<table>
<thead>
<tr>
<th>TIME</th>
<th>AGENDA</th>
</tr>
</thead>
</table>
| 12:30 – 12:35 | Welcome and Opening Remarks  
|            | Sheelagh Cawley-Knopf, Head R&D Global Portfolio Strategy                       |
| 12:35 – 12:45 | Takeda: A Global Values-Based, R&D-Driven Biopharmaceutical Leader  
|            | Christophe Weber, President & CEO Takeda                                   |
| 12:45 – 13:20 | Translating Science into Highly Innovative, Life-changing Medicines  
|            | Andy Plump, President R&D                                                 |
| 13:20 – 13:45 | Oncology and Cell Therapies with Spotlight on CAR-NK  
|            | Chris Arendt, Head Oncology Drug Discovery Unit                            |
| 13:45 – 14:05 | Spotlight on Oncology Opportunities  
|            | • TAK-788 : Rachael Brake, Global Program Lead  
|            | • Pevonedistat : Phil Rowlands, Head Oncology Therapeutic Area Unit        |
| 14:05 – 14:20 | Break                                                                  |
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|            | Dan Curran, Head Rare Disease Therapeutic Area Unit                       |
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| 15:00 – 15:20 | Therapeutic Area Focus in GI with Spotlight on Celiac Disease  
|            | Asit Parikh, Head GI Therapeutic Area Unit                                |
| 15:20 – 16:00 | Panel Q&A Session                                                        |
| 16:00 | Drinks reception                                                      |
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Financial Information

Takeda’s financial statements are prepared in accordance with International Financial Reporting Standards (“IFRS”).

The revenue of Shire plc (“Shire”), which were presented in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”), have been conformed to IFRS, without material difference.

Takeda’s financial statements are prepared in accordance with International Financial Reporting Standards (“IFRS”).

The Shire acquisition closed on January 8, 2019, and our consolidated results for the fiscal year ended March 31, 2019 include Shire’s results from January 8, 2019 to March 31, 2019. References to “Legacy Takeda” businesses are to our businesses held prior to our acquisition of Shire. References to “Legacy Shire” businesses are to those businesses acquired through the Shire acquisition.

This presentation includes certain pro forma information giving effect to the Shire acquisition as if it had occurred on April 1, 2018. This pro forma information has not been prepared in accordance with Article 11 of Regulation S-X. This pro forma information is presented for illustrative purposes and is based on certain assumptions and judgments based on information available to us as of the date hereof, which may not necessarily have been applicable if the Shire acquisition had actually happened as of April 1, 2018. Moreover, this pro forma information gives effect to certain transactions and other events which are not directly attributable to the Shire acquisition and/or which happened subsequently to the Shire acquisition, such as divestitures and the effects of the purchase price allocation for the Shire acquisition, and therefore may not accurately reflect the effect on our financial condition and results of operations if the Shire acquisition had actually been completed on April 1, 2018. Therefore, undue reliance should not be placed on the pro forma information included herein.

Our mission is to strive towards Better Health and a Brighter Future for people worldwide through leading innovation in medicine
~50,000

PEOPLE DEDICATED TO BRINGING BETTER HEALTH TO PATIENTS
TAKEĐA-ISM

INTEGRITY
Fairness
Honesty
Perseverance

PATIENT
TRUST
REPUTATION
BUSINESS
01 PATIENT

02 TRUST

03 REPUTATION

04 BUSINESS

INTEGRITY  Fairness  Honesty  Perseverance

TAKEDA-ISM
BUSINESS

LONG-TERM VALUE FOR PATIENTS, SOCIETY AND INVESTORS
 Positioned for **Sustainable Revenue Growth**

Note: The above chart represents conceptual changes in revenue through 2024 and 2029 demonstrating growth over time offsetting loss of exclusivities and achieving a single digit growth as compared to 2018 pro forma revenue which represents the sum of Takeda revenue for FY2018 plus Shire revenue for the same period (not including the Legacy Shire oncology business which was sold in August 2018), converted to JPY at the rate of $1 = 111 JPY, and converted from US GAAP to IFRS. Actual future net sales achieved by our commercialized products and pipelines will be different, perhaps materially so, as there is a range of possible outcomes from clinical development, driven by a number of variables, including safety, efficacy and product labelling. In addition, if a product is approved, the effect of commercial factors including the patient population, the competitive environment, pricing and reimbursement is also uncertain. Sales estimate in Wave 1 Pipeline is non-risk adjusted.
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TRANSLATING SCIENCE INTO HIGHLY INNOVATIVE LIFE-CHANGING MEDICINES

Andy Plump MD, PhD
President R&D
Takeda Pharmaceutical Company Limited
New York, NY
November 14, 2019

WHAT YOU WILL HEAR TODAY

1. Our portfolio and pipeline will drive growth and offset key patent expirations
2. We are investing in novel mechanisms and capabilities for a sustainable future
3. We have cultivated an environment of empowerment, accountability and agility
### WE ARE POSITIONED TO DELIVER NEAR-TERM & SUSTAINED GROWTH

**Target Approval**

<table>
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<tr>
<th>FY20</th>
<th>FY21</th>
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<th>FY25 and Beyond</th>
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</table>

### Platforms

- **Cell Therapy and Immune Engagers**
- **Targeted Immune Modulation**
- **Next-Gen Checkpoint Modulators**
- **Gene Therapy**
- **Other Platforms**
- **Microbiome**
- **Cell Therapy**

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**2019: A WATERSHED YEAR FOR TAKEDA**

1. **Integration of Shire**
2. **Expansion of Our Global Brands**
3. **Unprecedented NMEs**

<table>
<thead>
<tr>
<th>Integration of Shire</th>
<th>Expansion of Our Global Brands</th>
<th>Unprecedented NMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 18 assets added to the clinical pipeline*</td>
<td>• VARSITY study demonstrated head-to-head superiority of Entyvio vs Humira and published in New England Journal of Medicine</td>
<td>• 17 NMEs in Phase 2 and Phase 3</td>
</tr>
<tr>
<td>• Creation of a Rare Diseases Therapeutic Area</td>
<td>• TAKHYRO indication expansions in bradykinin mediated angioedema</td>
<td>• Potentially curative novel mechanisms (e.g. TAK-101, Orexin2R-ag, CAR-NK)</td>
</tr>
<tr>
<td>• Access to world-class Gene Therapy capabilities</td>
<td>• Expecting &gt;15 approvals in China over the next 5 years</td>
<td>• Momentum in Cell Therapies, including new partnership with MD Anderson</td>
</tr>
</tbody>
</table>

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*Orphan potential in at least one indication
Estimated dates as of November 14, 2019

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* Including approved products with ongoing R&D investment
PATIENT-DRIVEN AND SCIENCE-FIRST IN 3 CORE AREAS

INNOVATIVE BIOPHARMA

ONCOLOGY  RARE DISEASES  NEUROSCIENCE  GASTROENTEROLOGY

PLASMA DERIVED THERAPIES
Complementing our rare disease focus

VACCINES BUSINESS UNIT
Differentiated Dengue vaccine

WE ARE DOING MORE FOR OUR PATIENTS

8
POTENTIAL BIC/FIC NMEs IN PIVOTAL STUDIES

~40
NEW MOLECULAR ENTITY CLINICAL STAGE ASSETS

~4,500
R&D EMPLOYEES GLOBALLY

~70%
DIVERSIFIED MODALITIES IN RESEARCH

~50%
Pipeline with Orphan Drug Designation

200+
ACTIVE PARTNERSHIPS

1. BIC/FIC: Best-In-Class/First-In-Class (incl. relugolix). Three NMEs in pivotal studies in 2018
2. 31 Orphan Drug Designations in at least one indication for assets in Phase 1 through LCM in 2019 versus 15 in 2018
WE ARE TAKING COURAGEOUS RISKS TO MAKE A CRITICAL DIFFERENCE

“There is a considerable need for improved treatments for individuals with NT1, which is caused by the loss of orexin-producing neurons in the brain”

Dr. Makoto Honda, Sleep Disorders Project Leader, Tokyo Metropolitan Institute of Medical Science

Data presented at World Sleep conference

NOVEL TARGET MECHANISMS WITH HUMAN VALIDATION

MODALITY DIVERSIFICATION

~70%

Cell Tx
Gene Tx
Biologics
Peptides
Oligonucleotide
Microbiome
Small Molecule

5
Accelerated programs
20
NME stage-ups since FY18
19
Indications terminated or externalized since FY18

FAST GO / NO-GO DECISION MAKING

WE ARE CULTIVATING THE BEST SCIENCE THROUGH DIFFERENTIATED PARTNERSHIPS...

Select partnerships*

- Access to Innovation
- Risk-Sharing
- Expanding Capacity

Total Value in Public & Private Equity

>$1B

*Externalizations and venture investments are not included
WE ARE NURTURING INNOVATION WHEREVER IT OCCURS

Representative examples only

TO DRIVE HIGHER RETURN ON OUR $4.5B ANNUAL R&D INVESTMENT
A RESEARCH ENGINE FUELING A SUSTAINABLE PIPELINE

POTENTIAL NME PIVOTAL STUDY STARTS BY YEAR

- Research momentum building with a projected ~18 portfolio entries in FY19
- Productivity likely to increase with expansion of cell and gene therapy capabilities
- Leveraging partnerships to access the best clinical or preclinical innovation

IMPROVED PRODUCTIVITY

Note: Projections assume successful data readouts

PIPELINE INVESTMENTS SUPPORTING NEAR-TERM GROWTH

WAVE 1

- INNOVATIVE EXPANSIONS
- NEW MOLECULAR ENTITIES
WE ARE DRIVING EXPANSION OF OUR GLOBAL BRANDS

SELECT GLOBAL GROWTH BRANDS

<table>
<thead>
<tr>
<th>TAU</th>
<th>Therapies</th>
<th>New Indications / Geographic Expansions</th>
<th>Target (FY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONC</td>
<td>Alunbrig</td>
<td>1L Non Small Cell Lung Cancer</td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td>Ninlaro</td>
<td>ND MM Maintenance (non-SCT and post-SCT)</td>
<td>2020 / 2022</td>
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<tr>
<td>Rare</td>
<td>Brackyn Mediated Angioedema</td>
<td>2024</td>
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<tr>
<td></td>
<td>Prophylactic Treatment of von Willebrand Disease</td>
<td>2021</td>
<td></td>
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<tr>
<td></td>
<td>Ulcerative Colitis, Crohn’s Disease (subcutaneous formulation)</td>
<td>2019 / 2020</td>
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<td></td>
<td>Ninlaro</td>
<td>ND MM Maintenance (non-SCT and post-SCT)</td>
<td>2020 / 2022</td>
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<td></td>
<td>Entyvio</td>
<td>Bradykinin Mediated Angioedema</td>
<td>2024</td>
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<td>Alofisel</td>
<td>Prophylactic Treatment of von Willebrand Disease</td>
<td>2021</td>
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<td></td>
<td>Takhzyro</td>
<td>Graft versus Host Disease (prophylaxis)</td>
<td>2022</td>
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<td>Complex Perianal Fistulas</td>
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<td>GI</td>
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SELECT REGIONAL EXPANSIONS

<table>
<thead>
<tr>
<th>Region</th>
<th>Therapies</th>
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<tr>
<td>China</td>
<td>relugolix, cabozantinib, niraparib</td>
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<tr>
<td>Japan</td>
<td>Takeda</td>
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</tbody>
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ND MM: newly diagnosed multiple myeloma
SCT: stem cell transplant

* VONVENDI is emerging as a global brand
Estimated dates as of November 14, 2019

WAVE 1 NEW MOLECULAR ENTITIES HAVE POTENTIAL TO DELIVER >$10B AGGREGATE PEAK SALES...

