Innovating Women’s Reproductive Health and Pregnancy Therapeutics

June 2017

JEFFERIES CONFERENCE
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This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.
A very focused therapeutic approach in women’s reproductive health that have high unmet medical need, large markets and limited competition

Agenda
- Adolescent & Young Adult Gynecology
  - Oral Contraception
  - Anti-Infectives
  - Pregnancy Supplements
  - OTC / Generics
- Uterine Fibroids & Endometriosis
  - Underserved
- Infertility
- Preterm Labor
  - Emerging
- Preeclampsia
  - Untapped
- ObsEva Focus

Age 15+
- Menopause
  - Menopause Symptoms
  - Hormone Replacement Therapy
  - Osteoporosis
- Generics / Innovation
  - by Big Pharma

Age 15 - Age 49
- Age 50+

* Source: IMS Health Incorporated estimate as of 2015.
Late-stage pipeline for women’s reproductive health and pregnancy

<table>
<thead>
<tr>
<th>PRODUCT CANDIDATE</th>
<th>PRECLINICAL</th>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
<th>NEXT MILESTONE</th>
<th>COMMERCIAL RIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBE2109</strong>*</td>
<td>Endometriosis</td>
<td></td>
<td></td>
<td></td>
<td>US/EU Phase 2b data 1H 2018</td>
<td>Worldwide ex-Asia</td>
</tr>
<tr>
<td>Oral GnRH receptor antagonist</td>
<td>Uterine Fibroids</td>
<td></td>
<td></td>
<td></td>
<td>US/EU Phases 3 Initiated Data 2019</td>
<td></td>
</tr>
<tr>
<td><strong>NOLASIBAN</strong></td>
<td>IVF</td>
<td></td>
<td></td>
<td></td>
<td>EU Phase 3 Initiated Data 2018</td>
<td>Worldwide</td>
</tr>
<tr>
<td>Oral oxytocin receptor antagonist</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>OBE022</strong></td>
<td>Preterm Labor</td>
<td></td>
<td></td>
<td></td>
<td>DDI data 1H 2017</td>
<td>Worldwide</td>
</tr>
<tr>
<td>Oral PGF&lt;sub&gt;2α&lt;/sub&gt; receptor antagonist</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

* Kissei Pharmaceutical developing for Asia
Executive management team with significant operational experience

Ernest Loumaye, MD, PhD, OB/GYN
CEO and Co-founder

Tim Adams
CFO

Jean-Pierre Gotteland, PhD
CSO

Elke Bestel, MD
CMO

Ben T.G. Tan, MSc
VP Commercial & BD

A team of 30+ with successful experience in world-wide development and commercialization of women health products

ObsEva is listed on The NASDAQ Global Select Market and trades under the ticker symbol "OBSV".
Key investments highlights

Best-in-class GnRH antagonist

OBE2109: potential best-in-class oral gonadotropin-releasing hormone (GnRH) receptor antagonist

Compelling pipeline

NOLASIBAN (OBE001): potential to significantly improve clinical pregnancy and live birth rates after in vitro fertilization (IVF)

OBE022: potential first-in-class therapy to suppress preterm labor and delay or avoid preterm birth

Sizable target indications with significant unmet need

Targeting indications with millions of underserved patients globally

Multiple near-term data catalysts

Multiple programs with significant potential

OBE2109: Phase 2b endometriosis data in 1H18

NOLASIBAN: Phase 3 data in 2Q18

OBE022: Initiate Phase 2a proof-of-concept clinical trial in 2H2017

Highly experienced management team

Management team has strong track record of successfully in-licensing, developing and commercializing treatments for women’s reproductive health and pregnancy
OBE2109 for Endometriosis and Uterine Fibroids
OBE2109: Potential best-in-class, oral, GnRH receptor antagonist developed in two indications, each w/ or w/o add-back therapy

