vs. 0.2% increase at 1 month

- 57.9% of CCH treated patients reported being very satisfied; 36.8% were somewhat satisfied and 0% were not satisfied versus placebo where 21.1% were very satisfied; 15.8% were somewhat satisfied and 57.9% were not satisfied (p=0.0010 in favor of CCH)
### XIAFLEX® for Lipomas in Canines

Potential to be Only FDA Approved Nonsurgical Therapy

| Key Complications | ▪ Lipomas can seriously restrict motion in older dogs  
▪ Surgery can be risky due to the use of general anesthesia - especially for older dogs |
|------------------|------------------------------------------------------------------|
| Market Opportunity | ▪ 1.7M dogs affected in the U.S. annually  
▪ ~1M lipomas excised per year |
| Chien-804 Trial Results | ▪ Randomized, placebo-controlled Phase 2 Study  
▪ Demonstrated benefit in secondary measures including pet owner satisfaction and post-treatment difference in mean surface area |
## XIAFLEX® for Uterine Fibroids
### Clinical Trial to Begin in 2H16

**Definition & Key Complications**
- Benign tumors in the reproductive tract that contain large amounts of collagen
- Cause pelvic discomfort and pain, decreased fertility, pregnancy complications, increased rate of miscarriage, heavy menstrual bleeding and frequent urination
- Leading cause of hysterectomies in the U.S.

**U.S. Market Opportunity**
- ~200K hysterectomies and 30K myomectomies are performed annually to treat fibroids
- ~$9B in annual direct costs (surgery, hospital admissions, outpatient visits, medications)

**Encouraging Preclinical Data**
- Highly purified collagenase can reduce stiffness of human uterine fibroid tissue ex-vivo and potentially decrease their size
- Data published in May 2016 issue of the *American Journal of Obstetrics & Gynecology*

XIAFLEX® for Lateral Hip Fat
Phase 2 Trial to Begin in 4Q16*

Definition & Complications

- Similar prevalence to cellulite
- Fat accumulation is common among women particularly as they age
- Often very difficult to improve its appearance through exercise and diet alone
- Patients frequently avoid exercise and are unable to restrict their caloric intake
- In some cases, cyrolipolysis and liposuction are performed to remove the unsightly fat deposits

Source: Endo International plc
*Based on most recent public statements made by Endo International plc
XIAFLEX® for Plantar Fibromatosis
Phase 2 Trial to Begin in 3Q16*

Definition & Complications

- ~200,000 patients in the U.S.
- Pain and disability caused by the thickening of the feet's deep connective tissue
- Formation of nodules or cords along tendons of the foot
- Patients often have Dupuytren’s disease, Peyronie’s disease and adhesive capsulitis
- Current treatments include orthotics and anti-inflammatory drugs in the early stages of the disease, steroid injections and surgery in advanced cases

*Based on most recent public statements made by Endo International plc

Source: Endo International plc
Additional Promising Unlicensed Indications

**Capsular Contracture, Breast:** Post-surgical complication that can deform the breast and cause pain
- ~15% of breast augmentation / reconstructive surgery patients

**Hypertrophic Scars & Keloids:** Scars that form on the skin at site of injury
- ~600,000 scar and ~400,000 keloid patients

**Dercum’s Disease:** Obesity and overly sensitive painful adipose tissue
- Extremely rare condition

**Knee Arthrofibrosis:** Adhesions that form post-implant that may affect range of motion
- ~100,000 patients per year in U.S.