TARGET APPROVAL\(^1\) →

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<th>ONCOLOGY</th>
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</table>

14 potential NME launches which represent best-in-class or first-in-class therapies to advance patient standard of care

Estimated dates as of November 14, 2019

Peak sale estimate of >$10B is non-risk adjusted
1. Projected timing of approvals depending on data read-outs; some of these Wave 1 target approval dates assume accelerated approval
2. Projected approval date assumes filing on Phase 2 data

Estimated dates as of November 14, 2019

Orphan potential in at least one indication
...AND ARE EXPECTED TO DELIVER LIFE-CHANGING MEDICINES

**POTENTIAL FIRST-IN-CLASS OR BEST-IN-CLASS NMEs**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>MECHANISM</th>
<th>INDICATION</th>
<th>TARGET APPROVAL DATE</th>
<th>ADDRESSABLE POPULATION (IN US)</th>
<th>ADDRESSABLE POPULATION (WW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-788</td>
<td>EGFR inhibitor (exon 20)</td>
<td>NSCLC – 2L / 1L</td>
<td>2021† / 2023</td>
<td>~2k</td>
<td>~20 - 30k</td>
</tr>
<tr>
<td>Pevonedistat (TAK-924)</td>
<td>NAE inhibitor</td>
<td>HR-MDS / AML</td>
<td>2021† / 2024</td>
<td>~7k / ~12k</td>
<td>15 - 20k / 20 - 25k</td>
</tr>
<tr>
<td>TAK-007</td>
<td>CD19 CAR-NK</td>
<td>Hematologic malignancies</td>
<td>2023</td>
<td>~9k</td>
<td>~15 - 25k</td>
</tr>
<tr>
<td>TAK-609</td>
<td>ERT / iDS replacement</td>
<td>Hunter CNS (IT)</td>
<td>2021</td>
<td>~250</td>
<td>~1 - 1.5k</td>
</tr>
<tr>
<td>maribavir (TAK-620)</td>
<td>UL97 kinase inh</td>
<td>CMV infect. in transpl.</td>
<td>2021</td>
<td>~7 - 15k</td>
<td>~25 - 45k</td>
</tr>
<tr>
<td>TAK-607</td>
<td>IGF-1/IGFBP3</td>
<td>Complications of prematurity</td>
<td>2024‡</td>
<td>~25k</td>
<td>~80 - 90k</td>
</tr>
<tr>
<td>TAK-611</td>
<td>ERT / ADAMTS-15</td>
<td>cTTP / ITTP</td>
<td>2023</td>
<td>~350</td>
<td>~1 - 2k</td>
</tr>
<tr>
<td>TAK-788</td>
<td>Oral anti-inflammatory</td>
<td>Eosinophilic Esophagitis</td>
<td>2020</td>
<td>~150k</td>
<td>Under evaluation</td>
</tr>
<tr>
<td>TAK-007</td>
<td>Dengue vaccine</td>
<td>Vaccine</td>
<td>2021</td>
<td>~32M</td>
<td>~1.8B</td>
</tr>
</tbody>
</table>

1. Projected timing of approvals depending on data read-outs; some of these target approval dates assume accelerated approval
2. Estimated number of patients projected to be eligible for treatment in markets where the product is anticipated to be commercialized, subject to regulatory approval
3. For TAK-788, TAK-924, TAK-007, TAK-607 and TAK-620 the addressable population represent annual incidence
4. Projected approval date assumes filing on Phase 2 data
5. Currently in a non-pivotal Ph 2; interim stage gates may advance program into pivotal trial for target approval by 2024
   - Currently in pivotal study or potential for registration enabling Ph-2 study (note: table excludes relugolix)

**IN SUMMARY: ROBUST NEAR-TERM GROWTH**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>MECHANISM</th>
<th>INDICATION</th>
<th>TARGET APPROVAL DATE</th>
<th>ADDRESSABLE POPULATION (IN US)</th>
<th>ADDRESSABLE POPULATION (WW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-721</td>
<td>Eosinophilic Esophagitis</td>
<td>Vaccine</td>
<td>2021</td>
<td>~32M</td>
<td>~1.8B</td>
</tr>
</tbody>
</table>

1. China approval in 2023
2. US approval for sc CD, EU approval for sc UC & CD, Japan approval for sc CD
3. Includes approval in China
4. China approval in 2024
5. New indication for currently unapproved asset

---

**TAKHZYRO**

**Potential NME Approval**

**ENTYVIO**

**Potential Global Brand Extension**

**NINLARO**

**Potential Regional Brand Extension**

---

**FY19 FY20 FY21 FY22 FY23 FY24**

1. China approval in 2023
2. US approval for sc CD, EU approval for sc UC & CD, Japan approval for sc CD
3. Includes approval in China
4. China approval in 2024
5. New indication for currently unapproved asset

The target dates are estimates based on current data and subject to change
**SUSTAINED GROWTH BEYOND FY25**

**WAVE 2**

- **NOVEL MECHANISMS**
- **NEXT-GENERATION PLATFORMS**

---

**DRIVEN BY A CLINICAL PIPELINE OF NOVEL MECHANISMS...**

<table>
<thead>
<tr>
<th>Target Approval</th>
<th>FY25 and Beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oncology</strong></td>
<td></td>
</tr>
<tr>
<td>TAK-164</td>
<td>GI malignancies</td>
</tr>
<tr>
<td>TAK-252</td>
<td>Solid tumors</td>
</tr>
<tr>
<td>TAK-573</td>
<td>H/R/MM</td>
</tr>
<tr>
<td>TAK-981</td>
<td>Multiple cancers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Rare Diseases</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-079(^2)</td>
</tr>
<tr>
<td>TAK-754</td>
</tr>
<tr>
<td>TAK-755</td>
</tr>
<tr>
<td>TAK-531</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Neuroscience</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-341</td>
</tr>
<tr>
<td>TAK-418</td>
</tr>
<tr>
<td>WVE-120101</td>
</tr>
<tr>
<td>WVE-120102</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Gastro-Enterology</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kuma062</td>
</tr>
<tr>
<td>TAK-954</td>
</tr>
<tr>
<td>TAK-101</td>
</tr>
<tr>
<td>TAK-906</td>
</tr>
<tr>
<td>TAK-951</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Vaccines</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-214</td>
</tr>
<tr>
<td>TAK-426</td>
</tr>
<tr>
<td>TAK-021</td>
</tr>
</tbody>
</table>

---

1. Some Wave 2 assets could be accelerated into Wave 1 if they have breakthrough data
2. TAK-079 to be developed in Rare Diseases indications myasthenia gravis (MG) and immune thrombocytopenic purpura (ITP) [IPN] projected for 2H FY19

Rich early clinical pipeline of potentially transformative and curative NMEs

---

Orphan potential in at least one indication

Estimated dates as of November 14, 2019
### Target Approval

<table>
<thead>
<tr>
<th>Cell Therapies and Immune Engagers</th>
<th>Targeted Innate Immune Modulation</th>
<th>Next-Gen Checkpoint Modulators</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR-T</td>
<td>Adaptoric</td>
<td>Agonist redirected checkpoints</td>
</tr>
<tr>
<td>MS4CC</td>
<td>GammaDelta</td>
<td>STING</td>
</tr>
<tr>
<td>GammaDelta</td>
<td></td>
<td>Gardnex, Takeda</td>
</tr>
<tr>
<td>CAR-HK</td>
<td>SUMOylation</td>
<td>SUMOylation, Takeda</td>
</tr>
<tr>
<td>Adiropax</td>
<td></td>
<td>Takeda</td>
</tr>
</tbody>
</table>

### Rare Diseases

<table>
<thead>
<tr>
<th>Immunology</th>
<th>Gene Therapy</th>
<th>Other Platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematology</td>
<td>Homobilia</td>
<td>RNA Modulation</td>
</tr>
<tr>
<td>Metabolic</td>
<td>Lysosomal Storage Diseases</td>
<td>Bone, Skeletal</td>
</tr>
<tr>
<td>Neurodegenerative Diseases</td>
<td>StrideBio</td>
<td>Antibody Transport Vehicle</td>
</tr>
</tbody>
</table>

### Neuroscience

<table>
<thead>
<tr>
<th>Gene Therapy</th>
<th>Microbiome</th>
<th>Cell Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver</td>
<td>FIN-524</td>
<td>Ambys</td>
</tr>
<tr>
<td>Ambys</td>
<td>Microbial Consortia</td>
<td>Ambys</td>
</tr>
</tbody>
</table>

### Gastro-Enterology

<table>
<thead>
<tr>
<th>Gene Therapy</th>
<th>Cell Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambys</td>
<td>Ambys</td>
</tr>
</tbody>
</table>

---

### INVESTING IN CAPABILITIES TO POSITION US FOR SUCCESS

**Cell Therapy**
- 5 clinical programs by end of FY20
- Disruptive platforms, including off-the-shelf cell-therapies

**Gene Therapy**
- World-class gene therapy manufacturing
- Accessing innovation through partnerships (e.g. StrideBio, Ambys)

**Data Sciences**
- Accelerate clinical development with real world data (e.g. TAK-788)
- Use machine learning to identify rare disease patients

---

Some Wave 2 assets could be accelerated into Wave 1 if they have breakthrough data

Estimated dates as of November 14, 2019
LIVING OUR VALUES THROUGHOUT THE INTEGRATION PROCESS

1. **December 2018**
   Leadership Team and Proposed R&D Operating Model Announced

2. **April 2019**
   Prioritization of Combined Pipeline and Portfolio

3. **August 2019**
   R&D Employees Informed of Employment Status*

* Where legally cleared
STRONG LEADERSHIP EXECUTING ON OUR VISION

ASIT PARISH
Head, Gastroenterology
Therapeutic Area Unit

PHIL ROWLANDS
Head, Oncology
Therapeutic Area Unit

DAN CURRAN
Head, Rare Diseases
Therapeutic Area Unit

EMILIANGELO RATTI
Head, Neuroscience
Therapeutic Area Unit

SARAH SHEIKH
Head, Neuroscience
Therapeutic Area Unit*

STEVE HITCHCOCK
Head, Research

NENAD GRMUSA
Head, Center for External Innovation

GEORGINA KERESTY
R&D Chief Operating Officer

ANNE HEATHERINGTON
Head, Data Sciences Institute

WOLFRAM NOTHAFT
Chief Medical Officer

STEFAN WILDT
Head, Pharmaceutical Sciences and Translational Engine, Cell Therapies

JEREMY CHADWICK
Head, Global Development Office*

WOLFGANG HACKEL
Head, Global R&D Finance

ERIKA MARDER
Head, Global R&D Human Resources

COLLEEN BEAUREGARD
Head, Global R&D Communications

TOSHIO FUJIMOTO
General Manager, Shonan Health Innovation Park (iPark)

Sarah Sheik to succeed Emiliangelo Ratti upon his retirement beginning November 25

Includes Regulatory, Global Patient Safety Evaluation, Development Operations, and Clinical Supply Chain

NEW HIRE

Sarah Sheik to succeed Emiliangelo Ratti upon his retirement beginning November 25

Includes Regulatory, Global Patient Safety Evaluation, Development Operations, and Clinical Supply Chain

OUR COMMITMENT TO OUR PEOPLE IS BEING RECOGNIZED

New hire

Sarah Sheik to succeed Emiliangelo Ratti upon his retirement beginning November 25

Includes Regulatory, Global Patient Safety Evaluation, Development Operations, and Clinical Supply Chain
WE ARE POSITIONED TO DELIVER NEAR-TERM & SUSTAINED GROWTH

1. Projected timing of approvals depending on data read-outs; some of these Wave 1 target approval dates assume accelerated approval
2. Some Wave 2 assets could be accelerated into Wave 1 if they have breakthrough data
3. Projected approval date assumes filing on Phase 2 data
4. TAK-079 to be developed in Rare Diseases indications myasthenia gravis (MG) and immune thrombocytopenic purpura (ITP) (FPI projected in each indication in 2H FY19)

