



## Focused World Class R&D

New approaches to innovation

**Andy Plump, M.D., Ph.D**  
Chief Medical & Scientific Officer

**Takeda Pharmaceutical Company Limited**

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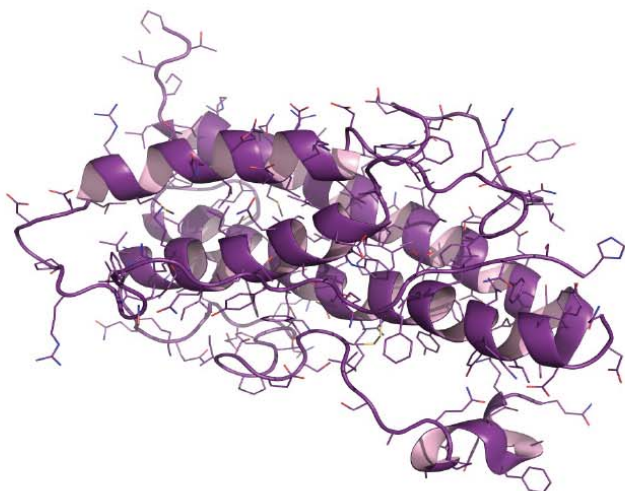
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Takeda is a patient-centric, science-driven company



We do more than  
develop medicines



We strive towards better health  
and a brighter future for  
people worldwide

Focused world class R&D is a vital component of  
our strategic roadmap

VALUES



**Takeda-ism**

Patient → Trust → Reputation → Business

PEOPLE



**Patient and customer centricity**

Agile global organization

Fostering talent

R&D



**Focused world class R&D**

New approaches to innovation

BUSINESS  
PERFORMANCE



**Sustaining sales growth**

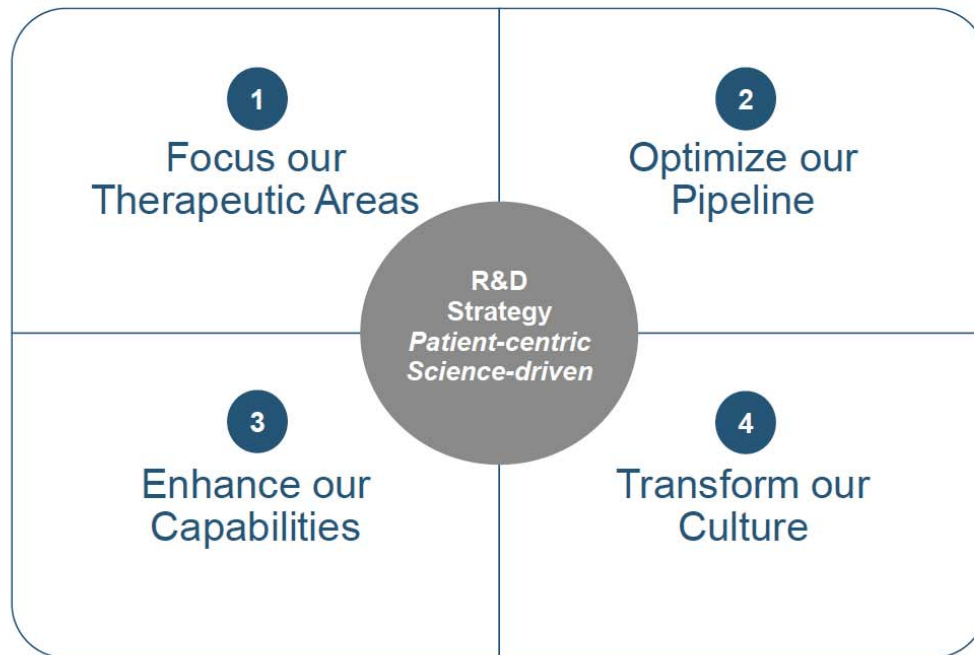
GI, Oncology, CNS and Emerging Markets

**Sustaining profit growth**

Cost discipline



# Our strategy for focused world class R&D involves four major components



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## Agenda



### Building on our heritage

Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

Focus our Therapeutic Areas

Optimize our Pipeline

Enhance our Capabilities

Transform our Culture

Therapeutic area R&D strategy highlights

Oncology

Gastroenterology (GI)

Central Nervous System (CNS)

