Forward-Looking Statements & Disclaimer

This presentation contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, relating to, among other things, the future performance of Sientra that are based on management's current assumptions and expectations of future events and trends and involve risks and uncertainties. Forward-looking statements include, but are not limited to, statements regarding Sientra's ability to successfully commercialize its products, market acceptance of its products, the planned acquisition of Miramar Labs, Inc. which is the subject of this presentation and the success thereof, market opportunities and ability to achieve expected growth, sales and financial results, the Company's continued efforts to secure a stable manufacturing supply chain that ensures uninterrupted access to its breast implant products, and the experience of its aesthetics sales force are subject to risks and uncertainties. The Company's business, strategy, operations or financial performance, and actual results may differ materially from those predicted or implied and reported results should not be considered as an indication of our future performance. There can be no assurance that the acquisition of Polytech will be completed as currently contemplated, or at all. In addition, there can be no assurance that intended benefits of the acquisition, including any projected pro forma operating results, will be realized on the timetable currently estimated, or at all. All statements other than statements of historical fact are forward-looking statements. The words "believe," "may," "might," "could," "will," "aim," "estimate," "continue," "anticipate," "intend," "expect," "plan," or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes are intended to identify estimates, projections and other forward-looking statements.

This presentation includes estimated projections of future operating results. These projections were not prepared in accordance with published guidelines of the SEC or the guidelines established by the American Institute of Certified Public Accountants or the Public Company Accounting Oversight Board for preparation and presentation of financial projections. This information is not fact and should not be relied upon as being necessarily indicative of future results; the projections were prepared in good faith by management and are based on numerous assumptions that may prove to be wrong. Important factors that may affect actual results and cause the projections to not be achieved include, but are not limited to, risks and uncertainties relating to the company and other factors described under “Risk Factors” sections of the Company's Annual Report on Form 10-K and Quarterly Reports on Form 10-Q or Current Reports on Form 8-K and “Forward-Looking Statements.” The projections also reflect assumptions as to certain business decisions that are subject to change. As a result, actual results may differ materially from those contained in the estimates. Accordingly, there can be no assurance that the estimates will be realized.

Management is using non-GAAP financial measures in this presentation because it considers them to be important supplemental measures of the Company’s performance. Non-GAAP financial measures should be considered in addition to, not as a substitute for, net income, total debt or other financial measures prepared in accordance with GAAP. The Company’s methods of determining these non-GAAP financial measures may differ from the methods used by other companies for these or similar non-GAAP financial measures. Accordingly, these non-GAAP financial measures may not be comparable to measures used by other companies.

This presentation also contains estimates and other statistical data made by independent parties and by the Company relating to market size and growth and other industry data. This presentation also contains estimates and information from the management of Polytech relating to market position and financial data. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. The Company has not independently verified the statistical and other industry data generated by independent parties and contained in this presentation and, accordingly, it cannot guarantee their accuracy or completeness. In addition, projections, assumptions and estimates of its future performance and the future performance of the industries in which it operates are necessarily subject to a high degree of uncertainty and risk due to a variety of factors. In addition, the industry in which we operate is subject to a high degree of uncertainty and risk due to variety of factors, including those described in the “Risk Factors” section of the Company's Annual Report on Form 10-K and Quarterly Reports on Form 10-Q or Current Reports on Form 8-K. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by Sientra. Undue reliance should not be placed on the forward-looking statements in this release, which are based on information available to the Company on the date hereof, and except to the extent required by law, Sientra assumes no obligation to update such statements.
A diversified aesthetics company poised for expansion within new and existing markets

- Differentiated technology for 2 highly attractive market segments

- Highly experienced and proven aesthetic sales force leveraging industry leading plastic surgeon relationships

- Significant cross-selling potential with diversified product portfolio and sales channel providing multiple growth opportunities

- Deep management team with extensive high growth aesthetic company experience
Sientra Team

Patrick F. Williams
Chief Financial Officer, SVP & Treasurer
Key Experience: Nuvasive, Zeltiq

Jeffery Nugent
Chairman & CEO
Key Experience: J&J, Neutrogena, Revlon, Bioform, Precision Dermatology

Charlie Huiner
Chief Operating Officer & SVP Corporate Development & Strategy
Key Experience: Inamed (Allergan)

205 total employees*

- corporate: 108
- sales managers: 17
- sales reps: 80

As of March 31, 2018
Launching the “New Sientra” in 2018

**Breast Products**

- Re-launching full-scale breast implants business
- Driving deeper within reconstruction market with tissue expander portfolio
- Re-branding bioCorneum

**miraDry**

- Expanding sales force
- Launching new **fresh** protocol
- Updating sales & marketing strategies with proven team