<table>
<thead>
<tr>
<th>CANDIDATE/TARGET</th>
<th>INDICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GnRH Receptor Antagonist</strong></td>
<td><strong>Uterine Fibroids (UF)</strong></td>
</tr>
<tr>
<td>OBE2109 (KLH-2109)</td>
<td>• Symptoms: <strong>Heavy menstrual bleeding</strong> and abdominal pain</td>
</tr>
<tr>
<td>Licensed from Kissei (WW rights, excludes Asia)</td>
<td>• Primary goal is to reduce/eliminate bleeding</td>
</tr>
<tr>
<td>IP Protection* to 2036 (COM 2032)</td>
<td><strong>Endometriosis</strong></td>
</tr>
<tr>
<td>&gt; 700 female subjects exposed to date</td>
<td>• Symptoms: <strong>pain</strong> and infertility</td>
</tr>
<tr>
<td></td>
<td>• Primary goal is to alleviate pain</td>
</tr>
</tbody>
</table>

**COMPETITION**

<table>
<thead>
<tr>
<th>Lupron®, OC’s, surgery current treatments</th>
<th>Esmya® approved in EU for UF</th>
</tr>
</thead>
</table>

Elagolix (AbbVie/Neurocrine) and Relugolix (Myovant/Takeda) in Phase 3 Development

* Including PTA/PTE (Patent Term Adjustment / Patent Term Extension)
Unmet medical need in endometriosis/uterine fibroids therapy

Large Patient Populations
• Uterine fibroids market size: 4 million women diagnosed and treated annually in the U.S.
• Endometriosis market size: 2.5 million women diagnosed and treated annually in the U.S.

Standard of Care (SOC) Older, Suboptimal Treatments
• Lupron injections cause flare, worsening of symptoms, no titration possible, prolonged and variable reversibility time
• Oral Contraceptives (OC’s) and progestin, only partially effective, safety risks
• Surgical interventions costly and invasive

OBE2109 Potentially Addresses SOC Shortcomings
• PK/PD allows Once Daily pill, no food effect observed in Phase 1 clinical trial
• Immediate action, no flare. Rapid reversibility.
• Can potentially balance estrogen suppression and need for add-back therapy
Suppression of estradiol levels can inhibit growth of endometriosis lesions and uterine fibroids, alleviating associated symptoms

- Estradiol appeared to be direct, sensitive marker of ESSS and BMD responses
- Estradiol measured at 1-2 months after treatment initiation was shown to be a reliable predictor of 6-month BMD change.
- Estradiol between 20 and 60 pg/mL is considered a reasonable target to evaluate efficacious endometrial pain response while minimizing BMD effects. We are exploring suppressing estradiol to between 20 and 60 pg/mL.

1. Integrated Pharmacometrics and Systems Pharmacology Model-Based Analyses to Guide GnRHReceptor Modulator Development for Management of Endometriosis
**OBE2109: Phase 1 clinical trial – pharmacokinetics (PK) & pharmacodynamics (PD)**

OBE2109 has a consistent PK/PD profile with low variability, due to high bioavailability and low volume of distribution.

- **Half life = 15h: once a day dosing**
- **Low volume of distribution (Vd 11 L): No dose adjustment for weight**
- **No food effect observed**
- **No significant differences between women of Japanese and European descent**

![Graphs showing mean OBE2109 concentration over time and LH reduction from baseline over time](image)
OBE2109 suppressed estradiol levels to the target range and reduced pain severity across the three Phase 2 clinical trials.

**KLH1202 TRIAL: % OF PATIENTS AT VARIOUS ESTRADIOL LEVELS IN KLH1202 TRIAL AT WEEK 12**

- **KLH1202 TRIAL: AVERAGE CHANGE IN SEVERITY OF PELVIC PAIN OVER TIME (MENSTRUAL AND NON-MENSTRUAL PAIN COMBINED)**

<table>
<thead>
<tr>
<th>Time (Weeks)</th>
<th>Pretreatment</th>
<th>Week 4</th>
<th>Week 8</th>
<th>Week 12</th>
<th>Post-treatment (Week 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBE2109 50 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBE2109 100 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBE2109 200 mg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placebo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **p < 0.05**
- **p < 0.01**
- **p < 0.001**