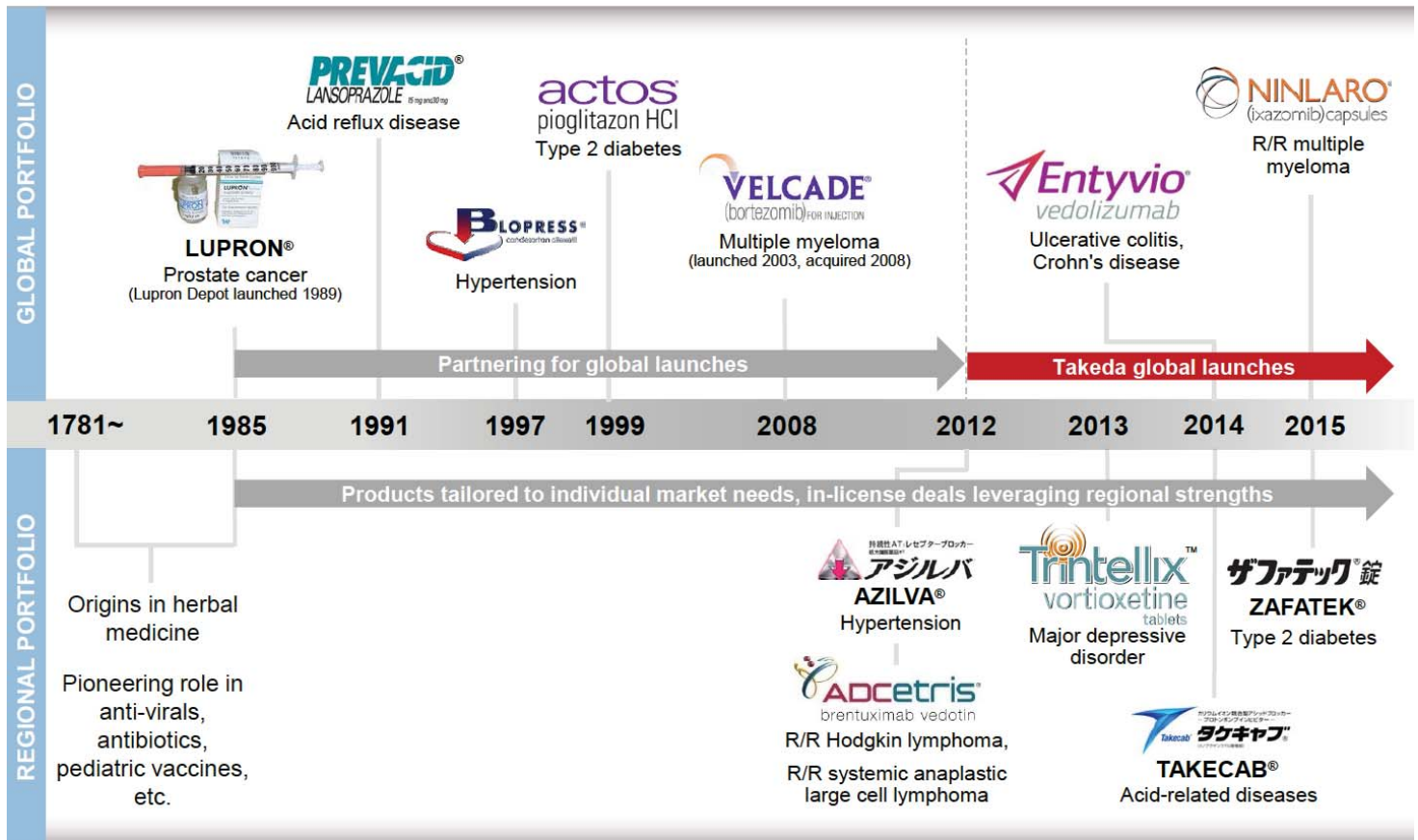
Vaccines

Summary

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Takeda has a 235 year heritage of successful, sustained innovation translating science into life-changing medicines



7 Note: Only selected products are shown on this slide  
R/R: Relapsed/Refractory

Takeda Pharmaceutical Company Limited

Maximizing the potential of our marketed portfolio is key to near- and mid-term success



Takeda will invest ~50% of FY16 and FY17 development budget to maximizing these assets			Phase 3		Filed
Oncology	Phase 1	Phase 2	NINLARO® Proteasome inhibitor Front Line MM	ADCESTRIS® CD30 ADC Front Line Hodgkin Lymphoma	NINLARO® Proteasome inhibitor R/R MM (EU & Emerging Markets)
			NINLARO® Proteasome inhibitor Maintenance MM post-SCT	ADCESTRIS® CD30 ADC Relapsed cTCL	ADCESTRIS® CD30 ADC post-ASCT Hodgkin Lymphoma
GI			NINLARO® Proteasome inhibitor Maintenance MM without SCT	ADCESTRIS® CD30 ADC Front Line MTCL	
			NINLARO® Proteasome inhibitor R/R AL Amyloidosis		
	ENTYVIO® Humanized monoclonal antibody against α4β7 integrin GVHD	TAKECAB® Potassium-competitive acid blocker PPI Partial Responder	ENTYVIO® Humanized monoclonal antibody against α4β7 integrin UC/CD (JP)	TAKECAB® Potassium-competitive acid blocker ARD (Asia)	ENTYVIO® Humanized monoclonal antibody against α4β7 integrin UC/CD (Emerging Markets)
	ENTYVIO® Humanized monoclonal antibody against α4β7 integrin IO Colitis		ENTYVIO® Humanized monoclonal antibody against α4β7 integrin Adalimumab H2H1	AMITIZA® Chloride channel activator Pediatric Constipation	DEXILANT® Proton Pump Inhibitor ARD in Adolescents
CNS			ENTYVIO® Humanized monoclonal antibody against α4β7 integrin SubQ UC/CD	AMITIZA® Chloride channel activator New Formulation	
			ENTYVIO® Humanized monoclonal antibody against α4β7 integrin PSC		
Vaccines		TRINTELLIX™ Multimodal an I-depressant ADHD	TRINTELLIX™ Multimodal anti-depressant MDD (JP)	AZILECT® MAO-B inhibitor Parkinson's (JP)	TRINTELLIX™ Multimodal an I-depressant Cognition data in label (CRL received)
Other			AZILVA® FDC w/ amlodipine & HCTZ (JP) ARB Hypertension	ULORIC® Non-purine selective XAO inhibitor, XR Formulation Hyperuricemia	NESINA® FDC with Metformin (JP) DPP4i T2DM
			BENET® Bone resorption inhibitor Additional formation (JP)		

8 This slide includes on-going studies and planned studies starting this year. See appendix for list of abbreviations.  
\* AZILECT is brand name in Teva territories

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Building on our heritage

## Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

Focus our Therapeutic Areas

Optimize our Pipeline

Enhance our Capabilities

Transform our Culture

## Therapeutic area R&D strategy highlights

Oncology

Gastroenterology (GI)

Central Nervous System (CNS)

