Focused on unmet needs in women’s reproductive health

September 2020
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Matters discussed in this presentation may constitute forward-looking statements. The forward-looking statements contained in this presentation reflect our views as of the date of this presentation about future events and are subject to risks, uncertainties, assumptions, and changes in circumstances that may cause our actual results, performance, or achievements to differ significantly from those expressed or implied in any forward-looking statement. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future events, results, performance, or achievements. Some of the key factors that could cause actual results to differ from our expectations include our plans to develop and potentially commercialize our product candidates; our planned clinical trials and preclinical studies for our product candidates; the timing of and our ability to obtain and maintain regulatory approvals for our product candidates; the extent of clinical trials potentially required for our product candidates; the clinical utility and market acceptance of our product candidates; our commercialization, marketing and manufacturing capabilities and strategy; our intellectual property position; and our ability to identify and in-license additional product candidates. For further information regarding these risks, uncertainties and other factors that could cause our actual results to differ from our expectations, you should read the risk factors set forth in our Annual Report on Form 20-F for the year ended December 31, 2019 filed with the SEC on March 5, 2020 and the risk factors disclosed in the Report on Form 6-K filed with the SEC on August 6, 2020, and our other filings we make with the Securities and Exchange Commission from time to time.

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Obseva focus on unmet needs in women’s health

LINZAGOLIX

Potential to relieve symptoms from heavy menstrual bleeding due to uterine fibroids and pain associated with endometriosis

OBE022

Potential to delay preterm birth to improve newborn health and reduce medical costs

NOLASIBAN

Potential to improve live birth rate following IVF & embryo transfer
Multiple development programs drive value

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Status/NEXT MILESTONES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YSELTY®</strong>&lt;br&gt;(LINZAGOLIX)&lt;br&gt;Oral GnRH receptor antagonist</td>
<td>Uterine Fibroids – Ph3 PRIMROSE 2 EU &amp; U.S.</td>
<td>Uterine Fibroids – Ph3 PRIMROSE 1 U.S.</td>
<td>Positive Ph3 24W Primary endpoint results for both PRIMROSE 1 &amp; 2&lt;br&gt;PRIMROSE 1 52W data Q4:2020&lt;br&gt;MAA /NDA Q4:2020/1H:2021&lt;br&gt;Phase 3 trials ongoing</td>
</tr>
<tr>
<td></td>
<td>Endometriosis – Ph3 EDELWEISS 2 U.S.</td>
<td>Endometriosis – Ph3 EDELWEISS 3 EU &amp; U.S.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Endometriosis – Ph2b EDELWEISS*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OBE022</strong>&lt;br&gt;Oral PGF$_{2\alpha}$ receptor antagonist</td>
<td>Preterm Labor – Ph2a PROLONG</td>
<td>Preterm Labor – Ph1</td>
<td>Phase 2a Part B results expected 4Q:20&lt;br&gt;Pre-clinical/Phase 1 complete</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td><strong>NOLASIBAN</strong>&lt;br&gt;Oral oxytocin receptor antagonist</td>
<td>IVF – Ph3 IMPLANT 2/4 EU</td>
<td>IVF – Ph1/2 in China</td>
<td>Positive IMPLANT 2 Ph3 Results&lt;br&gt;IMPLANT 4 Ph3 missed primary endpoint&lt;br&gt;YuYuan BioScience: China IND submission 4Q:20</td>
</tr>
</tbody>
</table>

* Primary and secondary endpoints met
## Uterine fibroids
A significant unmet need translating into a multibillion market

<table>
<thead>
<tr>
<th>Total U.S. costs from direct costs, lost workdays and complications</th>
<th>Women in the U.S. affected by fibroids</th>
<th>Women have fibroids by age 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>$34B/yr</td>
<td>9 million</td>
<td>70%+</td>
</tr>
</tbody>
</table>

### Quality of Life
premenopausal women may experience heavy menstrual bleeding, anemia, bloating, infertility, pain and swelling