Two sample *t* test vs Placebo.
**OBE2109 Phase 2b clinical trial (EDELWEISS) in patients with endometriosis: Recruitment of patients in process**

<table>
<thead>
<tr>
<th>LEAD-IN</th>
<th>Placebo</th>
<th>50 mg daily</th>
<th>75 mg daily</th>
<th>100 mg daily</th>
<th>200 mg daily</th>
<th>75 mg daily*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12 weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Primary endpoint:** pain scores

<table>
<thead>
<tr>
<th>FOLLOW-UP</th>
<th>50 mg daily</th>
<th>75 mg daily</th>
<th>100 mg daily</th>
<th>200 mg daily</th>
<th>* Titrated dose 50–100 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 weeks</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* Titrated dose 50–100 mg

Optional extension 6 m + 6m f-up

**Key secondary endpoint:** BMD

8–14 weeks

* Titration after 12 weeks based on E2 serum level at weeks 4 and 8

Target enrollment of 330 patients

- ~70 sites in US (up to 75% of patients)
- 15 sites in EU (Ru, Ukr, Pl) Pre-IND meeting completed in March 2016 to discuss the trial design - IND granted in June 2016
OBE2109 has been observed to reduce menstrual bleeding and uterine volume in uterine fibroids

**KLH1202 TRIAL: % OF DAYS WITH BLEEDING DURING 12-WEEK TREATMENT PERIOD**

- Placebo: 28.98%
- OBE2109 50 mg: 24.18%
- OBE2109 100 mg: 13.63%
- OBE2109 200 mg: 7.99%

\( p < 0.01 \) * Two sample t-test (vs Placebo)

**KLH1202 TRIAL: TIME TO NO BLEEDING FOR UTERINE FIBROIDS PATIENTS**

**KLH1202 TRIAL: CHANGE IN UTERINE VOLUME OVER TIME**
OBE2109 Phase 3 clinical trials (PRIMROSE) in patients with uterine fibroids: Recruitment of patients in process *

Aiming at registering two regimens of administration

<table>
<thead>
<tr>
<th>16-OBE2109-008*</th>
<th>16-OBE2109-009</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% US sites</td>
<td>70% Europe 30% US sites</td>
</tr>
<tr>
<td>n = 100</td>
<td>n = 100</td>
</tr>
<tr>
<td>n = 100</td>
<td>n = 100</td>
</tr>
<tr>
<td>n = 100</td>
<td>n = 100</td>
</tr>
<tr>
<td>n = 100</td>
<td>n = 100</td>
</tr>
</tbody>
</table>

**Screening**

- Placebo + placebo add-back
- 100 mg + placebo add-back
- 200 mg + placebo add-back
- 200 mg + add-back

**Primary endpoint: Reduction of HMB**

- Placebo + placebo add-back
- 200 mg + add-back
- 100 mg + placebo add-back
- 100 mg + add-back
- 200 mg + add-back
- 200 mg + add-back

- Placebo + placebo add-back
- 200 mg + add-back
- 100 mg + placebo add-back
- 100 mg + add-back
- 200 mg + add-back
- 200 mg + add-back

**24w follow-up**

- 8–14 weeks
- 24 weeks
- 28 weeks
- 24 weeks

*Recruitment of patients in process*
OBE2109 PK/PD Study

N=75

Screening

15 healthy women per group

N=75

NET

Synchronisation of menses

Day -15 to -5

NETA 5 mg TID (15 mg/d)

OBE2109 100 mg/d

OBE2109 100 mg/d + E2/NETA 0.5mg/0.1mg

OBE2109 200 mg/d

OBE2109 200 mg/d + E2/NETA 1.0mg/0.5mg

OBE2109 100 mg/d + E2/NETA 1.0mg/0.5mg

DAY 1 & WEEKS 1 / 2 / 4 / 5 / 6

Predose trough levels (E2, P, NET, OBE2109 & KP017)