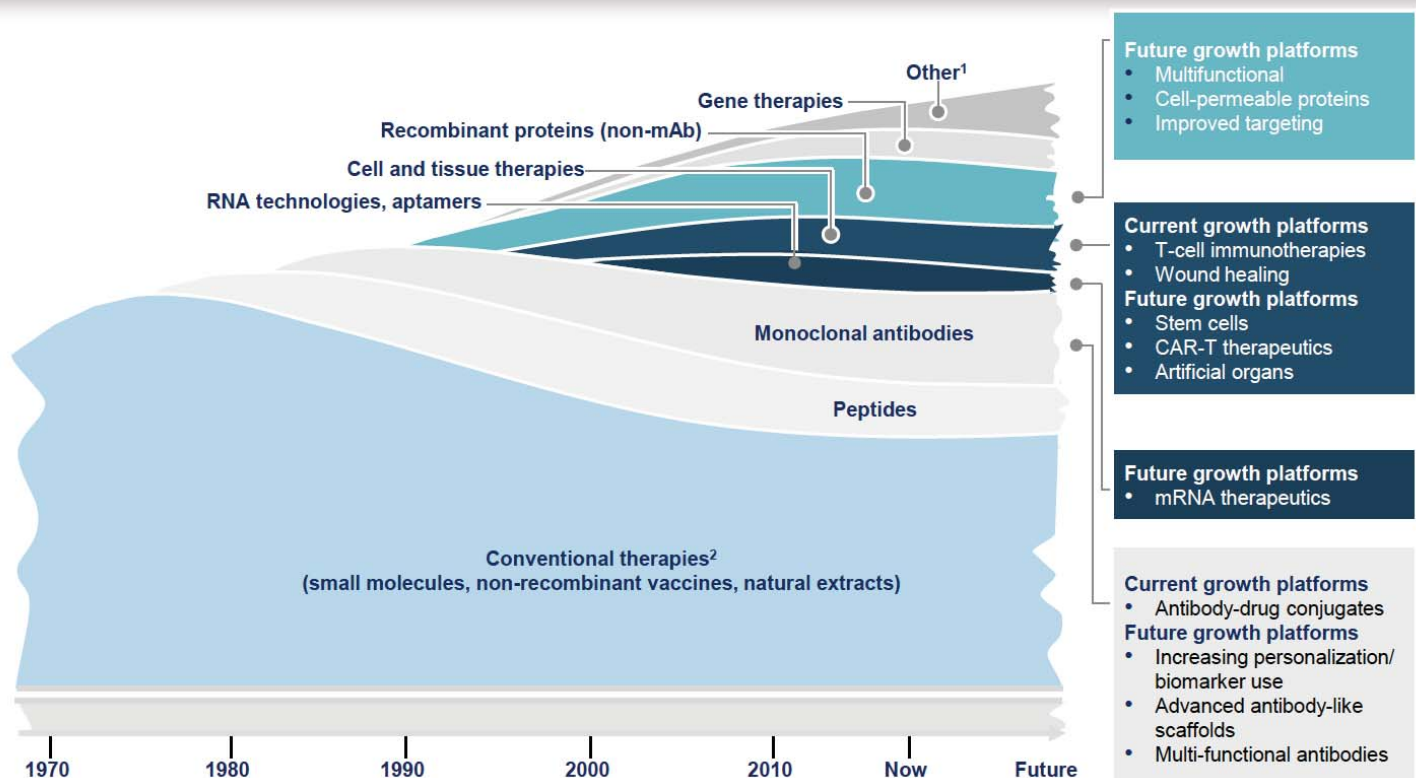
Vaccines

## Summary

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## The explosion of new modalities offers the potential to treat diseases in new ways



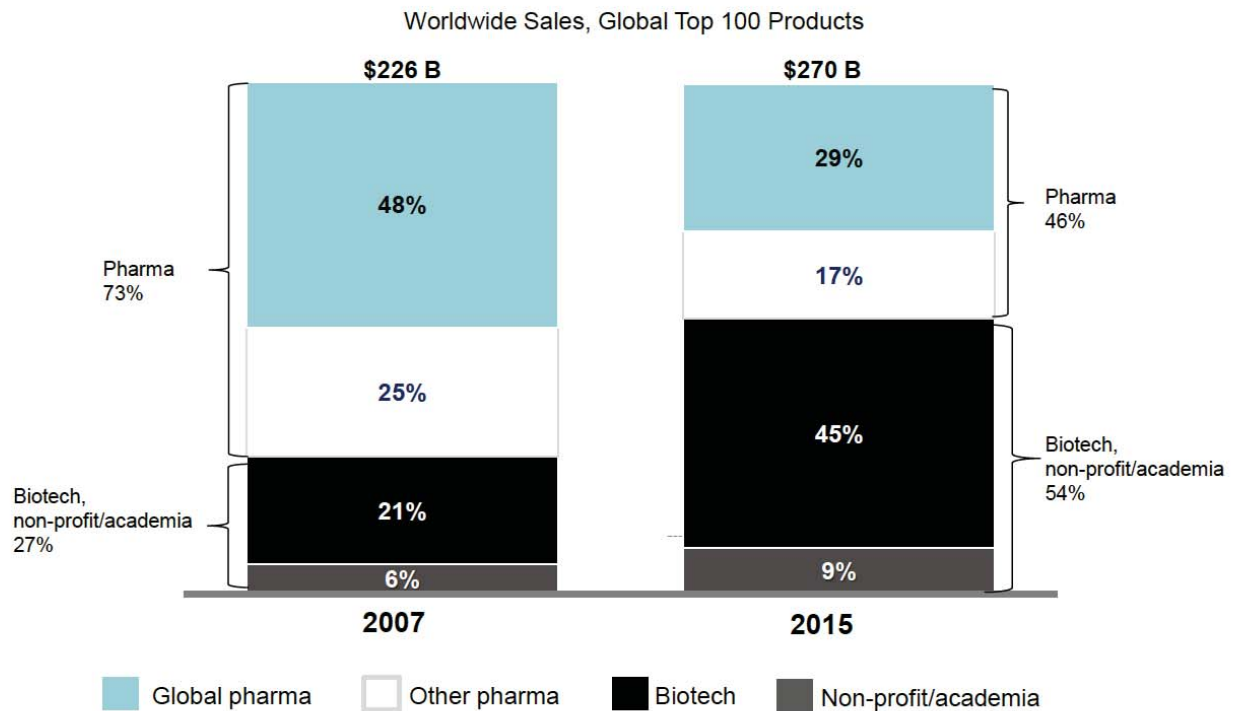
<sup>1</sup> E.g., nanotechnologies, bioelectronics, virus particles