R&D DAY AGENDA – NEW YORK, NOVEMBER 14, 2019

TIME | AGENDA
--- | ---
12:30 – 12:35 | Welcome and Opening Remarks  
Sheelagh Cawley-Knopf, Head R&D Global Portfolio Strategy
12:35 – 12:45 | Takeda: A Global Values-Based, R&D-Driven Biopharmaceutical Leader  
Christophe Weber, President & CEO Takeda
12:45 – 13:20 | Translating Science into Highly Innovative, Life-changing Medicines  
Andy Plump, President R&D
13:20 – 13:45 | Oncology and Cell Therapies with Spotlight on CAR-NK  
Chris Arendt, Head Oncology Drug Discovery Unit
13:45 – 14:05 | Spotlight on Oncology Opportunities  
• TAK-788: Rachael Brake, Global Program Lead  
• Pevonedistat: Phil Rowlands, Head Oncology Therapeutic Area Unit
14:05 – 14:20 | Break
14:20 – 14:45 | Rare Diseases & Gene Therapy  
Dan Curran, Head Rare Disease Therapeutic Area Unit
14:45 – 15:00 | Spotlight on Orexin2 agonists  
Deborah Hartman, Global Program Lead
15:00 – 15:20 | Therapeutic Area Focus in GI with Spotlight on Celiac Disease  
Asit Parikh, Head GI Therapeutic Area Unit
15:20 – 16:00 | Panel Q&A Session
16:00 | Drinks reception
A CURATIVE-INTENT IMMUNO-ONCOLOGY PIPELINE IS TAKING SHAPE

WAVE 1
NMEs that complement our global brands

- TAK-924
  - FY21 target approval
- TAK-007
  - FY23 target approval
- TAK-788
  - FY21 target approval

WAVE 2
Leading platforms in immuno-oncology and cell therapies
PARTNERSHIPS DRIVE OUR DIFFERENTIATED EARLY CLINICAL PIPELINE

Unique Partnership Model
- Innovative, disruptive platforms
- Agility in ‘open lab’ model

Differentiated Portfolio
- Harness innate immunity
- Eye towards solid tumors

THE FIRST BREAKTHROUGHS IN CANCER IMMUNOTHERAPY TARGET T CELLS

T CELL CHECKPOINT INHIBITORS
- PD-1
- CTLA-4

FIRST-GEN CAR-Ts
- Adoptive T cell therapy
- CAR

Adapted from Chen & Mellman, Immunity 2013
OUR FOCUS IS ON NOVEL MECHANISMS IN THE CANCER-IMMUNITY CYCLE

1. Innate immunomodulation
   - Novel-scaffold immune checkpoint platforms
   - Next-gen cell therapy & immune engager platforms

2. Innate immune enhancer
   - Attenukine™
   - Targeted attenuated IFN-α

3. Systemic therapies leveraging innate immunity to enhance response breadth, depth & durability
   - TAK-676 (STING agonist)
   - Targeted STING agonist
   - TAK-981 (CD38-Attenukine™)
   - Next-gen Attenukine™

Adapted from Chen & Mellman, Immunity 2013

EMERGING STRENGTH IN TARGETED INNATE IMMUNE MODULATION

- Patients refractory/ unresponsive to current immunotherapies
- Systemic therapies leveraging innate immunity to enhance response breadth, depth & durability
ATTENUKINE™ PLATFORM ELICITS BOTH DIRECT TUMOR KILL AND IMMUNE ACTIVATION

TARGETED ATTENUATED TYPE I IFN PAYLOAD

**TAK-573**
- Binds CD38
- Human IgG4 Fc
- Attenuated IFNα2b
- Immuno modulation in preclinical models
- Includes CD8+ T cell migration / activation

NEXT-GEN ATTENUKINE™
- Binds innate immune target
- Attenuated IFNα2b

TAK-573 POM IN ONGOING PHASE 1 R/R MM STUDY

**Activation of CD8+ T cells in bone marrow**
- Baseline: 7.3%
- Cycle 1 Day 16: 18.4%
- Cycle 2 Day 2: 28.8%

**Activation Marker (CD69+)**

EXPECTED MILESTONES (FY)
- 2019: Ph1 FPI in solid tumors
- 2020: Ph1b MM (incl. combinations)

**FPI = first patient in**
**R/R MM = Relapsed / refractory multiple myeloma**
**POM = proof-of-mechanism**

NOVEL SCAFFOLD NEXT-GENERATION CHECKPOINT MODULATORS

**High Unmet Need**
Current checkpoint modulators fail to improve overall survival in majority of patients

**Our Differentiated Approach**
New classes of checkpoint inhibitors designed to increase breadth and depth of responses

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>PARTNER</th>
<th>MECHANISM-OF-ACTION</th>
<th>PROGRAMS</th>
<th>PRE-CLINICAL</th>
<th>PH 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humbody Vh</td>
<td>Crescendo Biosciences</td>
<td>• Unique pharmacology</td>
<td>Concept 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agonist-directed checkpoints</td>
<td>Shattuck Biologics</td>
<td>• Co-inhibition &amp; co-stimulation</td>
<td>TAK-252 / SL-279352 (PD1-Fc-OX40L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TAK-254 / SL-115154 (CSF1R-Fc-CD40L)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vh = Variable heavy domain

= first-in-class
BRINGING 5 NOVEL CELL THERAPY PLATFORMS TO THE CLINIC BY THE END OF FY20

HIGH UNMET NEED
Current CAR-T therapies have significant challenges & fail to address solid tumors

OUR DIFFERENTIATED APPROACH
Leverage novel cell platforms & engineering to address shortcomings in liquid & solid tumors

INNATE IMMUNE PLATFORMS
• Multiple mechanisms of tumor killing
• ‘Off-the-shelf’
• Utility in solid tumors

NK & γδT cells
Innate tumor sensors & effectors
Engineered CAR
Fc-mediated killing

A NETWORK OF TOP INNOVATORS IS FUELING TAKEDA’S CELL THERAPY ENGINE

CUTTING-EDGE ENGINEERING & CELL PLATFORMS

IPSC expertise
γδT cell platform
Armored CAR-Ts
Next-gen CARs
IPSC CAR-Ts
CAR-NK platform

Shinya Yamanaka
Adrian Hayday
Koji Tamada
Michel Sadelain
Shin Kaneko
Katy Rezvani

Dr. Sadelain is a co-inventor on patents relative to next-gen CARs, intellectual property that MSK has licensed to Takeda. As a result of these licensing arrangements, Dr. Sadelain and MSK have financial interests related to these research efforts.
TAKEDA IS EMBARKING ON A TRANSFORMATIVE CAR-NK PARTNERSHIP THAT COULD ENTER PIVOTAL TRIALS IN 2021

NK CAR Platform

Multiple mechanisms of tumor killing
Potentiation of innate & adaptive immunity

FOUR NOVEL, OFF-THE-SHELF CAR-NK THERAPIES IN DEVELOPMENT

PATIENT VALUE PROPOSITION

Rapid and deep responses with a short-time-to-treatment, safe, off-the-shelf CAR-NK available in outpatient & community settings

<table>
<thead>
<tr>
<th>PLATFORM VALUE INFLECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY</td>
</tr>
<tr>
<td>Initial opportunity in G7 countries (CD19)*</td>
</tr>
<tr>
<td>3L+ DLBCL</td>
</tr>
<tr>
<td>3L+ CLL</td>
</tr>
<tr>
<td>3L+ INHL</td>
</tr>
</tbody>
</table>

Potential to move into earlier lines of therapy

CAR-NK (allo cord blood)

MDAnderson Cancer Center
Dr. Katy Rezvani
• Non-autologous NK cell therapy

TAK-007 (CD19 CAR-NK)
BCMA CAR-NK
Platform expansion

CLL = Chronic lymphocytic leukemia  DLBCL = Diffuse large B-cell lymphoma  INHL = Indolent non-Hodgkin’s lymphoma
*Estimated number of patients projected to be initially eligible for treatment in G7 markets, subject to regulatory approval
3 DRAMATIC COMPLETE RESPONSE IN FIRST PATIENT TREATED

47-YEAR OLD MALE WITH RELAPSED TRANSFORMED DOUBLE-HIT (C-MYC / BCL-2) DLBCL

KINETICS OF CAR-NK VERSUS ENDOGENOUS T AND B CELLS IN PERIPHERAL BLOOD

- Car-NK cells
- T cells
- B cells

Days post-CAR-NK infusion

Days post-CAR-NK infusion

Baseline scan  Day 30 post CAR19-NK

Data from Dr. Katy Rezvani, MD Anderson Cancer Center

3 IMPRESSIVE RESPONSES IN OTHER HEAVILY PRETREATED PATIENTS

61-YEAR OLD MALE CLL/RICHTER’S TRANSFORMATION (5 PRIOR LINES OF THERAPY)

60-YEAR OLD FEMALE WITH CLL / ACCELERATED CLL (5 PRIOR LINES OF THERAPY)

Baseline scan  Day 30 post CAR19-NK

Baseline scan  Day 30 post CAR19-NK

CR in Richter’s; SD in CLL

Data from Dr. Katy Rezvani, MD Anderson Cancer Center
CAR-NK CELLS PERSIST IN PATIENTS AND DO NOT TRIGGER CYTOKINE RELEASE SYNDROME (CRS)

CAR-NK CELLS PERSIST UP TO 4 MONTHS POST INFUSION

IL-6 LEVELS POST CAR-NK INFUSION DO NOT INDICATE CRS

CAR-NK EFFICACY & TOXICITY TREATING MULTIPLE DIAGNOSES

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Lines of Treatment</th>
<th>HLA Match</th>
<th>CRS / Neurotox</th>
<th>Complete Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose Level 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DLBCL - Relapsed transformed double-hit</td>
<td>3 Incl. ASCT</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>DLBCL - Refractory</td>
<td>7</td>
<td>Partial match</td>
<td>None</td>
<td>PD</td>
</tr>
<tr>
<td>CLL</td>
<td>4 Incl. ibrutinib &amp; venetoclax</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>Dose Level 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLL</td>
<td>4 Incl. ibrutinib</td>
<td>Partial match</td>
<td>None</td>
<td>PD</td>
</tr>
<tr>
<td>CLL/Richter’s transformation</td>
<td>5 Incl. ibrutinib</td>
<td>Partial match</td>
<td>None</td>
<td>✓ * Richter’s</td>
</tr>
<tr>
<td>CLL/Accelerated CLL</td>
<td>5 Incl. ibrutinib &amp; venetoclax</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
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<tr>
<td>Dose Level 3</td>
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<td></td>
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</tr>
<tr>
<td>DLBCL - Refractory</td>
<td>11 Incl. ASCT</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>DLBCL - Relapsed transformed double-hit</td>
<td>4 Incl. ASCT</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>Follicular lymphoma - Relapsed</td>
<td>4 Incl. ASCT</td>
<td>Mismatch</td>
<td>None</td>
<td>PD</td>
</tr>
<tr>
<td>Follicular lymphoma - Relapsed</td>
<td>4 Mismatch</td>
<td>None</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

CRS = Cytokine Release Syndrome
*Turtle et al. 2017
Data from Dr. Katy Rezvani, MD Anderson Cancer Center

Data from Dr. Katy Rezvani, MD Anderson Cancer Center
FAST-TO-CLINIC CELL THERAPY ENGINE WILL MAXIMIZE LEARNINGS ON MULTIPLE ‘DISRUPTIVE’ PLATFORMS