Bleeding pattern

Safety profile & BMD markers (D1 vs Wk 6)

RANDOMIZATION

" first randomize all 100mg subjects, then randomize subjects on 200mg

WEEK 3

PD profile (E2)

Predose trough levels (P, NET, OBE2109 & KP017)

Bleeding pattern

Safety profile

EOS

Reversibility of PD effects
Follow-up on safety

Day 55
OBE2109 PK/PD Study

Study results

Table 1: Median (IQR: 25 – 75%) E2 level after week 1 and 6 of treatment

<table>
<thead>
<tr>
<th>OBE2109 daily dose</th>
<th>100 mg (n=14)</th>
<th>100 mg (n=14)</th>
<th>100 mg (n=15)</th>
<th>200 mg (n=14)</th>
<th>200 mg (n=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add-Back E2/NETA</td>
<td>-</td>
<td>0.5mg/0.1mg</td>
<td>1mg/0.5mg</td>
<td>-</td>
<td>1mg/0.5mg</td>
</tr>
<tr>
<td>E2 Week 1 [pg/mL]</td>
<td>12 (9-18)</td>
<td>25 (18-30)</td>
<td>35 (26-45)</td>
<td>5 (4-7)</td>
<td>27 (22-38)</td>
</tr>
<tr>
<td>E2 Week 6 [pg/mL]</td>
<td>18 (9-27)</td>
<td>40 (31-50)</td>
<td>34 (26-47)</td>
<td>3 (2-3)</td>
<td>25 (21-34)</td>
</tr>
</tbody>
</table>

Table 2: Median (IQR: 25 – 75%) Bleeding pattern during the last 4 weeks of treatment

<table>
<thead>
<tr>
<th>OBE2109 daily dose</th>
<th>100 mg (n=14)</th>
<th>100 mg (n=14)</th>
<th>100 mg (n=15)</th>
<th>200 mg (n=15)</th>
<th>200 mg (n=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add-Back E2/NETA</td>
<td>-</td>
<td>0.5mg/0.1mg</td>
<td>1mg/0.5mg</td>
<td>-</td>
<td>1mg/0.5mg</td>
</tr>
<tr>
<td>Amenorrhea (no bleeding)</td>
<td>86%</td>
<td>21%</td>
<td>53%</td>
<td>87%</td>
<td>33%</td>
</tr>
<tr>
<td>Amenorrhea + spotting only</td>
<td>93%</td>
<td>57%</td>
<td>93%</td>
<td>100%</td>
<td>60%</td>
</tr>
</tbody>
</table>

From a safety standpoint, all regimens were well-tolerated and no safety signal emerged.
**OBE2109 PK/PD Study Conclusions**

- **Study results support:**
  - The dose of add-back therapy (ABT) selected for the PRIMROSE studies
  - ObsEva strategy to develop two regimens of administration for OBE2109 (with and without ABT) may best address the needs of the EM and UF populations

- We observed in Caucasian subjects the rapid onset and effectiveness of OBE2109 to reduce E2 levels that was previously reported in Japanese subjects.

- The median E2 trough level of 18 pg/mL following six weeks of dosing with 100 mg of OBE2109 suggests that upwards of 50% of patients may not require ABT.

- We expect that all subjects treated with 200 mg of OBE2109 will need ABT.

- Addition of ABT intended to counteract BMD reduction appears to significantly moderate the potential benefit of GnRH antagonism, in terms of bleeding control as measured by rates of amenorrhea and spotting.

* Standard dose is E2/NETA 1mg/0.5mg. (This dose is sometimes quoted as a low-dose ABT.)
The GnRH antagonists in development have similar timelines in uterine fibroids, while Elagolix leads in endometriosis.