- 600,000 hysterectomies are performed annually in the U.S.
- >4 million women in the U.S. are treated annually for fibroids
- 300,000 are because of uterine fibroids

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Cardozo et al., Am J Obstet Gynecol 2012; Stewart et al. NEJM, 2015; Flynn et al., Am J Obstet Gynecol 2006; Truven Health; Fibroid Foundation website; Epidemiology of women’s health, Jones & Bartlett Learning, Ruby T. Senie, 2014
Yselty® designed to treat more women
Only non-ABT dosing option under development for treating uterine fibroids
Potential best-in-class ABT containing regimen

100 mg without ABT
When ABT is a potential safety, tolerability or preference issue

200 mg with ABT
When maximum efficacy desired

ABT Contraindicated
Unique value proposition

Up to 50%

ABT Acceptable
Elagolix with ABT FDA approved and relugolix with ABT under development

> 4M women treated for uterine fibroids in the US per year

https://www.cdc.gov/2018; U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events (see slide 26); Cardozo et al., Am J Obstet Gynecol 2012; Stewart et al. NEJM, 2015; Flynn et al., Am J Obstet Gynecol 2006; Truven Health, Fibroid Foundation website; Epidemiology of women’s health, Jones & Bartlett Learning, Ruby T. Senie, 2014; ABT = Add Back Therapy (1mg estradiol + 0.5 mg norethindrone acetate)
The only GnRH antagonist designed to treat more women
Because not every woman is the same, one size does not fit all

Carole, 47 – Desires a long-term medical treatment to transition her to menopause*
• Black woman, weighing 230 lbs
• Moderate hypertension, not well-controlled
• Worsening heavy bleeding and pain related to UF

Janie, 32 – Strongly wishes to avoid surgery
• Healthy white woman, weighing 120 lbs
• Increasingly heavy bleeding and unpredictable flooding episodes that interfere with quality of life
• Multiple fibroids in the uterine cavity

Keisha, 42 – Needs a rapid & substantial reduction in uterine volume
• Black woman with bulky 26-week-sized uterus and MRI suggestive of concomitant adenomyosis
• Increasing pelvic pressure and pain, urinary frequency and urgency, interfering with ability to go to work
• Hb level of 10.2 g/dL

*U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events
Yselty®, our proposed trade name for linzagolix, is conditionally acceptable for the FDA. Linzagolix has not been approved by FDA for any indication for use. Linzagolix is an investigational drug. The hypothetical patients represented on this slide are for illustrative purposes only as no strength of linzagolix has been approved nor is there FDA-approved Prescribing Information to guide clinical decisions.
UF - PRIMROSE 1 and 2 achieved primary endpoint for both doses  Responder* analysis

PRIMROSE 1  
Week 24

PRIMROSE 2  
Week 24

PRIMROSE 1 and 2  
Week 24 pooled

Placebo  56.4%  35.0%
100 mg  56.4%  35.0%
200 mg + ABT  75.5%  56.6%

Placebo  29.4%  32.2%
100 mg  56.7%  32.2%
200 mg + ABT  93.9%  84.7%

*Proportion of women with menstrual blood loss ≤ 80 mL (by alkaline hematin method) and ≥ 50% reduction from baseline

Error bars are 95% CI
Responder* rate in patients completing treatment at week 24 sustained at week 52

PRIMROSE 1
Week 24
- Placebo: 31.8% (n=66)
- Linzagolix 100 mg: 56.9% (n=65)
- Linzagolix 200 mg + ABT: 85.9% (n=71)

PRIMROSE 2
Week 24
- Placebo: 29.2% (n=89)
- Linzagolix 100 mg: 62.0% (n=79)
- Linzagolix 200 mg + ABT: 98.8% (n=83)

PRIMROSE 2
Week 52
- Linzagolix 100 mg: 53.2% (n=79)
- Linzagolix 200 mg + ABT: 91.6% (n=83)

*Proportion of women with menstrual blood loss ≤ 80 mL (by alkaline hematin method) and ≥ 50% reduction from baseline

Error bars are 95% CI
Rapid onset and significant, sustained reduction in menstrual blood loss

**PRIMROSE 1**

- Mean % CFB menstrual blood loss mL

**PRIMROSE 2**

- Error bars are 95% CI

- Placebo
- Linzagolix 100 mg
- Linzagolix 200 mg + ABT
Both linzagolix doses significantly reduced or eliminated pain.