**Urethral Strictures:** Narrowing of the urethra that may affect urine flow
- 1% male population

*Source: Endo International plc*
## Endo Partnership for Development and Commercialization of XIAFLEX®

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
</table>
| **>$89.3M Received as of March 31, 2016** | - $89.3M received in licensing, sublicensing, milestone, COGS, and royalty payments as of March 31, 2016  
- Received $8.25M lump sum payment for ex-U.S. COGS by non-affiliates in Feb. 2016 |
| **Future Payments Due to BioSpecifics from Endo** | - Low double digit royalties as % of net sales  
- Additional mark-up on COGS for U.S. and other countries in Endo territory  
- Modest milestones for additional indications and regulatory submissions and approval worldwide |
| **Endo Opt-In Rights** | - Right to opt-in for all indications, following an opt-in payment and potential future milestone, royalty and COGS payments made to BioSpecifics |
| **Sublicense Income from Endo Partnerships** | - Endo partnered with Sobi, Asahi Kasei and Actelion for Dupuytren’s contracture and Peyronie’s disease  
- BioSpecifics entitled to specified % of potential milestones payments that Endo receives from its sublicensees |
Strong IP Portfolio

Long-term patent protection for CCH

- **Dupuytren’s Contracture**
  - Biologic Exclusivity until 2022
  - Drug product composition patent until 2028

- **Peyronie’s Disease**
  - Orphan Drug protection in U.S. until 2020
  - Drug product composition patent until 2028

- **Patents and Patent Applications**
  - Owned, co-owned or controlled by BioSpecifics for injectable collagenase to treat Dupuytren’s contracture, Peyronie’s disease, removal of adipose tissue and frozen shoulder syndrome and others
  - Royalties through 2028
Consistently Profitable Annually

Financial Highlights

(unaudited)

For the quarter ended

<table>
<thead>
<tr>
<th></th>
<th>03/31/16</th>
<th>03/31/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and equivalents, and investments</td>
<td>$44,263,035</td>
<td>$24,994,544</td>
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**Income Statement**

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<tr>
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<th>03/31/16</th>
<th>03/31/15</th>
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<tbody>
<tr>
<td>Revenues</td>
<td>6,567,991</td>
<td>$5,606,454</td>
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<tr>
<td>Other income</td>
<td>74,061</td>
<td>18,353</td>
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<tr>
<td>Costs and expenses</td>
<td>(2,412,833)</td>
<td>(2,042,587)</td>
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<tr>
<td>Provision for income taxes</td>
<td>(1,400,095)</td>
<td>(1,251,320)</td>
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<tr>
<td><strong>Net income</strong></td>
<td>$2,829,124</td>
<td>$2,330,900</td>
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Earnings per share:

<table>
<thead>
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<th>Basic</th>
<th>diluted</th>
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<tbody>
<tr>
<td></td>
<td>$0.40</td>
<td>$0.39</td>
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</tbody>
</table>

Shares used in computation of earnings per share:

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<tr>
<th></th>
<th>Basic</th>
<th>diluted</th>
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<tbody>
<tr>
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<td>7,011,664</td>
<td>6,739,047</td>
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<tr>
<td></td>
<td>7,274,966</td>
<td>7,218,033</td>
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</table>
**Anticipated Upcoming Pipeline Milestones**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Milestone Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Lipomas*</td>
<td>☐ Potential for Endo to opt-in following positive top-line Phase 2 results reported in June 2016</td>
</tr>
<tr>
<td>Uterine Fibroids*</td>
<td>☐ Initiate clinical trial in 2H16</td>
</tr>
<tr>
<td>Adhesive Capsulitis</td>
<td>☐ Initiate Phase 2b trial in 3Q16**</td>
</tr>
<tr>
<td>Cellulite</td>
<td>☐ Announce top-line data from recently initiated Phase 2b trial</td>
</tr>
<tr>
<td>Lateral Hip Fat</td>
<td>☐ Initiate Phase 2 trial in 4Q16**</td>
</tr>
<tr>
<td>Plantar Fibromatosis</td>
<td>☐ Initiate Phase 2 trial in 3Q16**</td>
</tr>
<tr>
<td>Dupuytren’s nodules</td>
<td>☐ Initiate registration trial in 4Q16**</td>
</tr>
</tbody>
</table>

* BioSpecifics-managed development programs

**Based on most recent public statements made by Endo International plc**