**Uterine Fibroids**
- Elagolix*
- Relugolix(1)*
- OBE2109

**Endometriosis**
- Elagolix*
- Relugolix(1)*
- OBE2109

*Based on publicly available information and data for these other product candidates currently in development.
GnRH Antagonist Market Takeaways

- Large patient populations at 2.5-4mm+ for each indication
- Ample room for multiple market entrants
- Patients not “one size fits all”
- Large companies (AbbVie and Allergan) investing in early market development
- Targeted Salesforce of 150-200 projected to cover ~30,000 OB/GYN’s
NOLASIBAN to Improve IVF Outcomes
### NOLASIBAN (OBE001): Oral oxytocin receptor antagonist to improve IVF outcomes

#### CANDIDATE/TARGET

| Oxytocin Receptor Antagonist NOLASIBAN (OBE001) Licensed from Merck Serono IP Protection to 2035-2036 (COM 2027 with PTE) |

#### INDICATION

- **In Vitro Fertilization (IVF)**
  - ART cycle cost: $8-15K in the US, EUR 2-10K in the EU and $3-6k in Japan
  - Estimated global sales of fertility drugs > 2 bn USD*

#### COMPETITION

| Atosiban (Tractocile®) marketed ex-US (IV only) |

| Barusiban Ph2 SC injection twice/day |

- **Well-characterized profile, Phase 2 clinical trial completed**
  - >240 subjects exposed
  - Orally active - Well tolerated
  - t\(_{\text{max}}\) at 2h; t\(_{1/2}\) = 12h; High bioavailability
  - Single oral dose of 900 mg OBE001 observed to increase the live birth rate up to 51% compared to 31% in the placebo group

* Source: IMS Health Incorporated estimate as of 2015.
ART procedures and options for embryo transfer (ET)

Medical need for assisted reproductive technology
• 11% of couples present with infertility
• IVF process has an overall live birth rate between ~21% and 33%
• NOLASIBAN (OBE001) has the potential to be the first-in-class orally available oxytocin antagonist
The Oxytocin receptor is a validated target for improving pregnancy and live birth rates in ART

Comparative, randomized trials on the use of Atosiban prior to ET in ART

<table>
<thead>
<tr>
<th>Study</th>
<th>Population</th>
<th>Treatment</th>
<th>ET day</th>
<th>N of Embryo transf.</th>
<th>Clinical preg (+ heart beat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moraloglu et al., 2010</td>
<td>ART cycle 1 (2 and 3)</td>
<td>Placebo-No R/ (n=90) Atosiban bolus+infusion/3h (n=90)</td>
<td>D3</td>
<td>Median=3</td>
<td>28.9% 46.7%</td>
</tr>
<tr>
<td>Chou et al., 2011</td>
<td>RIF (mean 3 failures)</td>
<td>Placebo (n=80) Atosiban bolus (n=40) Atosiban bolus+infusion/3h (n=30)</td>
<td>D3</td>
<td>Mean=2.4</td>
<td>12.5% 37.5% 20.0%</td>
</tr>
<tr>
<td>Ng et al., 2014</td>
<td>ART Cycle 1 (80%), 2 or 3</td>
<td>Placebo (n=400) Atosiban bolus + infusion/3h (n=400)</td>
<td>D2, D3</td>
<td>2 to 4</td>
<td>46.8% 50.3%</td>
</tr>
<tr>
<td>He et al., 2015</td>
<td>Endometriosis patients and «tubal factor patients» undergoing Frozen/thawed ET</td>
<td>Placebo – No R/ (n=120) Atosiban bolus (n=120)</td>
<td>D5</td>
<td>Mean=2.1</td>
<td>38.3% 58.3%</td>
</tr>
<tr>
<td>Hebisha et al., 2016</td>
<td>Male or tubal factor infertility undergoing ICSI using long agonist protocol</td>
<td>Placebo (n=91) Atosiban (n=91)</td>
<td>D5</td>
<td>Mean=1.6</td>
<td>48.4% 63.7%</td>
</tr>
</tbody>
</table>
NOLASIBAN for ART: Phase 2 clinical trial (IMPLANT) - Completed