**Significant Cross-Selling Opportunities**
Sientra U.S. Sales & Marketing Organization

Breast Products

Operating Room Focus

39 Plastic Surgery Consultants
6 Multi Specialty Consultants

Procedure Room Focus

miraDry

19 U.S. Capital Sales Reps
14 U.S. Consumable Sales Reps
~15 International Reps

As of March 31, 2018
Breast Products

Breast Implants
Tissue Expanders Q416
bioCorneum Q216

FY2017 Net Sales - $31.5 Million*
~$700 Million Market Opportunity**

*Excludes miraDry net sales
**Breast products market opportunity reflects Company estimates and American Society of Plastic Surgeons (ASPS) and American Society for Aesthetic Plastic Surgery (ASAPS) procedure data
Breast Market Opportunity

**US cosmetic breast aesthetics business: elective, cash-pay, private practice and solely board certified plastic surgeons**

<table>
<thead>
<tr>
<th>Market ($ millions)</th>
<th>Addressable Market Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Cosmetic Breast*</td>
<td>$360</td>
</tr>
<tr>
<td>Scar Management</td>
<td>$30</td>
</tr>
<tr>
<td>U.S. Recon Breast</td>
<td>$120</td>
</tr>
<tr>
<td>U.S. Tissue Expanders</td>
<td>$160</td>
</tr>
<tr>
<td>U.S. PS Regen Recon (ADM + Fat Grafting)</td>
<td>$370</td>
</tr>
<tr>
<td>Canada Breast Aesthetics</td>
<td>$40</td>
</tr>
<tr>
<td>OUS/OCAN Breast Aesthetics</td>
<td>$400</td>
</tr>
</tbody>
</table>

**Global Surgical Aesthetics:** ~$1,500

*Cosmetic breast market size excludes $40 million sales to non-board certified plastic surgeons that Sientra does not support. Source: Market sizes represent company estimates.*
Compelling Clinical Results

Largest long-term, peer-reviewed competitive data comparison confirms the safety and durability of Sientra implants

Risk of Key Complications Following Primary Augmentation:

<table>
<thead>
<tr>
<th>Complication/Event</th>
<th>Sientra 10-year (N=1116)</th>
<th>Mentor 10-year (N=552)</th>
<th>Allergan 10-year (N=455)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rupture (MRI cohort)</td>
<td>8.5%</td>
<td>24.2%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Capsular Contracture III/IV</td>
<td>12.9%</td>
<td>12.1%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Number of Implants</td>
<td>2230</td>
<td>1102</td>
<td>908</td>
</tr>
<tr>
<td>MRI Cohort Patients</td>
<td>398</td>
<td>202</td>
<td>158</td>
</tr>
</tbody>
</table>

Sources:
Positioned for Growth Post FDA Approval

Ramping to Full Scale Re-launch Expected in 2H18

- Received full FDA approval of Vesta U.S. based manufacturing facility in April 2018
- Began manufacturing finished goods of highest demand products in early October 2017
- Adding new sizes approved by FDA in late 2016 for a total of ~400 unique implants
- Initiating marketing activities and comprehensive go to market strategy

*Vesta is a subsidiary of The Lubrizol Corporation.*
Breast Implant Manufacturing Partnership

- Berkshire Hathaway subsidiary located in Franklin, WI
- Experienced silicone device manufacturing capabilities
- Approximately 17,000 sq/ft dedicated to Sientra implants
- Scalable capacity to meet Sientra’s supply needs
Breast Implant Relaunch: Steps Forward

- Expand Call-Points Beyond Precision Controlled Launch Targets
- Aggressively Promote 10 year Study Data
- Provide Samplings & Trials to Drive Demand
- Launch Best in Class Warranty and Opus™ Rebranding
- Penetrate Physician Resident Programs
- Relaunch & Grow Market Share
miraDry

**ONLY non-invasive treatment FDA cleared for reduction of underarm**

- ✔ Sweat
- ✔ Odor
- ✔ Hair of all colors

FY2017 Net Sales - $15.2 Million*  
(Full Year Proforma)

U.S. Addressable Market -  
15 Million Patients**

*Includes FY2017 GAAP miraDry net sales of $5.1 million post acquisition

**Source: miraDry Inc. Quantitative survey of 2,265 U.S. consumers, 18-75, HHI > $35,000
Significant U.S. Market Opportunity - Consumable

~37M
U.S consumers bothered by sweat

~27M
U.S consumers bothered by sweat in the underarm

~15M
U.S. consumers interested in miraDry

The Market for Sweat Controlling Products is Large and Highly Underpenetrated
Represents U.S. consumable market opportunity of ~$6 Billion*

Source: miraDry Inc. Quantitative survey of 2,265 U.S. consumers, 18-75, HHI > $35,000
* Company estimates based on $400 bioTip pricing across 15M US consumers
Significant U.S. Market Opportunity - Capital

Represented U.S. market opportunity of $700 Million.*

OUS opportunity approximately the same size

Source: miraDry Inc. Quantitative survey of 2,265 U.S. consumers, 18-75, HHI > $35,000
* Company estimates based on # of practices in U.S. & $70k net sales price for capital
Driving New Patients into Aesthetics