<sup>2</sup> Currently ~60% of global clinical pipeline

Truly differentiated medicines based on these new modalities are being developed increasingly by biotechs



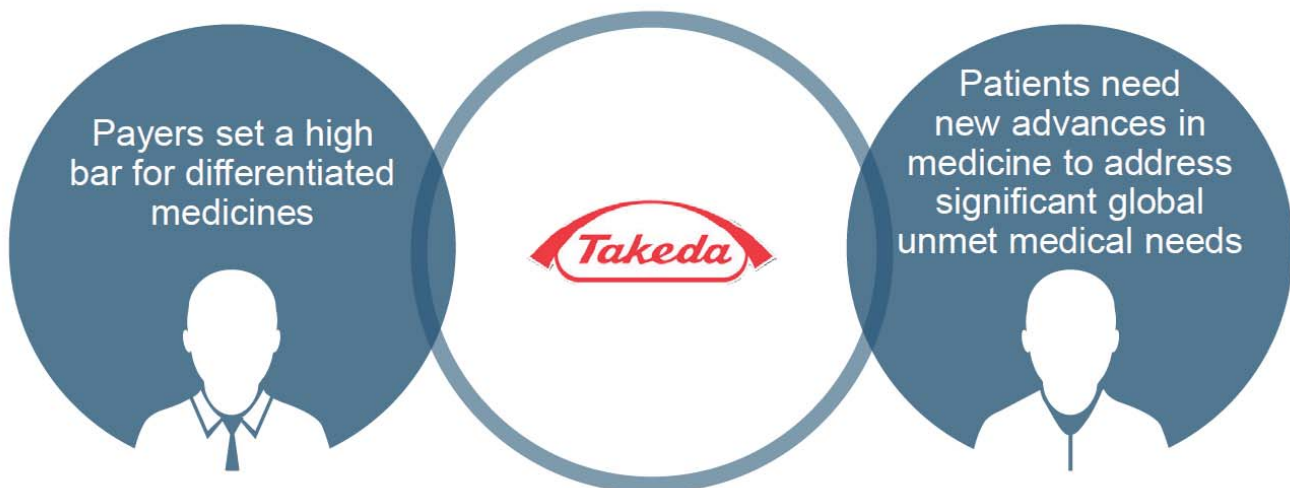
## Origination of Global Top 100 Products



11 SOURCE: EvaluatePharma®

Takeda Pharmaceutical Company Limited

Breakthroughs in science and medicine have led to increasing demand for innovation



**Takeda will address this demand with a patient-centric, science-based strategy for world class R&D**



Building on our heritage

Recognizing increasing demand for innovation

## Four major components in our strategy for focused world class R&D

**Focus our Therapeutic Areas**

**Optimize our Pipeline**

**Enhance our Capabilities**

**Transform our Culture**

Therapeutic area R&D strategy highlights

Oncology

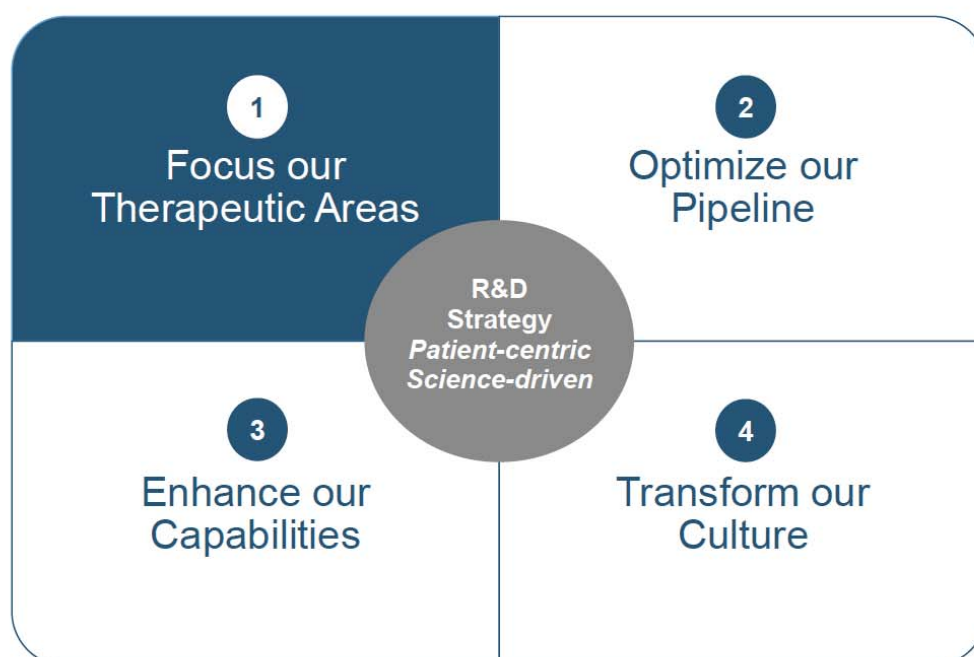
Gastroenterology (GI)

Central Nervous System (CNS)