FULL ANALYSIS RESULTS

<table>
<thead>
<tr>
<th></th>
<th>PLACEBO</th>
<th>OBE001 100 MG</th>
<th>OBE001 300 MG</th>
<th>OBE001 900 MG</th>
<th>OBE001 ALL DOSES</th>
<th>TREND TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of subjects</td>
<td>65</td>
<td>62</td>
<td>60</td>
<td>60</td>
<td>182</td>
<td></td>
</tr>
<tr>
<td>Relative change in uterine contractions</td>
<td>0.0%</td>
<td>-8.7%</td>
<td>-4.0%</td>
<td>-13.3%**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ongoing pregnancy rate at 6 weeks after ET day</td>
<td>33.8%</td>
<td>46.8%</td>
<td>35.0%</td>
<td>46.7%</td>
<td>42.9%</td>
<td>p=0.33</td>
</tr>
<tr>
<td>Ongoing pregnancy rate at 10 weeks after OPU day</td>
<td>29.2%</td>
<td>43.5%*</td>
<td>35.0%</td>
<td>45.0%*</td>
<td>41.2%</td>
<td>p=0.15</td>
</tr>
<tr>
<td>Live birth rate (baby born alive ≥24 weeks gestation)</td>
<td>29.2%</td>
<td>40.3%</td>
<td>35.0%</td>
<td>43.3%</td>
<td>39.6%</td>
<td>p=0.20</td>
</tr>
</tbody>
</table>

POST-HOC ANALYSIS RESULTS: Excluding subjects in progesterone 4th quartile at baseline

<table>
<thead>
<tr>
<th></th>
<th>PLACEBO</th>
<th>OBE001 100 MG</th>
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<th>OBE001 900 MG</th>
<th>OBE001 ALL DOSES</th>
<th>TREND TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of subjects</td>
<td>49</td>
<td>50</td>
<td>35</td>
<td>49</td>
<td>134</td>
<td></td>
</tr>
<tr>
<td>Ongoing pregnancy rate at 6 weeks after ET day</td>
<td>36.7%</td>
<td>44.0%</td>
<td>48.6%</td>
<td>53.1%</td>
<td>48.5%</td>
<td>p=0.095*</td>
</tr>
<tr>
<td>Ongoing pregnancy rate at 10 weeks after OPU day</td>
<td>30.6%</td>
<td>42.0%</td>
<td>48.6%</td>
<td>51.0%*</td>
<td>47.0%*</td>
<td>p=0.035**</td>
</tr>
<tr>
<td>Live birth rate (baby born alive ≥24 weeks gestation)</td>
<td>30.6%</td>
<td>38.0%</td>
<td>48.6%</td>
<td>51.0%*</td>
<td>45.5%*</td>
<td>p=0.025**</td>
</tr>
</tbody>
</table>
NOLASIBAN Phase 3 clinical trial (IMPLANT2): Recruitment of patients in process

Main study

10 weeks

SCREENING
D3 or D5 ET

Randomize

Placebo, n=380
900 mg, n=380

10 weeks

Primary Analysis

Follow-up

Not preg.

FU

1 month

7–8 months

Preg.*

n=314

Preg. FU

Neonatal FU

6 months

Target enrollment of 760 patients

First patients randomized in March 2017

Note: N=760 gives 90% power to show significant difference if the true effect size is 11-12%. It will still show a significant effect if the observed size is about 6-7%.
OBE022 for Preterm Labor
OBE022: Potential first-in-class, oral and selective PGF2α receptor antagonist for preterm labor (PTL)

<table>
<thead>
<tr>
<th>CANDIDATE/TARGET</th>
<th>INDICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostaglandin F2α (FP) receptor antagonist OBE022 Licensed from Merck Serono IP Protection through 2037 (COM 2037 with PTE)</td>
<td>Preterm Labor (GA 24-34 week)</td>
</tr>
<tr>
<td></td>
<td>• Incidence: USA: 500,000; EU: 500,000; Asia: 6,900,000*</td>
</tr>
<tr>
<td></td>
<td>• Economic burden for premature infants: ~$26 billion in the U.S. ($16.9 billion in infant medical care)</td>
</tr>
</tbody>
</table>