5 CLINICAL-STAGE PROGRAMS EXPECTED BY END OF FY20

FY19

FY20

FY21+

Other cell therapy candidates

TAK-007

Off-the-shelf CAR-NK product

MD Anderson Cancer Center

TAK-102

Cytokine + chemokine armed CAR-T

NOILE-IMMUNE BIOTECH

CD19 1XX-CAR-T

Next-gen CART signaling domain

Memorial Sloan Kettering Cancer Center

GDX012

Gamma-delta T cells

GAMMADELTA THERAPEUTICS

GCC CAR-T

Colorectal Cancer

GCD-012

Gamma-delta T cells

GAMMADELTA THERAPEUTICS

A RICH AND POTENTIALLY TRANSFORMATIVE EARLY CLINICAL ONCOLOGY PIPELINE

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>PARTNER(S)</th>
<th>MECHANISM-OF-ACTION</th>
<th>PROGRAMS</th>
<th>PRECLINICAL</th>
<th>PH1</th>
</tr>
</thead>
<tbody>
<tr>
<td>STING agonism</td>
<td>CURADEV</td>
<td>• Innate-to-adaptive priming</td>
<td>TAK-676 (STING agonist) Targeted STING agonist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUMOylation</td>
<td></td>
<td>• Innate immune enhancer</td>
<td>TAK-981 TAK-981 (ADCC combo)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenukine™</td>
<td>teva</td>
<td>• Targeted attenuated IFN-α</td>
<td>TAK-573 (CD38-Attenukine™)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agonist-redirected</td>
<td>SHATTUCK</td>
<td>• Co-inhibition &amp; co-stimulation</td>
<td>TAK-252 / SL-279353 TAK-254 / SL-115154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>shiga-like toxin A</td>
<td>tem</td>
<td>• Novel cytotoxic payload</td>
<td>TAK-169 (CD38-SLTA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IGN toxin</td>
<td>immunogen</td>
<td>• Solid tumor-targeted ADC</td>
<td>TAK-164 (GCC-ADC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditional T cell</td>
<td>MAVERICK</td>
<td>• Novel solid tumor platform</td>
<td>MVC-101 (EGFR COBRA™)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cell engagers</td>
<td>GAMMADELTA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cell therapy platforms</td>
<td>GAMMADELTA</td>
<td>• Off-the-shelf cell therapies</td>
<td>TAK-007 (CD19 CAR-NK)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**NME MILESTONES ACHIEVED IN FY19 AND LOOKING AHEAD TO OTHER POTENTIAL MILESTONES¹ THROUGH FY20**

**PIVOTAL STUDY STARTS, APPROVALS**

<table>
<thead>
<tr>
<th>1H FY 2019</th>
<th>2H FY 2019</th>
<th>1H FY 2020</th>
<th>2H FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oncology</strong></td>
<td><strong>Rare Disease</strong></td>
<td><strong>Neuroscience</strong></td>
<td><strong>Gastroenterology</strong></td>
</tr>
<tr>
<td>TAK-825 Neurology POC</td>
<td>TAK-924</td>
<td>TAK-607 MDS</td>
<td>TAK-611 MLG: Ph 3 start</td>
</tr>
<tr>
<td>TAK-721 Esophageal Disease POC</td>
<td>TAK-693</td>
<td>TAK-888 HR-MDS</td>
<td>TAK-721 Gastroesophageal POC</td>
</tr>
<tr>
<td>TAK-101 Colitis Disease POC</td>
<td>TAK-678 Pivotal</td>
<td>TAK-786 ES&gt;MRC</td>
<td>TAK-721 Huntington’s Disease POC</td>
</tr>
</tbody>
</table>

Denotes milestones that have been achieved.

**KEY DATA READOUTS**

1. Potential key milestone dates as of November 14, 2019. The dates included herein are estimates based on current data and are subject to change.
2. Potentially registration enabling

**SUMMARY**

1. Total transformation of preclinical & early clinical pipeline
2. Differentiated opportunities in IO leveraging innate immunity & cell therapies
3. Multiple near-term catalysts informing momentum towards solid tumors
# R&D DAY AGENDA – NEW YORK, NOVEMBER 14, 2019

<table>
<thead>
<tr>
<th>TIME</th>
<th>AGENDA</th>
</tr>
</thead>
</table>
| 12:30 – 12:35 | Welcome and Opening Remarks  
Sheelagh Cawley-Knopf, Head R&D Global Portfolio Strategy                                                                                     |
| 12:35 – 12:45 | Takeda: A Global Values-Based, R&D-Driven Biopharmaceutical Leader  
Christophe Weber, President & CEO Takeda                                                                                               |
| 12:45 – 13:20 | Translating Science into Highly Innovative, Life-changing Medicines  
Andy Plump, President R&D                                                                                                             |
| 13:20 – 13:45 | Oncology and Cell Therapies with Spotlight on CAR-NK  
Chris Arendt, Head Oncology Drug Discovery Unit                                                                                   |
| 13:45 – 14:05 | Spotlight on Oncology Opportunities  
• TAK-788: Rachael Brake, Global Program Lead  
• Pevonedistat: Phil Rowlands, Head Oncology Therapeutic Area Unit                                                                  |
| 14:05 – 14:20 | Break                                                                                                                                    |
| 14:20 – 14:45 | Rare Diseases & Gene Therapy  
Dan Curran, Head Rare Disease Therapeutic Area Unit                                                                                     |
| 14:45 – 15:00 | Spotlight on Orexin2R agonists  
Deborah Hartman, Global Program Lead                                                                                                  |
| 15:00 – 15:20 | Therapeutic Area Focus in GI with Spotlight on Celiac Disease  
Asit Parikh, Head GI Therapeutic Area Unit                                                                                                |
| 15:20 – 16:00 | Panel Q&A Session                                                                                                                        |
| 16:00 | Drinks reception                                                                                                                          |

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**TAK-788: PURSuing A FAST-To-PATIENT STRATEGY FOR NSCLC PATIENTS WITH EGFR EXON 20 INSERTIONS**

Rachael L Brake, PhD  
Global Program Leader, Oncology  
Takeda Pharmaceutical Company Limited  
New York, NY  
November 14, 2019
1. American Cancer Society; Cancer facts and figures 2019
2. Office for National Statistics UK (www.ons.gov.uk)

143,000
Lung cancer deaths/yr
More than breast, colon, and prostate cancer combined

228,000
New Lung cancer cases/yr

Survival of Lung cancer is amongst the lowest of all cancers

5 yr survival estimates among adults diagnosed with lung cancer between 2007-2011

THE SIZE OF THE LUNG CANCER CHALLENGE IS VAST

EXON 20 INSERTIONS ARE A RARE SUBSET OF EGFR MUTANT NSCLC

PATIENTS WITH EGFR EXON 20 INSERTIONS HAVE NO EFFECTIVE THERAPY

EGFR exon 20 insertions do not demonstrate significant PFS benefit with 1st and 2nd gen EGFR TKIs

<table>
<thead>
<tr>
<th>Group</th>
<th>Median PFS (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGFR exon 20 ins (n=9)</td>
<td>2.0</td>
</tr>
<tr>
<td>Classical EGFR mut (n=129)</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Hazard ratio = 12.3 (p<0.00001)

EGFR exon 20 ins patients demonstrate limited benefit to anti PD-1 directed therapy

<table>
<thead>
<tr>
<th>Group</th>
<th>Median PFS (months)</th>
<th>PDL-1 expression ≥1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGFR exon 20 ins (n=20)</td>
<td>2.7 (1.7-3.8)</td>
<td>40%</td>
</tr>
<tr>
<td>Classical EGFR mut (n=22)</td>
<td>1.8 (1.2-2.4)</td>
<td>25%</td>
</tr>
</tbody>
</table>

OVERCOMING THE DRUG DEVELOPMENT CHALLENGE IN EXON 20 INSERTIONS

EGFR exon 20 insertion mutations have a similar structure and similar affinity for ATP to wild type EGFR

Source: TAK-788 bound to EGFR kinase domain containing D770 ins NPG, crystal structure (data on file)
TAK-788 PROOF OF CONCEPT DATA IN EGFR EXON 20 INSERTIONS

- Confirmed ORR: 12/28 patients: 43% (24.5-62.8%)
- Median PFS: 7.3 months (4.4 mo - NR)

ANTITUMOR ACTIVITY IN EGFR EXON 20 INS AT 160 MG DAILY

SAFETY SUMMARY IN PATIENTS TREATED WITH TAK-788

<table>
<thead>
<tr>
<th>N (%)</th>
<th>All Patients 160 mg qd (n=72)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment-related AE</td>
<td></td>
</tr>
<tr>
<td>Any grade</td>
<td>68 (94)</td>
</tr>
<tr>
<td>Grade ≥3</td>
<td>29 (40)</td>
</tr>
<tr>
<td>Dose reduction due to AE</td>
<td>18 (25)</td>
</tr>
<tr>
<td>Dose interruption due to AE</td>
<td>36 (50)</td>
</tr>
<tr>
<td>Discontinuation due to treatment-related AE</td>
<td>10 (14)</td>
</tr>
</tbody>
</table>

ENCOURAGING EFFICACY AND SAFETY HAS BEEN OBSERVED WITH TAK-788

Select signs of efficacy

<table>
<thead>
<tr>
<th>Clinical feature</th>
<th>TAK-788 1 n=28</th>
<th>Poziotinib 2 n=50</th>
<th>Afatinib 3 n=23</th>
<th>Osimertinib 4 n=15</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITT confirmed ORR (%)</td>
<td>43%</td>
<td>NR</td>
<td>8.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Evaluable confirmed ORR (%)</td>
<td>NR</td>
<td>43%</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>ITT median PFS (months)</td>
<td>7.3</td>
<td>5.5</td>
<td>2.7</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Select treatment related adverse events attributable to wild type EGFR inhibition

<table>
<thead>
<tr>
<th>Grade ≥ 3 Adverse event</th>
<th>TAK-788 1 n=72</th>
<th>Poziotinib 2 n=63</th>
<th>Afatinib 3 n=229</th>
<th>Osimertinib 4 n=279</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea ≥ Gr3</td>
<td>1.8%</td>
<td>17.5%</td>
<td>14%</td>
<td>1%</td>
</tr>
<tr>
<td>Rash ≥ Gr3</td>
<td>1%</td>
<td>35%</td>
<td>16%</td>
<td>1%</td>
</tr>
<tr>
<td>Paronychia ≥ Gr3</td>
<td>0%</td>
<td>9.5%</td>
<td>11%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total dose reduction rates

| AE related dose reductions (%) | 25% | 60% | 52% | 2.9% |

Direct cross-trial comparison cannot be made between TAK-788 and other treatments due to different studies with different designs.

ITT = Intention to treat, ORR = Overall response rate, PFS = progression free survival, NR = Not reported.
Average time on TAK-788
7.9 months

<table>
<thead>
<tr>
<th>Diarrhea</th>
<th>Time on Treatment (Mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 3</td>
<td>4.6</td>
</tr>
<tr>
<td>Grade 2</td>
<td>9.8</td>
</tr>
<tr>
<td>Grade 1</td>
<td>12.7</td>
</tr>
<tr>
<td>No diarrhea</td>
<td>12.1</td>
</tr>
</tbody>
</table>

**June 2016**
FIRST IN HUMAN
Diarrhea management very late - medicate when at Grade 2

**Feb 2019 new trial**
Comprehensive diarrhea management guidelines implemented earlier

**WE HAVE MODIFIED OUR APPROACH TO GI ADVERSE EVENT MANAGEMENT WITH THE AIM TO IMPROVE EFFICACY**

Source. TAK-788 Clinical trial database (data on file)

---

2021: EXPECTED FIRST APPROVAL IN EGFR EXON 20 INSERTIONS

- Single arm Phase 2 trial
- Refractory EGFR Exon 20 insertion patients

- Previously treated, ≤2 systemic anticancer chemotherapy
- Locally advanced or metastatic
- NSCLC harboring EGFR exon 20 insertion

TAK-788 at 160 mg qd

1. Overall Response Rate
2. Duration of Response
3. Median Progression Free Survival
4. Overall survival

- ACTIVELY ENROLLING US, EU, AND ASIA
- POTENTIAL APPROVAL MID 2021

- Supporting data generation
- Real world evidence (RWE) data collection

RWE will be used to assess the benefit of conventional standard of care (SOC) agents in patients with EGFR Exon 20 insertions

EMR claims databases and Medical Chart Review

<table>
<thead>
<tr>
<th>Chemo +/- VEGFR</th>
<th>Immunotherapy</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall Response Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Time to treatment failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Median progression free survival</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Duration of Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Overall survival</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- US (FLAT IRON HEALTH) - JP (SCRUM-JAPAN)
- EU AND CHINA CHART REVIEW