Vaccines

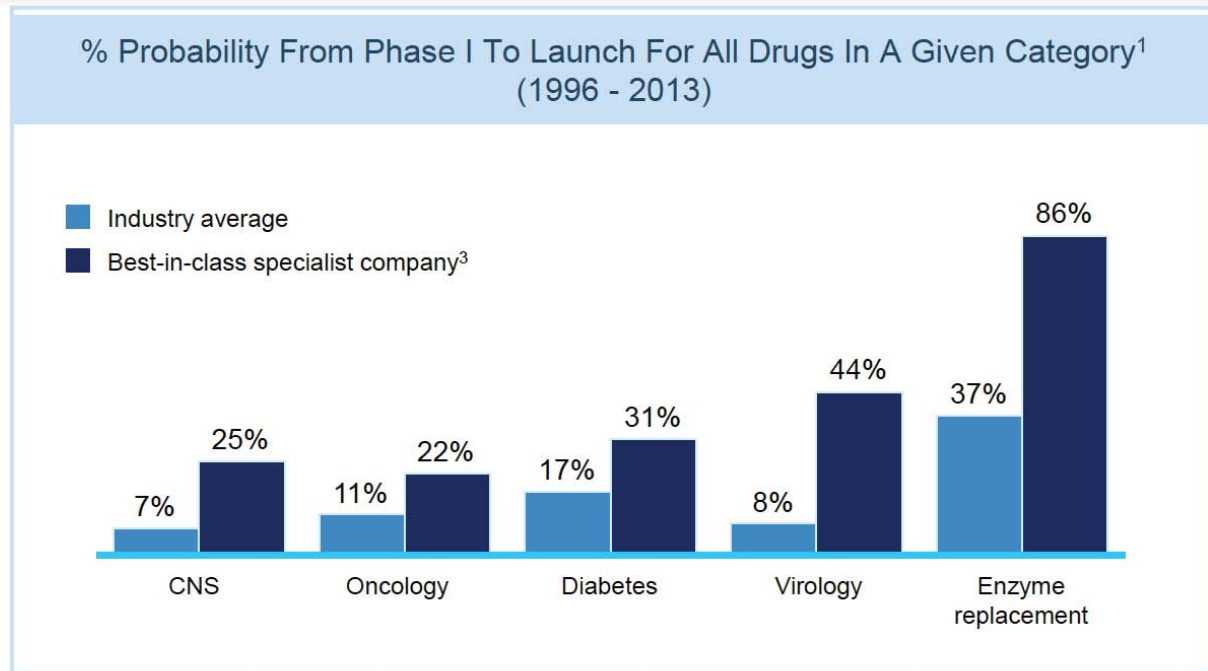
Summary

## Our strategy for focused world class R&D involves four major components



## 1 Focus Therapeutic Areas

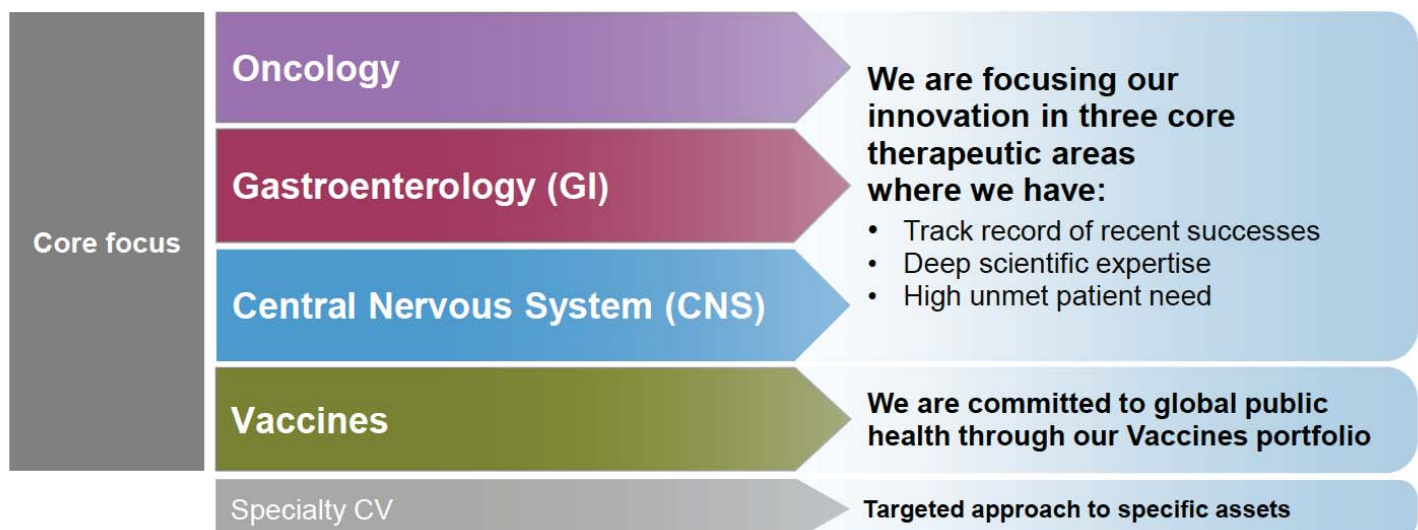
We know that companies with narrower therapeutic area focus outperform their peers



1. Category definitions: Central Nervous System (CNS) as main therapy class; Cancer as primary indication group; Diabetes as primary indication group; HIV/AIDS infection as primary indication; Enzyme replacement = Recombinant protein AND Endocrine as main therapy class; includes reformulated drugs
2. Total number of phase transitions included in each calculation. Includes reformulations
3. Companies with very high success rates in R&D in the respective Therapeutic Areas based on Takeda analysis