COMPETITION

No drug approved for acute use in the US; atosiban used in the EU
Progesterone indicated for prevention

Phase 1 clinical trials completing

• Oral administration
• Favorable preclinical study outcomes

Antagonism of PGF2α receptor has potential to treat PTL with improved safety over NSAIDs

Prostaglandins

Cytokines

Chemokines

kidney, brain, vascular smooth muscle

vasoconstriction of ductus arteriosus, renal and mesenteric arteries

PGF2α contracts the myometrium and metabolites rise in amniotic fluid before and during labor

PGF2α upregulates enzymes causing cervix dilatation and membrane rupture

Phospholipids

Arachidonic Acid

PGHS-1/2 = COX1/2

Indomethacin

PGH2

PGE2

PGF2α

EP1 EP3

EP2 EP4

FP

UTERUS: CONTRACT

RELAX

CONTRACT

OBE022
OBE022 has been observed to inhibit uterine contractions and synergies with SOC.

**OBE022 inhibition of spontaneous contractions in pregnant rats**

- Graph showing the inhibition of spontaneous contractions over time with different treatments.

**OBE022 has been observed to exert a synergistic effect in combination with calcium channel blocker, nifedipine in preclinical studies**

- Graph showing percent delivery over time post RU486 injection with different treatments.
OBE022 did not induce vasoconstriction, hence no adverse impact on the neonatal renal function *in contrast to indomethacin*

**URINARY FLOW RATE**

- Treatment with OBE022 did not result in any significant differences compared to vehicle.

- **Urinary flow rate:**
  - IND: -50%
  - OBE: 24%
  - PEG: 54%

- **Renal vascular resistance**
  - IND: 40%
  - OBE: -20%
  - PEG: -37%

- **Glomerular filtration rate**
  - IND: -51%
  - OBE: -13%
  - PEG: 47%

- **Renal blood flow**
  - IND: -45%
  - OBE: 34%
  - PEG: 71%
Phase 1/DDI results for OBE022

Phase 1 SAD – MAD

✓ healthy women volunteers, single and multiple doses over 7 days
✓ favorable safety profile and well-tolerated up to 1,300 mg single and 1,100mg per day (highest tested doses)

Phase 1 Drug Drug Interactions with Betamethasone and MgSO$_4$ i.e. SoC to improve the neonate outcome during preterm labor

✓ No interactions

Phase 1 Drug Drug Interactions with Atosiban, Nifedipine i.e. tocolytics,

✓ No clinically significant interaction with Atosiban
✓ Nifedipine exposure enhanced by co-administration with OBE022

Next steps:

✓ Initiate Phase 2a study in women with PTL in 2H 2017
### Expected near-term catalysts

<table>
<thead>
<tr>
<th>Catalyst</th>
<th>Expected timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBE022 (Preterm labor): Phase 1 DDI</td>
<td>2Q 2017</td>
</tr>
<tr>
<td>OBE2109: Phase 1 PK/PD add-back study data</td>
<td>2Q 2017</td>
</tr>
<tr>
<td>OBE2109 (Uterine fibroids): Initiation of two US/EU Phase 3 clinical trials</td>
<td>1H 2017</td>
</tr>
<tr>
<td>NOLASIBAN (IVF): Initiate European Phase 3</td>
<td>1H 2017</td>
</tr>
<tr>
<td>OBE022 (Preterm labor): Initiate Phase 2a proof-of-concept clinical trial</td>
<td>2H 2017</td>
</tr>
<tr>
<td>OBE2109 (Endometriosis): US/EU Phase 2b data</td>
<td>1H 2018</td>
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<tr>
<td>NOLASIBAN (IVF): EU Phase 3 data</td>
<td>2Q 2018</td>
</tr>
<tr>
<td>OBE022 (Preterm labor): US/EU Phase 2 data</td>
<td>2H 2018</td>
</tr>
<tr>
<td>OBE2109 (Uterine fibroids): US/EU Phase 3 data</td>
<td>2019/2020</td>
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</table>
Thank You