**Mean pain score reduction from baseline**

- **PRIMROSE 1 Week 24:**
  - Placebo: -1.06, P<0.001
  - Linzagolix 100 mg: -2.70, P<0.001
  - Linzagolix 200 mg + ABT: -3.66, P<0.001

- **PRIMROSE 2 Week 24:**
  - Placebo: -2.28, P<0.001
  - Linzagolix 100 mg: -1.62, P=0.002
  - Linzagolix 200 mg + ABT: -1.06, P<0.001

**Proportion of patients with a score of 1 or less at Week 24 out of those with a baseline score of at least 4**

- **PRIMROSE 1 Week 24:**
  - Placebo: 22.2, P<0.001
  - Linzagolix 100 mg: 27.4, P<0.001
  - Linzagolix 200 mg + ABT: 9.0, P=0.055

- **PRIMROSE 2 Week 24:**
  - Placebo: 22.4
  - Linzagolix 100 mg: 27.9
  - Linzagolix 200 mg + ABT: 37.9

Error bars are 95% CI.
24 week efficacy data support linzagolix as potential best-in-class GnRH antagonist

Caution advised when comparing across clinical trials. Below data are not head-to-head comparison, and no head-to-head trials have been completed, nor are underway.

<table>
<thead>
<tr>
<th>Dose Regimen</th>
<th>Linzagolix</th>
<th>Elagolix</th>
<th>Relugolix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRIMROSE 1</strong></td>
<td>200mg + ABT</td>
<td>300 mg + ABT</td>
<td>40mg + ABT</td>
</tr>
<tr>
<td><strong>PRIMROSE 2</strong></td>
<td>Once daily</td>
<td>Twice daily</td>
<td>Once daily</td>
</tr>
<tr>
<td><strong>Pool Analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mean Age (y)</strong></td>
<td>41.6</td>
<td>42.6</td>
<td>41.3</td>
</tr>
<tr>
<td><strong>Baseline MBL (mL per cycle)</strong></td>
<td>197</td>
<td>238</td>
<td>229</td>
</tr>
<tr>
<td><em><em>Responder</em> Rate (RR) (%)</em>*</td>
<td>75.5</td>
<td>68.5</td>
<td>73.4</td>
</tr>
</tbody>
</table>

- Amenorrhea: ✓
- Pain: ✓
- Fibroid Volume: ✗
- Uterine Volume: ✗
- Menstrual Blood Loss: ✓
- Anemia: ✓
- Quality of Life: ✓

- **Elagolix**
  - ELARIS 1: 76.5
  - ELARIS 2: 72.2

- **Relugolix**
  - LIBERTY 1: 71.2
  - LIBERTY 2: 72.3

Source: Company information  Note: NR = Not reported.

*Primary endpoint: Proportion of women with menstrual blood loss ≤ 80 mL (by alkaline hematin method) and ≥ 50% reduction from baseline.  **P-value not reported.

# Linzagolix safety profile

## Day 1 to week 24

<table>
<thead>
<tr>
<th>Number (%) of women</th>
<th>PRIMROSE 1</th>
<th>PRIMROSE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Placebo</td>
<td>Linzagolix 100 mg</td>
</tr>
<tr>
<td></td>
<td>n=104</td>
<td>n=100</td>
</tr>
<tr>
<td>Subject with at least one TEAE</td>
<td>56 (53.8)</td>
<td>66 (66.0)</td>
</tr>
<tr>
<td>TEAE leading to discontinuation</td>
<td>10 (9.6)</td>
<td>8 (8.0)</td>
</tr>
<tr>
<td>SAE related to linzagolix</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Adverse Events occurring in > 5% of women in 100 mg or 200 mg + ABT groups**