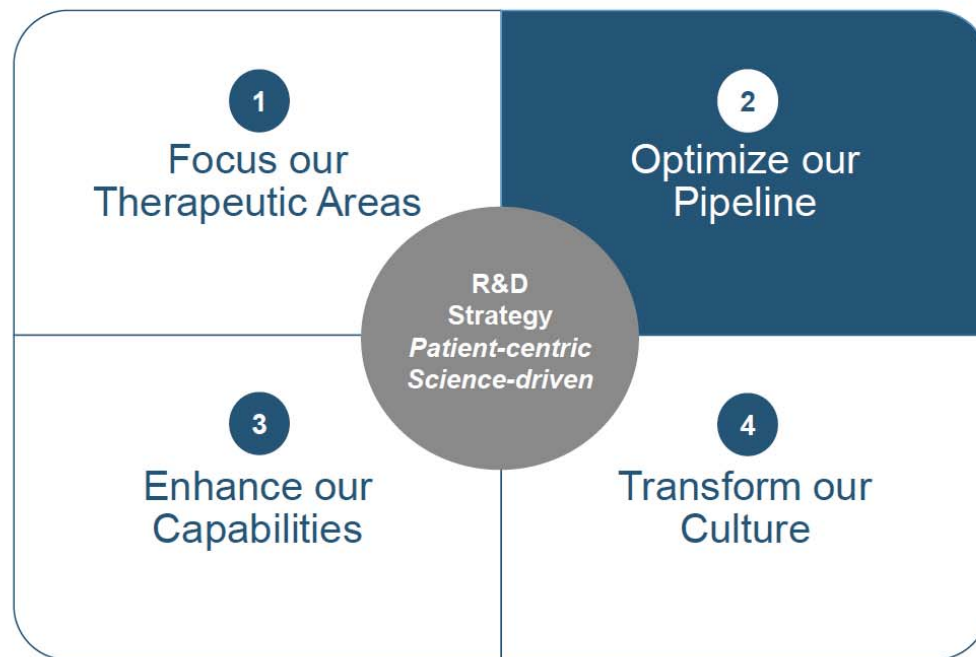
## 1 Focus Therapeutic Areas

We are focusing our efforts in the therapeutic areas where we want to be at the cutting edge of innovation



<b>Deprioritized</b>	Autoimmune Diseases (such as psoriasis, RA) <sup>1</sup>
	Respiratory
	Nephrology
	Metabolism
	Women's Health and General Medicine <sup>2</sup>





## 2 Optimize Pipeline

A look back: Our FY2013 pipeline of NMEs had many assets in late-stage development



	Phase 1	Phase 2	Phase 3 / Filed
<b>Oncology</b>	<div>TAK-117 (MLN1117)</div> <div>TAK-243 (MLN7243)</div> <div>TAK-264 (MLN0264)</div> <div>TAK-580 (MLN2480)</div> <div>TAK-659</div> <div>TAK-733</div> <div>pevonedistat (MLN4924 / TAK-924)</div>	<div>TAK-228 (MLN0128)</div>	<div>alisertib (MLN8237)</div> <div>orteronel (TAK-700)</div> <div>NINLARO (MLN9708)</div> <div>motesanib (diphosphate)</div> <div>trebananib (JP) (AMG 386)</div>
<b>GI/ General Medicine</b>	<div>TAK-233</div>	<div>TAK-114</div> <div>relugolix (TAK-385)</div>	<div>ENTYVIO (MLN0002)</div> <div>TAKECAB (TAK-438)</div> <div>OMONTYS (peginesatide)</div> <div>FOMEPIZOLE (JP)</div>
<b>CNS</b>	<div>LU AA24530</div> <div>TAK-063</div> <div>ITI-214</div> <div>TAK-137</div>		<div>AD-4833 TOMM40</div> <div>LATUDA (EU) (lurasidone)</div>
<b>Vaccines</b>	<div>TAK-021</div>	<div>TAK-003</div> <div>TAK-214</div> <div>TAK-850 (JP)</div> <div>TAK-361S (JP)</div>	<div>VaxemHib (JP) (TAK-816)</div>
<b>Other</b>	<div>TAK-272</div> <div>AMG 403</div>	<div>namilumab (MT203)</div>	<div>CONTRACE (US)</div> <div>fasiglifam (TAK-875)</div> <div>ZAFATEK (SYR-472)</div>

## 2 Optimize Pipeline

Since 2013 we have achieved several key NME approvals



	Phase 1	Phase 2	Phase 3 / Filed
<b>Oncology</b>	<div>TAK-137 (MLN-111)</div> <div>TAK-243 (MLN-035)</div> <div>TAK-264 (MLN-036)</div> <div>TAK-088 (MLN-037)</div> <div>TAK-858</div> <div>TAK-732</div> <div>pevonedistat (MLN-039, TAK-031)</div>	<div>TAK-028 (MLN-038)</div>	<div>alisertib (MLN-002)</div> <div>ENTYVIO (MLN0002) ✓</div> <div>irinotecan (irinotecan)</div> <div>irinotecan (irinotecan)</div>
<b>GI/ General Medicine</b>	<div>TAK-233</div>	<div>TAK-114</div> <div>relugolix (TAK-935)</div>	<div>ENTYVIO (MLN0002) ✓</div> <div>TAKECAB (TAK-438) ✓</div> <div>OMONTYS (MLN-001)</div> <div>FOMEPIZOLE (JP) ✓</div>
<b>CNS</b>	<div>LU-AA24530</div> <div>TAK-083</div> <div>ITI-214</div> <div>TAK-137</div>		<div>AD-4833/TOMM40</div> <div>LATUDA (EU) (lurasidone)</div>
<b>Vaccines</b>	<div>TAK-021</div>	<div>TAK-003</div> <div>TAK-214</div> <div>TAK-850 (JP)</div> <div>TAK-361S (JP)</div>	<div>VaxemHib (JP) ✓</div> <div>(TAK-816)</div>
<b>Other</b>	<div>TAK-272</div> <div>AMG 403</div>	<div>namilumab (MT203)</div>	<div>CONTRACE (US)</div> <div>ZAFATEK (SYR-472) ✓</div> <div>fasiglifam (TAK-875)</div>

19 Note: Does not highlight products that were approved but subsequently divested, returned, or withdrawn from the market

## 2 Optimize Pipeline

We have divested or returned to partners 4 NMEs that no longer fit with our strategic focus