NEW ACTIVATION: A TRIAL FOR NEWLY DIAGNOSED PATIENTS

• Randomized, controlled, Phase 3 trial
• Treatment-naïve EGFR exon 20 insertion patients

- Advanced or metastatic
- Treatment-naïve patients diagnosed with NSCLC harboring EGFR exon 20 insertion mutations

R
1:1

TAK-788 at 160 mg qd
Platinum doublet

1. Median Progression Free Survival
2. Overall Response Rate
3. Duration of Response
4. Overall survival

Electronic patient reported outcomes

2 year enrollment
Anticipated approval 2023

SUMMARY

1. NSCLC patients with EGFR Exon 20 insertions are underserved with the current available therapies

2. TAK-788 is the first purposely designed inhibitor and clinical proof-of-concept has demonstrated efficacy

3. The EXCLAIM trial in refractory patients could lead to the first approval of TAK-788 by 2021

Source: https://clinicaltrials.gov/ct2/show/NCT04129502
PEVONEDISTAT (TAK-924): A POTENTIAL NEW TREATMENT FOR HR-MDS AND AML

Phil Rowlands, PhD
Head Oncology Therapeutic Area Unit
Takeda Pharmaceutical Company Limited
New York, NY
November 14, 2019

BUILDING ON THE TAKEDA ONCOLOGY FOUNDATION IN HEMATOLOGIC MALIGNANCIES

Next Generation I/O
Cell therapies
Type I IFN
Novel checkpoints

GROWING LEADERSHIP POSITION IN HEMATOLOGIC MALIGNANCIES

MDS/AML
Phase 3
pevonedistat

Lymphoma
Chronic Myeloid Leukemia

Improving Patient Outcomes in Multiple Myeloma
HIGH RISK MYELODYSPLASTIC SYNDROME (HR-MDS) AND ACUTE MYELOID LEUKEMIA (AML) HAVE LIMITED TREATMENT OPTIONS

**CONTINUUM OF HR-MDS AND AML**

- HR-MDS and AML are both rare bone marrow-related cancers that share foundational biology, clinical features, and genetic mutations*
- Incidence highest in elderly (>70 years old)
- Overall survival several months to a few years, depending on risk category

* 30% of HR-MDS patients progress to AML

**CLINICAL TREATMENT**

- BM failure → cytopenias
  - Fatigue (anemia)
  - Infection (neutropenia)
  - Bleeding (thrombocytopenia)

- Clinical treatment goals:
  - Alleviate cytopenias
  - Improve patient quality of life
  - Improve survival

**FIT PATIENTS**

- Younger
- Fewer co-morbidities
- Better performance status

- Intensive Chemotherapy

**UNFIT PATIENTS**

- Older
- Unfit for intensive chemotherapy and/or stem cell transplant

- Chemotherapy
  - azacitidine
decitabine
- Low dose ara-c

- Targeted therapies
  - (AML only)
  - BCL2
  - IDH1/2
  - FLT3

- Stem Cell Transplant
  - (Only curative treatment)
  - ≤ 10% HR-MDS, ~45% AML

**CURRENT STANDARD OF CARE IS INADEQUATE FOR HR-MDS PATIENTS**

- No new treatments have been approved for MDS in over a decade
- Transplant ineligible patients treated with first line therapy: Median OS = 15mo; 2yr OS rate 35%
- Economic burden is substantial - hospitalizations are common among patients and many are transfusion dependent

**MDS SURVIVAL BY PROGNOSTIC RISK**

- Median survival ~6 months to 5 years

Schanz et al., J Clin Oncol. 2012, 30:820-829
PEVONEDISTAT: A UNIQUE FIRST-IN-CLASS NAE INHIBITOR

- Pevonedistat is a small molecule inhibitor of NAE (NEDD-8 activating enzyme), a protein involved in the ubiquitin-proteasome system.
- NAE acts upstream of the proteasome and catalyzes the first step in the neddylation pathway.

ENCOURAGING RESPONSES IN AML PATIENTS TREATED WITH PEVONEDISTAT + AZACITIDINE

- 60% ORR with a trend towards improved survival in secondary AML.
- Response rates not influenced by AML genetic risk or leukemia burden.
- Initial data drove interest to move to registration.
A PHASE 2 STUDY IN HR-MDS TO CONFIRM THE RISK / BENEFIT PROFILE OBSERVED IN AML

Phase 2, Randomized, Open-label, Global, Multicenter Study
Comparing Pevonedistat Plus Azacitidine vs. Azacitidine in Patients with Higher-Risk MDS, CMML, or Low-Blast AML

- Mature OS data will be available in November
- Data will be presented in upcoming congress
- Potential approval in FY21*

THE PHASE 3 PANTHER STUDY WAS INITIATED AT RISK TO ACCELERATE DEVELOPMENT

Phase 3, Randomized controlled trial of Pevonedistat Plus Azacitidine Versus Single-Agent Azacitidine as First-Line Treatment for Patients with Higher-risk-MDS/CMML, or Low-blast AML

- Completed global enrollment 10 months earlier than originally projected*
- Indicative of demand for new innovative therapies

* Closed to global enrollment; Open for extended enrollment in China
EXPANDING PATIENT-CENTRIC DEVELOPMENT OF PEVONEDISTAT

**NEW STUDIES IN UNFIT AML**

**Ph3 PEVOLAM**
- pevo + aza vs. aza
- Currently enrolling patients

**Ph2 (P2002) Combo**
- pevo + venetoclax + aza vs. venetoclax + aza
- Study will open in 2020

Utilizing partnership (PETHEMA) for efficient development

Unique MOA and biologic hypothesis to support combination

---

**SUMMARY**

1. Unmet need in High-risk MDS and AML remain high with few treatment options

2. Pevonedistat is a selective first-in-class inhibitor with potential to be first new therapy in over a decade for HR-MDS

3. The Ph2 HR-MDS trial has reached the updated OS endpoint data readout and the PANTHER Ph3 trial has completed global enrollment
# R&D Day Agenda – New York, November 14, 2019

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<thead>
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<th>Time</th>
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</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>12:35 – 12:45</td>
<td>Takeda: A Global Values-Based, R&amp;D-Driven Biopharmaceutical Leader  &lt;br&gt;Christophe Weber, President &amp; CEO Takeda</td>
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<td>12:45 – 13:20</td>
<td>Translating Science into Highly Innovative, Life-changing Medicines  &lt;br&gt;Andy Plump, President R&amp;D</td>
</tr>
<tr>
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<td>Oncology and Cell Therapies with Spotlight on CAR-NK  &lt;br&gt;Chris Arendt, Head Oncology Drug Discovery Unit</td>
</tr>
<tr>
<td>13:45 – 14:05</td>
<td>Spotlight on Oncology Opportunities  &lt;br&gt;• TAK-788: Rachael Brake, Global Program Lead  &lt;br&gt;• Pevonedistat: Phil Rowlands, Head Oncology Therapeutic Area Unit</td>
</tr>
<tr>
<td>14:05 – 14:20</td>
<td>Break</td>
</tr>
<tr>
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<td>Rare Diseases &amp; Gene Therapy  &lt;br&gt;Dan Curran, Head Rare Disease Therapeutic Area Unit</td>
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<td>15:00 – 15:20</td>
<td>Therapeutic Area Focus in GI with Spotlight on Celiac Disease  &lt;br&gt;Asit Parikh, Head GI Therapeutic Area Unit</td>
</tr>
<tr>
<td>15:20 – 16:00</td>
<td>Panel Q&amp;A Session</td>
</tr>
<tr>
<td>16:00</td>
<td>Drinks Reception</td>
</tr>
</tbody>
</table>

**Rare Diseases & Gene Therapy**

Dan Curran, MD  
Head Rare Diseases Therapeutic Area Unit  
Takeda Pharmaceutical Company Limited  
New York, NY  
November 14, 2019
RARE DISEASES: AN OPPORTUNITY TO TRANSFORM TREATMENT

HIGH UNMET NEED

7,000 Distinct rare diseases¹

350 million Patients worldwide

95% Diseases have no FDA-approved treatment

SCIENTIFIC AND REGULATORY ADVANCES

80% Diseases are genetic in origin

Transformative therapies

Recombinant engineering & delivery of proteins and nucleic acids

~90%² Orphan drug approvals benefited from expedited review

90%

1. Rare diseases defined by prevalence in line with regulatory agencies (US: <7 in 10,000; EU: < 5 in 10,000 and JPN: <4 in 10,000), Global Genes, NIH/National Human Genome Research Institute; 2. Comprises four pathways in US: Accelerated approval, breakthrough therapy designation, fast track designation, priority review designation; 3. Three pathways in JPN: Priority review, Sakigake designation and conditional approval, CIRS R&D Briefing 70, New drug approvals in six major authorities 2009-2018

RARE DISEASE MARKET IS EXPECTED TO DOUBLE IN SIZE

GLOBAL ORPHAN DRUG¹ SALES EXCLUDING ONCOLOGY², USD BN

Orphan drugs expected to make up ~17% of global branded Rx sales by 2024

Growth driven by advances in new modalities and new indications

Orphan cell and gene therapies estimated at ~$20 bn by 2024, up from ~$2bn in 2018

1. Orphan drugs generally used as synonym for rare disease due to lack of uniform definition, including also non-rare, but neglected diseases lacking therapy (e.g., tropical infectious diseases); 2. EvaluatePharma (03 June 2019)
TAKEDA IS THE LEADER IN RARE DISEASES

PATIENT IMPACT

• Foundation of >30 year history of leadership in rare diseases
• Leading portfolio of rare disease therapies: 11 out of 14 global brands spanning Hematology, Metabolic, GI and Immunology

SCIENCE & INNOVATION

• Multiple opportunities for transformational therapies across therapeutic areas
• Emerging, cutting edge platforms to drive high-impact pipeline
• Investments in technologies to accelerate diagnosis

CAPABILITIES AND SCALE

• Engagement with key stakeholders within the ecosystem e.g. patient groups, regulators
• Pioneering regulatory pathways
• Global footprint

OUR STRATEGY IS TO TRANSFORM AND CURE RARE DISEASES

As the global leader in Rare Diseases, we aspire to provide transformative and curative treatments to our patients

Transformative

Programs with transformative potential in devastating disorders with limited or no treatment options today

Curative

Emerging early pipeline of AAV gene therapies to redefine treatment paradigm in monogenic rare diseases
WE ARE POSITIONED TO DELIVER NEAR-TERM & SUSTAINED GROWTH

POTENTIAL APPROVALS OF TRANSFORMATIVE THERAPIES

1. Projected timing of approvals depending on data read-outs; some of these Wave 1 target approval dates assume accelerated approval. 2. Some Wave 2 assets could be accelerated into Wave 1 if they have breakthrough data; 3. Projected approval date assumes filing on Phase 2 data; 4. TAK-079 to be developed in Rare Diseases indications myasthenia gravis (MG) and immune thrombocytopenic purpura (ITP); 5. Currently in a non-pivotal Phase 2 study; planning underway to include interim stage gates that can advance the program into a pivotal trial.