<table>
<thead>
<tr>
<th></th>
<th>PRIMROSE 1</th>
<th>PRIMROSE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot flush</td>
<td>7 (6.7)</td>
<td>6 (6.0)</td>
</tr>
<tr>
<td>Headache</td>
<td>6 (5.8)</td>
<td>8 (8.0)</td>
</tr>
<tr>
<td>Anemia</td>
<td>4 (3.8)</td>
<td>1 (1.0)</td>
</tr>
</tbody>
</table>

* Hypertension in an obese subject
## Low rates of adverse events of interest/pregnancy
### Day 1 to week 24

<table>
<thead>
<tr>
<th>Number (%) of women</th>
<th>PRIMROSE 1</th>
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<tr>
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<td>Linzagolix 100 mg</td>
</tr>
<tr>
<td></td>
<td>n=104</td>
<td>n=100</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Depression; depressed mood</td>
<td>0</td>
<td>1 (1.0)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1 (1.0)</td>
<td>0</td>
</tr>
<tr>
<td>Alopecia</td>
<td>2 (1.9)</td>
<td>0</td>
</tr>
<tr>
<td>Decreased libido</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Minimal BMD change, similar across GnRH antagonists

Caution advised when comparing across clinical trials. Below data are not head-to-head comparison, and no head-to-head trials have been completed, nor are underway.

<table>
<thead>
<tr>
<th></th>
<th>Linzagolix</th>
<th>Elagolix</th>
<th>Relugolix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRIMROSE 1 US</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black women %</td>
<td>61</td>
<td>4</td>
<td>67</td>
</tr>
<tr>
<td>BMI, mean (kg/m²)</td>
<td>33.0</td>
<td>26.8</td>
<td>33.4</td>
</tr>
<tr>
<td><strong>PRIMROSE 2 EU/US</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMD mean CBL Spine (%) @W24</td>
<td>-0.84</td>
<td>-1.31</td>
<td>-0.76*</td>
</tr>
<tr>
<td>Patients (%) with BMD loss &gt;3%</td>
<td>23.3</td>
<td>29.1</td>
<td>20</td>
</tr>
<tr>
<td>Patients (%) with BMD loss &gt;8%</td>
<td>1.8**</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>ELARIS 1 US</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMD mean CBL Spine (%) @W52</td>
<td>NA</td>
<td>-2.03</td>
<td>-1.5+</td>
</tr>
<tr>
<td>Patients (%) with BMD loss &gt;3%</td>
<td>NA</td>
<td>28.3</td>
<td>27.0</td>
</tr>
<tr>
<td>Patients (%) with BMD loss &gt;8%</td>
<td>NA</td>
<td>1.7</td>
<td>1.7</td>
</tr>
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<td>NA</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>LIBERTY 1 US/RoW</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMD mean CBL Spine (%) @W24</td>
<td>NA</td>
<td>-2.03</td>
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<td>NA</td>
<td>1.7</td>
<td>1.7</td>
</tr>
</tbody>
</table>

* Values disclosed are for >2% and <8% ** 1 subject

Up to 50% of US women suffering from uterine fibroids may have a contraindication to hormonal ABT*. Minorities are overrepresented.

*U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events (see slide 26)


** Proportion of individuals with hypertension - Overall population Male vs Female: 47% vs 43%
Yselty® designed to treat more women
Only non-ABT dosing option under development for treating uterine fibroids
Potential best-in-class ABT containing regimen

100 mg without ABT
When ABT is a potential safety, tolerability or preference issue