	Phase 1	Phase 2	Phase 3 / Filed
<b>Oncology</b>	<div>TAK-137 (MLN-111)</div> <div>TAK-243 (MLN-035)</div> <div>TAK-264 (MLN-036)</div> <div>TAK-088 (MLN-037)</div> <div>TAK-858</div> <div>TAK-732</div> <div>pevonedistat (MLN-039, TAK-031)</div>	<div>TAK-028 (MLN-038)</div>	<div>alisertib (MLN-002)</div> <div>ENTYVIO (MLN0002)</div> <div>irinotecan (irinotecan)</div> <div>irinotecan (irinotecan)</div>
<b>GI/ General Medicine</b>	<div>TAK-233 ↻</div>	<div>TAK-114</div> <div>relugolix (TAK-935)</div>	<div>ENTYVIO (MLN0002)</div> <div>TAKECAB (TAK-438)</div> <div>OMONTYS (MLN-001)</div> <div>FOMEPIZOLE (JP)</div>
<b>CNS</b>	<div>LU-AA24530</div> <div>TAK-083</div> <div>ITI-214 ↻</div> <div>TAK-137</div>		<div>AD-4833/TOMM40</div> <div>LATUDA (EU) (lurasidone) ↻</div>
<b>Vaccines</b>	<div>TAK-021</div>	<div>TAK-003</div> <div>TAK-214</div> <div>TAK-850 (JP)</div> <div>TAK-361S (JP)</div>	<div>VaxemHib (JP)</div> <div>(TAK-816)</div>
<b>Other</b>	<div>TAK-272</div> <div>AMG 403</div>	<div>namilumab (MT203)</div>	<div>CONTRACE (US) ↻</div> <div>ZAFATEK (SYR-472)</div> <div>fasiglifam (TAK-875)</div>



## 2 Optimize Pipeline

We have terminated programs and discontinued 10 NMEs



	Phase 1	Phase 2	Phase 3 / Filed
<b>Oncology</b>	<div>TAK-117 (MLN117)</div> <div>TAK-264 (MLN0264)</div> <div>TAK-658</div> <div>pevonedistat (TAK-924) (MLN0264, MLN0264)</div> <div>TAK-243 (MLN0243)</div> <div>TAK-659 (MLN0259)</div> <div>TAK-733</div>	<div>TAK-228 (MLN0228)</div> <div>TAK-114</div> <div>relugolix (TAK-385)</div>	<div>alisertib (MLN8237)</div> <div>orteroneel (TAK-700)</div> <div>motesanib (AMG706)</div> <div>trebananib (JP)</div>
<b>GI/ General Medicine</b>			<div>OMONTYS (peginesatide)</div>
<b>CNS</b>	<div>LU AA24530</div> <div>TAK-063</div> <div>TAK-137</div>		<div>AD-4833 TOMM40</div>
<b>Vaccines</b>	<div>TAK-021</div>	<div>TAK-003</div> <div>TAK-214</div> <div>TAK-850 (JP)</div> <div>TAK-361S (JP)</div>	
<b>Other</b>	<div>TAK-272</div> <div>AMG 403</div>	<div>namilumab (MT203)</div>	<div>fasiglifam (TAK-875)</div>

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## 2 Optimize Pipeline

In our core focus areas, we have added 10 innovative early-stage NMEs



	Phase 1	Phase 2	Phase 3 / Filed
<b>Oncology</b>	<div>TAK-243 UAE inhibitor Solid Tumors</div> <div>TAK-580 Pan-RAF kinase inhibitor Solid Tumors</div> <div>TAK-931 CDC7 inhibitor Solid Tumors</div> <div>XMT-1522** anti-HER2 ADC Solid Tumors</div>	<div>TAK-659 SYK inhibitor Hematologic malignancies</div> <div>TAK-202* CCR2 chemokine antagonist Solid Tumors</div> <div>pevonedistat (TAK-924) NAE inhibitor HR Myelodysplastic Syndromes</div> <div>TAK-228 mTORC1/2 inhibitor Renal Cell Carcinoma</div> <div>relugolix (TAK-385) LH-RH antagonist Prostate cancer</div>	<div>TAK-117 PI3Ka isoform inhibitor Non-small Cell Lung Cancer</div> <div>trebananib (JP) (AMG 386) Anti-angiopoietin (replisud) Ovarian Cancer</div>
<b>GI</b>	<div>TAK-828 RORyt inverse agonist Crohn's Disease</div>		
<b>CNS</b>	<div>TAK-041 GPR139 agonist CIAS neg. symptoms</div> <div>TAK-058 5-HT3 receptor antagonist CIAS</div> <div>TAK-071 M1PAM LBD-AD</div> <div>TAK-653 AMPA receptor potentiator Treat Resistant Depression</div> <div>TAK-831 DAO inhibitor Schizophrenia, Ataxia</div> <div>TAK-915 PDE2A inhibitor LBD-AD</div> <div>TAK-935 CH24H inhibitor Epilepsy</div>	<div>TAK-063 PDE10A inhibitor Schizophrenia</div>	<div>AD-4833 TOMM40 Mitochondrial growth modulator Delay of MCI</div>
<b>Vaccines</b>	<div>TAK-021 EV71</div>	<div>TAK-003 Dengue</div> <div>TAK-214 Norovirus</div> <div>TAK-850 (JP) Influenza</div>	
<b>Specialty CV</b>		<div>TAK-272 Direct renin inhibitor Diabetic Nephropathy</div>	
<b>Other</b>	<div>AMG 403 Human monoclonal antibody against human NGF Pain</div> <div>TAK-020 BTK inhibitor Rheumatoid arthritis</div> <div>TAK-079 Anti-CD38 mAb Rheumatoid arthritis</div>	<div>namilumab (MT203) GM-CSF monoclonal antibody Psoriasis &amp; RA</div>	

22 \*TAK-202 repositioned to oncology from CV/Metabolic; \*\*XMT-1522 is still pre-clinical; IND expected in 2016

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## 2 Optimize Pipeline

Our pipeline today is strategically focused with exciting early assets; we must continue to optimize for sustainability