<table>
<thead>
<tr>
<th>WAVE 1³</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2023</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>POSSIBLE WAVE 1 APPROVAL²</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-721</td>
<td>Eosinophilic Esophagitis (EoE)</td>
<td>~150k/Under evaluation</td>
<td>~7 - 15k/25 - 45k</td>
<td>~500/2 - 6k</td>
<td>~350/1 - 2k</td>
<td>~50k/70 - 90k</td>
</tr>
<tr>
<td>TAK-620</td>
<td>Cytomegalovirus (CMV) infection in transplant</td>
<td></td>
<td></td>
<td></td>
<td>70 - 140k/300k – 1.2M</td>
<td></td>
</tr>
<tr>
<td>TAK-755</td>
<td>Congenital Thrombotic Thrombocytopenic Purpura (cTTP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>~25k/80 - 90k</td>
</tr>
<tr>
<td>TAK-611</td>
<td>Metachromatic Leukodystrophy (MLD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAK-935</td>
<td>Developmental and Epileptic Encephalopathies (DEE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orexin2R-ag (TAK-925/994)</td>
<td>Narcolepsy T1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAK-607</td>
<td>Complications of prematurity²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Projected timing of approvals depending on data read-outs; some of these Wave 1 target approval dates assume accelerated approval
2. Currently in a non-pivotal Phase 2 study; planning underway to include interim stage gates that can advance the program into a pivotal trial
3. Estimated number of patients projects to be eligible for treatment, in markets where the product is anticipated to be commercialized, subject to regulatory approval
4. For TAK-620 and TAK-607, the addressable population represents annual incidence
## SELECTED TRANSFORMATIVE PROGRAMS

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAK-620</td>
<td>Potential first treatment of CMV infection in transplant patients in over 10 years. Inhibitor of protein kinase UL97.</td>
</tr>
<tr>
<td>TAK-607</td>
<td>Potential first pharmacologic therapy in &gt;20 years to prevent complications of prematurity. Recombinant IGF-1 growth factor.</td>
</tr>
</tbody>
</table>

### TAK-620: POTENTIAL BEST IN CLASS TREATMENT FOR POST-TRANSPLANT CMV INFECTION

**BURDEN OF CMV INFECTION IN TRANSPLANT RECIPIENTS**

- CMV infection is the most common post-transplant viral infection
  - Affects >25% of transplants
- CMV infection can be fatal
  - Higher rates of graft failure: 2.3X and mortality: 2.6X

**Current therapies have significant toxicities and resistance**

- Incidence of neutropenia >20% and renal toxicity >50%

---

**TAK-620: NOVEL MOA TARGETING PROTEIN KINASE UL97**

1. Replication
2. Maturation and encapsidation
3. Egress of viral capsids

---

**TAK-620: ADDRESSES UNMET NEED IN BOTH FIRST-LINE AND RESISTANT / REFRACTORY SETTING**

*Transplant treatment*  
~100K

*CMV Viremia*  
~30K

*First-Line: Newly diagnosed CMV*  
~100K

*Failure First-Line*  
~5K

*Resistant/Refractory (R/R) CMV*  
~5K

---

**TAK-620 DEMONSTRATED SIMILAR EFFICACY AND BETTER SAFETY VERSUS SOC IN A PHASE 2 STUDY IN FIRST-LINE PATIENTS**

---


---

1. Confirmed undetectable CMV DNA in plasma was defined as two consecutive CMV DNA polymerase-chain-reaction assay values below the level of quantitation (i.e., <200 copies per millimeter  
according to the central laboratory) separated by at least 5 days. For the primary analyses of confirmed undetectable CMV DNA within 3 weeks and 6 weeks, data were missing for 3 patients: 1 each in the 400-mg TAK-620 group, the 1200-mg TAK-620 group and the valganciclovir group

2. N Engl J Med 2019; 381:1136-47. Overall risk ratio (95% CI) relative to the Valganciclovir reference was 1.20 (0.95-1.51)
TAK-620: GRANTED BREAKTHROUGH DESIGNATION IN RESISTANT OR REFRACTORY CMV INFECTION

1. Efficacy in seriously ill R/R CMV in SOT and HSCT recipients with multiple risk factors predictive of poor outcomes

<table>
<thead>
<tr>
<th>TAK-620 Dose: 400 mg, 800 mg, 1200 mg BID¹</th>
<th>Primary efficacy endpoint</th>
<th>All doses (Total N = 120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with confirmed undetectable plasma CMV DNA within 6 weeks in ITT² population</td>
<td>80 (66.7%)</td>
<td></td>
</tr>
</tbody>
</table>

2. Superior renal safety profile - did not result in treatment discontinuations

Historical outcomes: High (~50%) failure rates / relapse rates³,⁴,⁵

Renal impairment is the primary reason for discontinuation with SOC (Foscarnet, Cidovir); nephrotoxicity is > 50%⁶


TAK-620: TWO ONGOING PIVOTAL STUDIES; EXPECT FIRST APPROVAL IN RESISTANT OR REFRACTORY CMV IN 2021

TAK-620 PHASE 3 STUDY 303

Resistant/Refractory CMV Patients with SOT or HSCT

- 2:1 Randomization
- TAK-620 400mg BID (N=234)
- Investigator’s choice (N=117)
- Primary Endpoint: Viremia @ 8 wks of Rx

EXPECTED MILESTONES (FY)
- 2020: 2H: Ph 3 Readout
- 2021: US Approval
- 2022: EU Approval

TAK-620 PHASE 3 STUDY 302

HSCT Recipients With First CMV Infection

- 1:1 Randomization
- TAK-620 400mg BID (N=275)
- 900mg BID VGV (N=275)
- Primary Endpoint: Viremia @ 8 wks of Rx

EXPECTED MILESTONES (FY)
- 2021: 1H: Ph 3 Readout
- 2021: US Approval
- 2022: EU Approval
SELECTED TRANSFORMATIVE PROGRAMS

**TAK-620**
Potential first treatment of CMV infection in transplant patients in over 10 years. Inhibitor of protein kinase UL97.

**TAK-755**

**TAK-607**
Potential first pharmacologic therapy in >20 years to prevent complications of prematurity. Recombinant IGF-1 growth factor.

CONGENITAL AND IMMUNE TTP HAVE SUBSTANTIAL MORTALITY AND MORBIDITY BURDEN DUE TO INADEQUATE SOC

**CONGENITAL TTP (cTTP)**
- Sub-therapeutic dose with plasma infusions
- Patients still experience ischemic injury of brain, kidneys and heart
- Poor long-term outcomes

**IMMUNE TTP (iTTP)**
- ~30% relapse rate with plasma exchange (PEX)
- New market entrant reduces relapse rate, but has significant limitations
  - Enhanced risk of bleeding:
    - Gingival bleeding 18% vs. 1% placebo
    - Epistaxis 32% vs. 3% placebo

**ADDRESSABLE POPULATION (WW)**

<table>
<thead>
<tr>
<th></th>
<th>cTTP</th>
<th>iTTP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,000 – 6,000</td>
<td>5,000 – 18,000</td>
</tr>
</tbody>
</table>

TAK-755 DIRECTLY ADDRESSES UNDERLYING CAUSE OF TTP

TAK-755 REPLACES ADAMTS13, DEFICIENCY OF WHICH LEADS TO TTP

ADAMTS13:
Cleaves VWF multimers that mediate platelet aggregation and clotting

TTP
ADAMTS13 deficiency:
Formation of microthrombi due to accumulation of large VWF multimers

TAK-755 PHASE I, OPEN-LABEL, DOSE ESCALATION STUDY IN cTTP³

• Administered as a single dose in 15 cTTP patients
• TAK-755 was well tolerated
• No anti-ADAMTS13 antibodies detected

TAK-755: POTENTIAL TRANSFORMATIVE THERAPY FOR TTP

TAK-755 PK PROFILE AND PD EFFECT ON VWF CLEAVAGE AT 40 IU/KG

TAK-755: ONGOING PHASE 3 CONGENITAL TTP STUDY

TAK-755 PHASE 3 PROPHYLAXIS STUDY

- cTTP patients (N = 26 – 42)
- 1:1 Randomization
- Tx duration: 6 months
- Primary Endpoint: Incidence of acute TTP episodes

- All patients roll over to a 6 month TAK-755 extension
- Phase 3 study has a cohort of acute cTTP patients who receive TAK755. Patients are eligible to enter the prophylaxis study upon completion of acute treatment

EXPECTED MILESTONES (FY)

- 2019: 1H: Ph 3 initiated
- 2020: 2H: Ph 3 Start
- 2021: 2H: Ph 3 Readout
- 2022: US Approval
- 2023: EU Approval
- 2025: EU Approval

1. A single dose modification to 1x/week may be mandated based on clinical outcomes; 2. Plan to seek deferral of pediatric data requirement in EU for initial filing, which would enable possible approval in EU in 2023

TAK-755 IMMUNE TTP PHASE 2 STUDY DESIGN

Primary or relapse acute iTTP episode (N=30)

- PEX Day 1
- 1:1:1 Randomization
- Placebo + SOC
- TAK-755 Low dose + SOC
- TAK-755 High dose + SOC

Remission Phase
Placebo or TAK-755

Primary endpoints: PK/PD

EXPECTED MILESTONES (FY)

- 2019: 2H: Ph 2 Readout
- 2020: 2H: Ph 3 Start
- 2021: 2H: Ph 3 Readout
- 2022: US/EU Approval
SELECTED TRANSFORMATIVE PROGRAMS

**TAK-620**  
Potential first treatment of CMV infection in transplant patients in over 10 years. Inhibitor of protein kinase UL97.

**TAK-755**  

**TAK-607**  
Potential first pharmacologic therapy in >20 years to prevent complications of prematurity. Recombinant IGF-1 growth factor.

EXTREMELY PREMATURE INFANTS EXPERIENCE CONSIDERABLE MORBIDITY

TAK-607 REPLENISHES IGF-1, A FETAL GROWTH FACTOR THAT IS DECREASED IN PRETERM INFANTS

TAK-607: IGF-1 / IGFBP-3\(^1\) COMPLEX

- IGF-1 is an important fetal growth factor supplied by the mother that is involved in the development of multiple organs
- IGF-1 is low or absent in premature infants born before 28 weeks\(^2\)
- TAK-607 demonstrated beneficial effects in lung development and brain vasculature in preclinical models\(^3,4\)

IGF-1 LEVELS ARE LOW IN PRETERM INFANTS\(^2\)

![Graph showing IGF-1 levels in normal utero fetus and preterm infants]

- IGF-1 in normal in utero fetus
- IGF-1 in preterm infants
- Mean predicted value
- Upper prediction interval (95\(^{th}\))
- Lower prediction interval (5\(^{th}\))

4. Ley D et al. JENS 2019

TAK-607: PHASE 2 STUDY INFORMED DOSE AND ENDPOINT SELECTION

ROP-2008-01: RANDOMIZED, CONTROLLED PHASE 2 STUDY OF TAK-607

- Pre-term infants with a gestational age (GA) <28 weeks (N = 120)
- Assessed outcomes in ITT and “evaluable” sets (40% patients who achieved target exposure of IGF-1 levels\(^1\))
  - Primary endpoint: ROP not met
  - Pre-specified secondary endpoints: Bronchopulmonary Dysplasia (BPD) was reduced and Intra-Ventricular Hemorrhage (IVH) showed a positive trend
- Granted FDA fast-track designation

TAK-607 IMPACTED BPD AND IVH\(^2\)

![Graph showing impact of TAK-607 on BPD and IVH]

- Standard of care
- IGF-1/IGFBP-3

1. Evaluable set: ≥70% IGF-1 measurements within targeted intrauterine range (28–109 μg/L) AND ≥70% intended duration of treatment
2. Ley D, J Pediatrics, 2018
3. ROP – retinopathy of prematurity
TAK-607: FOOTPRINTS STUDY DESIGNED TO DEMONSTRATE REDUCTION IN THE COMPLICATIONS OF PREMATURETY

Premature infants: <28 weeks GA

- Open label, 1:1:1 Randomization (N = 200/arm)
- TAK-607 250 μg/kg/24 h continuous IV
- TAK-607 400 μg/kg/24 h continuous IV
- Standard Neonatal Care

**Primary endpoint:** Duration of supplemental oxygen use through 1 year corrected age

**MILESTONES (FY)**

1H: Ph 2b initiated

**Treatment (2-7 wks based on GA)**

Rx: Day 1

**Post Treatment Follow-up period**

Rx End: 29 wk + 6 d PMA

Primary endpoint: 12 months corrected age

Outpatient: Respiratory morbidity assessments/week

---

**Primary endpoint:** Duration of supplemental oxygen use through 1 year corrected age

<table>
<thead>
<tr>
<th>Expected</th>
<th>2019</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>1H: Ph 2b initiated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1H: Ph 2b Readout</td>
<td></td>
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</tr>
</tbody>
</table>