200 mg with ABT
When maximum efficacy desired

ABT
Contraindicated

Unique value proposition

Up to 50%

> 4M women treated for uterine fibroids in the US per year

ABT
Acceptable

Elagolix with ABT FDA approved and relugolix with ABT under development

Up to 50%

https://www.cdc.gov/2018; U.S. FDA elagolix PI, section 4. Contraindications and section 5.1. Warnings and precautions – thromboembolic disorders and vascular events (see slide 26); Cardozo et al., Am J Obstet Gynecol 2012; Stewart et al. NEJM, 2015; Flynn et al., Am J Obstet Gynecol 2006; Truven Health, Fibroid Foundation website; Epidemiology of women’s health, Jones & Bartlett Learning, Ruby T. Senie, 2014; ABT = Add Back Therapy (1mg estradiol + 0.5 mg norethindrone acetate)
Next steps in uterine fibroids

Yselty® is the only GnRH antagonist being developed to provide differentiated options for women suffering from uterine fibroids

1. Primrose 1
   52 week results expected 4Q:20

2. MAA regulatory submission
   anticipated in 4Q:20

3. NDA regulatory submission
   anticipated in 1H:21

4. Commercial partnerships
   active ongoing discussions

Designed to treat more women
Endometriosis
An emotionally and physically painful condition

$22B/yr
total U.S. costs

176 million
women worldwide suffer from endometriosis

60%+
of women feel symptoms by age 16

Quality of Life

Premenopausal women may experience pelvic pain, pain during intercourse and defecation, infertility and emotional distress

Endometriosis affects up to
10%+ in the general population
50%+ in the fertile population
60%+ in patients with chronic pelvic pain

5 million
women in the U.S. are treated annually for endometriosis

Phase 3 endometriosis trials
EDELWEISS 2 and 3

Co-Primary efficacy endpoint: DYS/NMPP Responder Analysis

Initiated 1H:19
# Preterm Delivery
Life altering and costly

<table>
<thead>
<tr>
<th>$26B/yr</th>
<th>&gt;1</th>
<th>1 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. economic burden</td>
<td>In 10 babies are born preterm</td>
<td>preterm related deaths in 2015 in the U.S.</td>
</tr>
</tbody>
</table>

**Leading cause of death in children under age 5**

- Preterm birth, a costly burden per baby

<table>
<thead>
<tr>
<th>$16.9B+</th>
<th>$195K+</th>
<th>$50K</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. infant medical costs</td>
<td>average cost per U.S. survivor infant born 24-26 weeks</td>
<td>average U.S. cost for a preterm infant</td>
</tr>
</tbody>
</table>

Obseva
OBE-022 Phase 2a study part B
PROLONG

**Study design:**
Double-blind, randomized Atosiban + OBE022 versus Atosiban + Placebo

**Endpoints:**
- Incidence of delivery within 2 and 7 days of treatment
- Time to delivery and delivery prior to 37 weeks of gestation
- Maternal, fetal, neonatal safety

**Next steps:**
Phase 2b dose ranging  \(\rightarrow\) Phase 3 endpoints

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**Dosing:** 7 days up to 60 patients
Followed thru delivery

**Interim Updates:**
- Interim Update 30 patients
- Interim Update 60 patients

**Main Study completion:** ~120 patients

**Final Part B: Main analysis**

**24-month Infant FU**
Financial outlook to achieve milestones and drive programs

1. **Linzagolix**
   - Completion of PRIMROSE 1 and 2
   - EU/US Uterine Fibroid regulatory filings
   - Preparing commercialization through partnership(s)
   - EDELWEISS 2 and 3 continuation

2. **OBE-022**
   - PROLONG readout
   - Phase 2b initiation

3. **Nolasiban**
   - Phase 1 trial results in China
   - Phase 2 initiation in China
   - Reassess EU/U.S. development

June 30 2020 cash + pro-forma Sept. financing $65 million

Expected cash runway Mid-2021 ex credit facility

First commercial launch Yselty EU Q1:22

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Obseva
Evolving from pure development to commercial focused company

- **First linzagolix regulatory filings**
  MAA/NDA Q4:20/1H:21

- **Linzagolix regional commercial partnerships**
  Active discussions ongoing

- **Phase 2a readout of OBE022 in preterm labor**
  Part B results in ~120 patients 4Q:20

- **Nolasiban development proceeding in China**
  Partner YuYuan Bioscience submitting IND 4Q:20
Thank you