New Patients

77%

interested miraDry patients are aesthetic neophytes

Younger Patients

76%

consumers concerned with excessive sweat are younger than 40

Diverse Interest

60%

60% female: 40% male – broad market interest from both men and women

Source: miraDry Inc. Quantitative survey of 2,265 U.S. consumers, 18-75, HHI > $35,000
miraDry Clinical Validation

DRI-UP Study: Prospective, Multi-Center, Randomized, Blinded

HDSS* Response at 30 Day Follow-Up / ITT Population

<table>
<thead>
<tr>
<th></th>
<th>Sham Group (N=39)</th>
<th>Treatment Group (n=81)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Failure</strong></td>
<td>18 (46.2%)</td>
<td>9 (11.1%)</td>
</tr>
<tr>
<td><strong>Success</strong></td>
<td>21 (53.8%)</td>
<td>72 (88.9%)</td>
</tr>
<tr>
<td><strong>95% CI</strong></td>
<td>[38.2%, 69.5%]</td>
<td>[82.0%, 95.7%]</td>
</tr>
</tbody>
</table>

**p-value = <0.001**

Summary of Results

<table>
<thead>
<tr>
<th>Efficacy Measure</th>
<th>Follow-up visit time from last treatment session</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30 day</td>
</tr>
<tr>
<td>% of subjects with HDSS reduction to score 1 or 2*</td>
<td>28/31 = 90.3% [74.3, 98.0]</td>
</tr>
<tr>
<td></td>
<td>29/31 = 93.6% [78.6, 99.2]</td>
</tr>
<tr>
<td></td>
<td>28/31 = 90.3% [74.3, 98.0]</td>
</tr>
<tr>
<td></td>
<td>28/31 = 90.3% [74.3, 98.0]</td>
</tr>
<tr>
<td>Patient satisfaction: % of subjects rating &quot;very satisfied&quot; or &quot;somewhat satisfied&quot; (top 2 out of 5 choices)</td>
<td>27/30 = 90%</td>
</tr>
<tr>
<td></td>
<td>27/28 = 96%</td>
</tr>
<tr>
<td></td>
<td>25/27 = 93%</td>
</tr>
<tr>
<td></td>
<td>23/26 = 89%</td>
</tr>
</tbody>
</table>

*Hyperhidrosis Disease Severity Scale: Quality of life measurement for hyperhidrosis ranging from 1 (sweating not noticeable) to 4 (sweating intolerable)
miraDry: Proven Aesthetic Industry Model

miraDry Capital System

- Standard service agreement
- Listing price U.S. Price $95k
- 50% - 55% gross margin

miraDry Consumable bioTip

- Per procedure consumable ($400 for two underarms)
- Practice Development Managers help drive patient volumes
- ~90% gross margin
miraDry Fresh™ Treatment Protocol

Goal: reduce procedure time to >1 hour and simplify delivery to drive adoption across all specialties

Key Drivers:

1. Faster overall procedure time
   - Utilize multi-injector needle array* with lower gauge needles to deliver high volume anesthesia
   - Reduce post cool time
   - More efficient, simpler and more comfortable

2. Redesign & simplify treatment templates used to guide procedure
   - Reduce number of individual templates
   - Design for intuitive use

3. Update user interface to allow clinicians an easier process to unlock higher energy options & decrease post-treatment cool down time
   - Improve efficacy and single treatment success
   - Maintain strong safety profile

*Submitted 510(k) approval
miraDry: A Substantial Growth Opportunity

- **Profitable** for physician practice and **affordable** for patients

- Global commercial footprint with over 1,000 systems sold and 125,000 biotips sold *

- Addressable US market of >15 million patients

- High margin **consumables** >40% of net sales

- No significant competition

- Strong clinical data with over 10 clinical studies, 5 white papers & 7 peer-reviewed papers

*Reflects company information as of 3.31.2018*
**Balance Sheet Position**

As of 3/31/18

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Balance*</td>
<td>$16.1M</td>
</tr>
<tr>
<td>Outstanding Term Debt</td>
<td>$25.0M</td>
</tr>
</tbody>
</table>

*Does not include ~$108M in net proceeds from recently completed follow-on common stock offering nor does the figure include $10M of cash from the draw down of the Company’s remaining tranche of term debt following FDA PMA supplement approval.

Additional Debt Accessible Within Existing Facility

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specified Net Sales Milestone</td>
<td>$5.0M</td>
</tr>
</tbody>
</table>
- Voluntary hold on implant sales beginning Q4 '15
- Controlled commercial relaunch Q1'16
- Miramar Labs acquisition Q3'17
- PMA approval of Vesta Facility Q2'18
- Implant supply scaling into 2H18
Why own Sientra today?

Innovative technology & differentiated products/market

Multiple growth drivers in 2018 and beyond in breast products & miraDry segments

Transitioning to growth w/ adjacent products & diversifying product portfolio

Building a global aesthetics company
THANK YOU