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NME MILESTONES ACHIEVED IN FY19 AND LOOKING AHEAD TO OTHER POTENTIAL MILESTONES THROUGH FY20

**PIVOTAL STUDY STARTS, APPROVALS**

**1H FY 2019**

- TAK-611 MID Ph 3 start
- TAK-751 TET Ph 3 start
- TAK-625 Neurology POC
- TAK-721 Gastroenterology POC

**2H FY 2019**

- PIVONIDSTAT TAK-521 ANA Ph 3 start
- TAK-788 Ph 3 start

**1H FY 2020**

- TAK-788 2L RISC Ph 2 Start
- TAK-572 R/R Mm, Solid Tumor POC

**2H FY 2020**

- TAK-623 R/R OMN 5OT & IEGT Ph 3 start
- TAK-751 ITT POC
- TAK-930 SOL POC
- TAK-906 Gastroenterology POC
- TAK-957 Nausea & Vomiting POC

**KEY DATA READOUTS**

1. Potential key milestone dates as of November 14, 2019. The dates included herein are estimates based on current data and are subject to change.
2. Potentially registration enabling

---

1. Supplemental oxygen use defined by one of the following: a) Any fraction of inspired oxygen (FiO2) >21%, b) Non-invasive respiratory support delivered via a nasal interface [e.g., continuous positive airway pressure (CPAP), nasal cannula, etc.], c) Invasive respiratory support (mechanical ventilation) via an endotracheal tube or tracheostomy.
WE AIM TO PROVIDE CURATIVE THERAPY

As the global leader in Rare Diseases, we aspire to provide transformative and curative treatments to our patients

Transformative
Programs with transformative potential in devastating disorders with limited or no treatment options today

Curative
Emerging early pipeline of AAV gene therapies to redefine treatment paradigm in monogenic rare diseases

BUILDING A WORLD CLASS GENE THERAPY ‘ENGINE’

TOP TIER GMP MANUFACTURING

GENE THERAPY AAV\(^1\) PLATFORM

• Strong capabilities in liver expression
• Emerging capabilities in CNS expression

GENE THERAPY PIPELINE

TAKEDA THERAPEUTIC AREAS

Liver expression

<table>
<thead>
<tr>
<th>Research</th>
<th>NextGen</th>
<th>TAK-748</th>
<th>TAK-754</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidates</td>
<td>Hem A</td>
<td>Hem B</td>
<td>Hem A</td>
</tr>
</tbody>
</table>

CNS expression

<table>
<thead>
<tr>
<th>StrideBio</th>
<th>StrideBio</th>
<th>TAK-686</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Candidate</td>
<td>Friedreich Ataxia</td>
<td>Huntington’s Disease</td>
</tr>
</tbody>
</table>
WE WILL APPLY OUR CELL THERAPY PLAYBOOK AND UNIFYING CAPABILITIES TO BUILD A GENE THERAPY PIPELINE

Select Cell Therapy Partnerships/Acquisitions

Cell To Gene Therapy

Unifying Capabilities
- Viral expertise
- Manufacturing

Focus of Future Gene Therapy Partnerships

1. Enable re-dosing
2. Lower dose and enhance biodistribution
3. Develop alternative gene delivery vehicles

SUMMARY

1. Takeda has the capabilities, scale, and innovative platforms to extend our leadership in Rare Diseases
2. We have a leading late stage portfolio of transformative programs that will establish or re-define the standard of care for highly underserved patients
3. We are building cutting-edge capabilities in gene therapy that aim to deliver ‘cures’ in monogenic rare diseases
<table>
<thead>
<tr>
<th>TIME</th>
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</tr>
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  Andy Plump, President R&D |
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  Asit Parikh, Head GI Therapeutic Area Unit |
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| 16:00 | Drinks reception |

**OX2R AGONISTS FOR THE TREATMENT OF NARCOLEPSY TYPE 1**

Deborah Hartman, PhD  
Global Program Leader, Neuroscience  
Takeda Pharmaceutical Company Limited  
New York, NY  
November 14, 2019
NARCOLEPSY TYPE 1 IS A RARE, ACQUIRED CHRONIC NEUROLOGICAL DISORDER

- Psychosocially devastating effects
- Current treatments are only partially effective
- Polypharmacy is common

When I’m awake, sleep is constantly intruding on that part of my life. And when I’m asleep, wakefulness is constantly intruding on that part of my life. It’s frustrating because no matter how well you regulate your narcolepsy, you’re always tired. You’re exhausted.

- Charlie, adviser with NT1

3M
Estimated global population affected by NT1

~50%
Estimated diagnostic rate for NT1 in US, EU, JP

15Y
Mean diagnostic delay

NARCOLEPSY TYPE 1 IS DISTINGUISHED BY THE PRESENCE OF CATAPLEXY AND LOW OREXIN LEVELS

It’s not just about sleep, it’s about quality of wakefulness… it’s really about partnership with your extended family, your spouse, taking care of your children… it limits my ability to play with my kids.

- Sara, adviser with NT1

Narcolepsy Type 1
- Loss of orexin: CSF levels <110 pg/mL
- Excessive daytime sleepiness
- Disrupted nighttime sleep
- Hallucinations
- Sleep paralysis
- Cataplexy

Narcolepsy Type 2
- Normal or partially reduced orexin levels
- Sleep attacks

Other hypersomnia disorders
- Idiopathic Hypersomnia
- Residual Excessive Daytime Sleepiness in Obstructive Sleep Apnea

CSF: Cerebral spinal fluid; Orexin also referred to as hypocretin
1. Individuals with Obstructive Sleep Apnea who are compliant with use of continuous positive airway pressure at night
**NARCOLEPSY TYPE I IS CAUSED BY PROFOUND LOSS OF OREXIN-PRODUCING NEURONS**

**OREXIN mRNA LABELLING OF POSTMORTEM HYPOTHALAMIC SECTIONS**

- Healthy control
- Narcolepsy Type 1

• Individuals with NT1 have >85% less orexin neurons than control, which are located in the hypothalamus.\(^1, 2\)

**ACTIVATION OF OREXIN 2 RECEPTOR (OX2R) LEADS TO AROUSAL AND PROMOTES WAKEFULNESS\(^3\)**

Orexin neuropeptides A and B
Post-synaptic neurons with orexin 2 receptors
Downstream signalling promoting wakefulness

**THE OREXIN HYPOTHESIS IN NARCOLEPSY TYPE I**

An orexin 2 receptor agonist may replace the missing endogenous orexin peptide, addressing the underlying orexin deficiency of Narcolepsy Type 1 and reduce disease specific symptoms.

---

**TAK-925, A SELECTIVE OX2R AGONIST, REDUCES NARCOLEPSY-LIKE SYMPTOMS IN AN OREXIN-DEFICIENT MOUSE MODEL**

**TAK-925 FULLY RESTORED WAKEFULNESS**

Wakefulness time of NT1 mouse model in active phase for one hour

- TAK-925 (mg/kg, s.c.)
- *p<0.05, **p<0.01 vs placebo

**TAK-925 ELIMINATED SLEEP / WAKE TRANSITIONS**

Hypnogram of sleep/wake transitions in NT1 mouse model

**TAK-925 ABOLISHED CATAPLEXY-LIKE EPISODES**

Cataplexy-like episodes in NT1 mouse model for three hours after chocolate

- TAK-925 (mg/kg, s.c.)
- *p<0.05, **p<0.01 vs placebo

---


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\(^{1, 2}\) f: fornix

---

\(^{3}\) TAK-925, a selective OX2R agonist, reduces narcolepsy-like symptoms in an orexin-deficient mouse model.
TAK-925 SHOWED PROMISING ABILITY TO MAINTAIN WAKEFULNESS IN AN EARLY PROOF OF CONCEPT STUDY IN NT1 PATIENTS

**SLEEP LATENCY IN THE MAINTENANCE OF WAKEFULNESS TEST (MWT): CURRENT TREATMENTS**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Placebo-adjusted change from baseline (minutes, 95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitolisant</td>
<td>NR</td>
</tr>
<tr>
<td>Modafinil</td>
<td>NR</td>
</tr>
<tr>
<td>Sodium Oxybate</td>
<td>NR</td>
</tr>
<tr>
<td>Armodafinil</td>
<td>NR</td>
</tr>
<tr>
<td>Solriamfetol</td>
<td>NR</td>
</tr>
</tbody>
</table>

TAK-925 was well-tolerated; most AEs were mild and no SAEs were observed

In this TAK-925-1001 study, four 40 minute MWTs were conducted per period

Direct cross-study comparison cannot be made between TAK-925 and treatments due to different studies with different designs

NR: 95% CI not reported


TAK-925 ALSO REDUCED SUBJECTIVE SLEEPINESS IN THIS EARLY PROOF OF CONCEPT STUDY IN NT1

**KAROLINSKA SLEEPINESS SCALE VALUES DURING AND AFTER ADMINISTRATION OF TAK-925**

(single dose nine hour continuous IV infusion during the day)

TAK-925 improved subjective and objective measures of wakefulness

1. TAK-925 effective plasma half-life ≤2 hours

TAK-925 MAINTAINED WAKEFULNESS IN SLEEP-DEPRIVED HEALTHY ADULTS IN A SECOND PHASE 1 STUDY

SLEEP LATENCY IN THE MAINTENANCE OF WAKEFULNESS TEST (MWT) IN SLEEP-DEPRIVED HEALTHY ADULTS

Results suggest potential therapeutic use of TAK-925 in other hypersomnia disorders not associated with orexin deficiency

TAK-925 was well-tolerated; most AEs were mild and no SAEs were observed

WE ARE COMMITTED TO LEADING INNOVATION IN OREXIN BIOLOGY AND EXPANDING THERAPEUTIC INDICATIONS FOR OX2R AGONISTS


***: p-value <0.001 relative to placebo

1. Individuals with Obstructive Sleep Apnea who are compliant with use of continuous positive airway pressure at night

- **TAK-925-1003** for Narcolepsy Type 2 (NCT03748979)
- **SPARKLE 2001** study for Residual EDS in Obstructive Sleep Apnea (NCT04091425)
- **SPARKLE 2002** study for Idiopathic Hypersomnia (NCT04091438)
TAK-994 IS AN ORAL OX2R AGONIST PROGRESSING TO STUDIES IN NARCOLEPSY TYPE 1

TAK-994-1501 PROOF OF CONCEPT STUDY IN NARCOLEPSY TYPE 1

- Multi-center, placebo-controlled trial in North America and Japan
- Enrollment target: 72 adults
- Duration of treatment: 28 days dosing
- Exploratory outcome measures include Maintenance of Wakefulness Test (MWT), Epworth Sleepiness Scale (ESS), and Weekly Cataplexy Rate (WCR)

Proof of Concept trial: ClinicalTrials.gov Identifier: NCT04096560

DIGITAL TECHNOLOGIES ARE ENHANCING THE DEVELOPMENT OF OX2R AGONISTS FOR SLEEP DISORDERS

TRADITIONAL CLINICAL INSTRUMENTS DO NOT FULLY MEASURE SYMPTOMS OF SLEEP DISORDERS

Digital measures will further characterize sleep architecture and support clinical trial assessments

- Real-time data capture to understand disease burden and effects of treatment
- Non-invasive measures to optimize therapy
- Patient stratification using digital fingerprints

WE ASPIRE TO BRING A POTENTIALLY TRANSFORMATIVE OX2R AGONIST SOLUTION TO INDIVIDUALS WITH NARCOLEPSY TYPE 1

TAK-925

- Achieved early Proof of Concept for NT1
- Awarded Breakthrough Therapy Designation
- Awarded Sakigake Designation
- Launched formulation development activities

TAK-994

- TAK-994, first oral OX2R agonist, entered phase I
- Initiate SPARKLE-1501 Proof of Concept study in NT1
- Initiation of NT1 pivotal studies First approval targeted for 2024

FY19 FY20 FY21

Thank you to all the study participants who have enrolled in these early OX2R agonist clinical trials

SUMMARY

1. TAK-925 has achieved early Proof-of-Concept for OX2R agonists in Narcolepsy Type 1
2. TAK-925 has demonstrated potential of OX2R agonists for treatment of other sleep-related disorders
3. TAK-994 is an oral OX2R agonist progressing to studies in Narcolepsy Type 1
**R&D DAY AGENDA – NEW YORK, NOVEMBER 14, 2019**

<table>
<thead>
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| 15:20 – 16:00 | Panel Q&A Session                                                      |
| 16:00      | Drinks reception                                                       |

**THERAPEUTIC AREA FOCUS IN GI WITH SPOTLIGHT ON CELIAC DISEASE**

Asit Parikh, MD, PhD  
Head Gastroenterology Therapeutic Area Unit  
Takeda Pharmaceutical Company Limited  
New York, NY  
November 14, 2019
WE TARGET UNMET NEEDS THAT ALIGN WITH OUR STRENGTHS

AREAS OF FOCUS

- High unmet medical need
- Potential to advance SoC through innovative science – by being first or best in class
- Fit with internal strengths
- Ability to create a commercially viable path

GI WW RX SALES 2018 (USD BN)

- Total = $57Bn
- Other GI
- GI Inflammation: 18.2
- GI motility: 12.6
- Liver fibrosis: 12.2
- Acid related diseases: 6.5
- Viral hepatitis: 3.2
- GI Cancers: 3.9

TAKEDA GI DISEASE AREAS

SOURCE: EvaluatePharma indication specific sales, accessed May 29, 2019. Other GI includes: pancreatic insufficiency, hepatic encephalopathy, diarrhea, bowel clearance, gallstones, hemorrhoids

WE STRENGTHEN ENTYVIO BY CONTINUOUSLY IMPROVING VALUE FOR PATIENTS

COMPETITIVE POSITIONING

VARSITY: 1st Head-to-Head study in IBD (UC)
- Vedolizumab was superior to adalimumab on the primary endpoint of clinical remission at wk 52
- Onset of action as rapid as anti-TNF

EXPANDED PATIENT POPULATIONS

Envyvio Subcutaneous Development
- Positive VISIBLE UC and CD trials
- Subject to regulatory approval, on track to launch exclusive, digital, needle-free jet-injector by 2022

GUT GVHD PROPHYLAXIS
- Could transform SoC for cancer patients undergoing allo stem-cell transplants

EXPECTED MILESTONES (FY)

2019
- Entyvio (SC UC) US approval

2020
- Entyvio (SC CD) US, EU approval
- Entyvio (SC UC) EU, JP approval
- Entyvio (IV) CN approval

2021
- Entyvio GvHD Ph3 readout

IBD: Inflammatory Bowel Disease; UC: ulcerative colitis; CD: Crohn’s Disease; IV=intravenous; SC=subcutaneous; TNF=tumour necrosis factor; SoC: standard of care; CN: China; JP: Japan; GvHD: graft versus host disease; Clinical remission: Complete Mayo score of 2 points and no individual subscore >1 point
TAK-721: ON TRACK TO BE THE FIRST FDA APPROVED AGENT TO TREAT EOSINOPHILIC ESOPHAGITIS (EOE)

**ADDRESSES SIGNIFICANT UNMET NEED**

- Chronic, allergic, inflammatory condition of the esophagus that results in swallowing dysfunction
- Diagnosed prevalence is expected to increase significantly

No approved US medication
SOC is food elimination, off-label use\(^1\)

TAK-721 granted breakthrough therapy designation by FDA in 2016

**INDUCTION DATA SHOWS SIGNIFICANT HISTOLOGIC AND SYMPTOM RESPONSE**

Results presented at presidential plenary at ACG, Texas, Oct 2019

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### Histologic Response at 12 Weeks (peak ≤ 6 eosinophils/hpf on biopsy)

<table>
<thead>
<tr>
<th>Proportion of patients (%)</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo (n = 105)</td>
<td>1.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 mg BID (n=213)</td>
<td>53.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( p < 0.001 \)

### Symptom Response at 12 Weeks (≥ 30% reduction in DSQ score)

<table>
<thead>
<tr>
<th>Proportion of patients (%)</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo (n = 105)</td>
<td>39.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 mg BID (n=213)</td>
<td>52.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( p = 0.024 \)

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**EXPECTED MILESTONES (FY)**

<table>
<thead>
<tr>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4: Maintenance TL results</td>
<td>Q2: NDA filing</td>
<td>Q1: Launch</td>
</tr>
</tbody>
</table>

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1. Swallowed use of glucocorticoids intended for asthma (e.g., home or compounded thickening of budesonide solution, or swallowing fluticasone aerosol).

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\( p \): Statistical significance.

1. Projected timing of approvals depending on data read-outs; some of these Wave 1 target approval dates assume accelerated approval
2. Some Wave 2 assets could be accelerated into Wave 1 if they have breakthrough data
3. Projected approval dates assume filing on Phase 2 data
4. TAK-079 to be developed in Rare Diseases indications myasthenia gravis (MG) and immune thrombocytopenic purpura (ITP) (FPI projected in each indication in 2H FY19)
CELIAC DISEASE IS AN EXAMPLE OF A HIGH UNMET NEED AREA WITH NO THERAPIES

- Overlooked disease, growing prevalence
- Chronic symptoms
- Higher risk of certain cancers
- High treatment burden affecting the whole family
- No current pharmacologic therapies

Some of us are so extremely sensitive that one little crumb will make us extremely sick. I’m one of those people, and there is really nothing I can do about it

– Delisi, Celiac disease patient

WE ARE FOCUSING ON THE NARROWEST POPULATION WITH HIGH UNMET NEED

Uncontrolled* on GFD

Controlled on Gluten Free Diet (GFD)

Uncontrolled defined as ongoing chronic moderate to severe symptoms with villous atrophy

Our focus:
- Niche patient segment with the highest unmet need
- Severe symptoms with villous atrophy
- Continue to suffer despite the GFD and are highly likely to take a therapy
OUR APPROACH TO TREATING CELIAC DISEASE

TREATMENT OPPORTUNITIES FOR CELIAC DISEASE

1. Enzymatic digestion of gluten
2. Reduce intestinal permeability
3. Microbiome modulation
4. Cytokine inhibition
5. Transglutaminase inhibition
6. Promote Immune tolerance

Source: Green and Cellier, 2007

KUMA062: A HIGHLY POTENT ORAL GLUTENASE THAT COULD CHANGE THE STANDARD OF CARE IN CELIAC DISEASE

ABOUT KUMA062

• Kuma062 is an oral, computationally-engineered super glutenase
• Enhanced catalytic activity compared to other glutenases

CLINICAL DATA SHOWS KUMA062 CAN DEGRADE >95% OF INGESTED GLUTEN

Gluten recovery in gastric contents aspirated 30mins after meal containing 3g of gluten

- Kuma well-tolerated, no identified safety concern
- Decision to acquire PVP Biologics expected Q3 FY2019
TAK-101: POTENTIAL BEST-IN-CLASS, INTRAVENOUS THERAPY FOR CELIAC DISEASE DESIGNED TO MODIFY T CELL RESPONSE

ABOUT TAK-101*

- Biodegradable polymer encapsulating antigen
- Designed to induce tolerance to gluten, reduce T cell responses to gliadin
- Expected to provide durable (3 months or longer) down regulation of T cell responses to immunogenic gliadin peptides

TAKEDA ACQUIRED EXCLUSIVE GLOBAL LICENSE TO TAK-101

*Formerly TIMP-GLIA
Source: https://www.courpharma.com/our-technology/

TAK-101 REDUCES IMMUNE ACTIVATION AFTER GLUTEN EXPOSURE

Interferon-gamma ELISPOT measurement of gluten-responsive T cells

![Bar graph showing decrease in immune activation](image)

Treatment with TAK-101 reduced immune activation by >85%

TAKEDA ACQUIRED EXCLUSIVE GLOBAL LICENSE TO TAK-101

WE ARE LEADING THE SCIENCE IN CELIAC DISEASE WITH A NEW AI - BASED TOOL AND INGESTIBLE DEVICE

PIONEERING AT BOUNDARIES OF CLINICAL MEDICINE

- Innovative, non-invasive, patented method of measuring total burden of intestinal disease

INNOVATIVE USE OF TECHNOLOGY

- Ingestible high resolution camera pill
- Modern machine-learning/ AI based image processing

PRECISION MEASUREMENT USING AI

- Pioneering Automated Image assessment quantifies disease burden
TAKEDA IS THE BEST COMPANY TO BRING CELIAC THERAPIES TO PATIENTS

World-class, fully connected GI commercial infrastructure across 65+ countries that supports $6bn+ revenues

- Extensive GI clinical footprint
- Strong reputation for scientific excellence
- Laundered for calculated risk-taking by the GI community
- Experience with redefining guidelines and treatment paths

NME MILESTONES ACHIEVED IN FY19 AND LOOKING AHEAD TO OTHER POTENTIAL MILESTONES1 THROUGH FY20

PIVOTAL STUDY STARTS, APPROVALS

1. Potential key milestone dates as of November 14, 2019. The dates included herein are estimates based on current data and are subject to change.
2. Potentially registration enabling.
SUMMARY

1
We have built an industry-leading portfolio rooted in unparalleled scientific excellence and outstanding global commercial strength

2
We are well positioned to bring the first therapies to celiac patients that could change the standard of care

3
We have multiple milestones, including expected key approvals in the next 2 years that will be transformative for patients

R&D DAY AGENDA – NEW YORK, NOVEMBER 14, 2019

<table>
<thead>
<tr>
<th>TIME</th>
<th>AGENDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 – 12:35</td>
<td>Welcome and Opening Remarks&lt;br&gt;Sheelagh Cawley-Knopf, Head R&amp;D Global Portfolio Strategy</td>
</tr>
<tr>
<td>12:35 – 12:45</td>
<td>Takeda: A Global Values-Based, R&amp;D-Driven Biopharmaceutical Leader&lt;br&gt;Christophe Weber, President &amp; CEO Takeda</td>
</tr>
<tr>
<td>12:45 – 13:20</td>
<td>Translating Science into Highly Innovative, Life-changing Medicines&lt;br&gt;Andy Plump, President R&amp;D</td>
</tr>
<tr>
<td>13:20 – 13:45</td>
<td>Oncology and Cell Therapies with Spotlight on CAR-NK&lt;br&gt;Chris Arendt, Head Oncology Drug Discovery Unit</td>
</tr>
<tr>
<td>13:45 – 14:05</td>
<td>Spotlight on Oncology Opportunities&lt;br&gt;• TAK-788: Rachael Brake, Global Program Lead&lt;br&gt;• Pevonedistat: Phil Rowlands, Head Oncology Therapeutic Area Unit</td>
</tr>
<tr>
<td>14:05 – 14:20</td>
<td>Break</td>
</tr>
<tr>
<td>14:20 – 14:45</td>
<td>Rare Diseases &amp; Gene Therapy&lt;br&gt;Dan Curran, Head Rare Disease Therapeutic Area Unit</td>
</tr>
<tr>
<td>14:45 – 15:00</td>
<td>Spotlight on Orexin2R agonists&lt;br&gt;Deborah Hartman, Global Program Lead</td>
</tr>
<tr>
<td>15:00 – 15:20</td>
<td>Therapeutic Area Focus in GI with Spotlight on Celiac Disease&lt;br&gt;Asit Parikh, Head GI Therapeutic Area Unit</td>
</tr>
<tr>
<td>15:20 – 16:00</td>
<td>Panel Q&amp;A Session</td>
</tr>
<tr>
<td>16:00</td>
<td>Drinks reception</td>
</tr>
</tbody>
</table>
Panel Q&A Session