	Phase 1	Phase 2	Phase 3	LCM
<b>Oncology</b>	<b>TAK-202</b> CCR2 antagonist Solid Tumors <b>TAK-659</b> SYK inhibitor Hematologic malignancies <b>TAK-931</b> CDC7 inhibitor Solid Tumors	<b>TAK-243</b> UAE inhibitor Solid Tumors <b>TAK-580</b> pan-RAF kinase Solid Tumors <b>relugolix***</b> (TAK-385) LH/RH antagonist Prostate cancer	<b>Pevonelistat</b> NAE inhibitor HR MDS <b>alisertib</b> Aurora A kinase SCLC <b>TAK-117</b> PI3Ka NSCLC <b>TAK-228</b> mTORC 1/2 RCC	<b>trebananib (JP)</b> Anti-angiopoietin peptibody Ovarian Cancer <b>NINLARO®</b> Proteasome inhibitor MM R/R (EU/EM), R/R AL Amyloidosis, Front Line MM Maintenance MM post-SCT Maintenance MM w/o SCT <b>ADCESTRIS®</b> CD30 ADC HL Post Transplant FL HL, FL MTCL, Relapsed CTCL
<b>GI</b>	<b>TAK-828</b> RORγ1 inverse agonist Crohn's Disease	<b>TD-8954</b> Selective 5-HT4 receptor agonist Enteric Feeding Intolerance		<b>ENTYVIO®</b> α4β7 mAb UC/CD (EM, JP), adalimumab H2H Subcutaneous formulation UC/CD PSC, GvHD, IO Colitis <b>AMITIZA®</b> Chloride channel activator Pediatric constipation New formulation <b>DEXILANT®</b> PPI ARD in adolescents <b>TAKECAB®</b> PCAB ARD (Asia) PPI Partial Responder
<b>CNS</b>	<b>TAK-041</b> GPR139 agonist CIAS neg. symptoms <b>TAK-071</b> M1PAM LBD-AD <b>TAK-831</b> DAAO inhibitor Schizophrenia, Ataxia	<b>TAK-058</b> 5-HT3 antagonist CIAS <b>TAK-653</b> AMPA potentiator TRD <b>TAK-915</b> PDE2A LBD-AD <b>TAK-935</b> CH24H inhibitor Epilepsy	<b>TAK-063</b> PDE10A Schizophrenia	<b>AD-4833 TOMM40</b> Mitochondrial growth modulator Delay of MCI <b>AZILECT®</b> MAOB inhibitor Parkinson's (JP)
<b>Vaccines</b>	<b>TAK-195**</b> s PV	<b>TAK-021</b> EV71 <b>TAK-003</b> Dengue <b>TAK-850 (JP)</b> Influenza	<b>TAK-214</b> Norovirus	<b>TRINTELLIX®</b> Multimodal anti-depressant Cognition data in label (CRL received) MDD (JP), ADHD
<b>Specialty CV</b>		<b>TAK-272</b> Direct renin inhibitor Diabetic Nephropathy		
<b>Other</b>	<b>AMG 403</b> NGF Pain <b>TAK-079</b> Anti-CD38 mAb RA <b>TAK-020</b> BTK inhibitor RA	<b>namlumab</b> GM-CSF Psoriasis & RA		<b>AZILVA®</b> FDC w/ amlodipine & HCTZ (JP) ARB Hypertension <b>NESINA®</b> FDC with Met (JP) DPP4i TZDM <b>ULORIC®</b> XAO inhibitor XR Formulation Hyperuricemia <b>BENET®</b> Bone resorption inhibitor Additional formulation (JP)

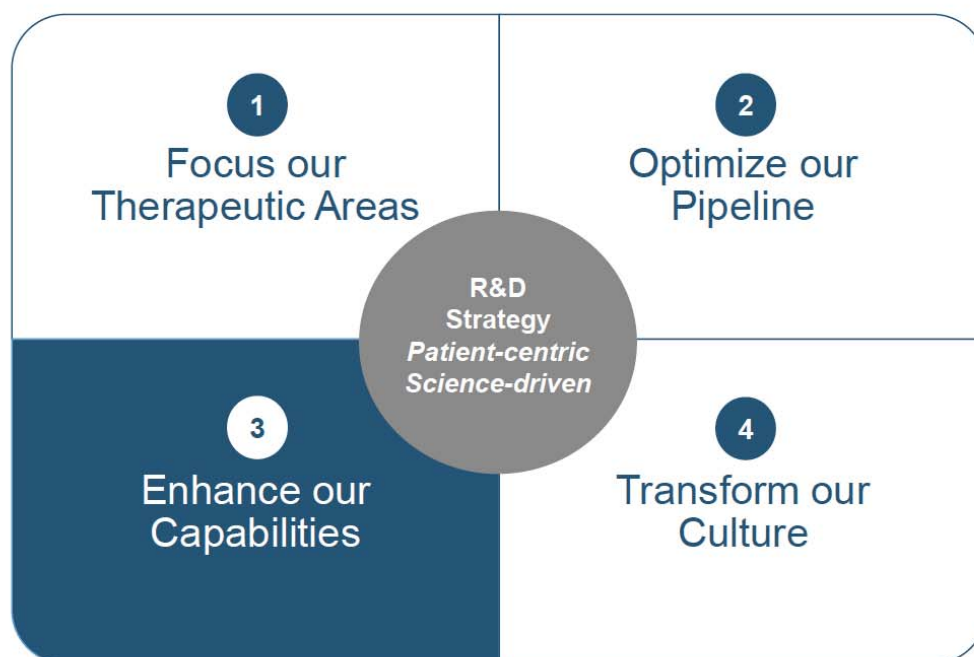
Note: this slide does not represent the entire pipeline

23 \*XMT-1522 is still pre-clinical; IND expected in 2016 ; \*\*TAK-195 is still pre-clinical; Phase 1 start expected in Q4 FY2016  
\*\*\*Relugolix also in Phase 3 for uterine fibroids, Phase 2 for endometriosis. Takeda has granted Myovant an exclusive, worldwide license to relugolix, excluding Japan and certain other Asian countries. See appendix for list of abbreviations

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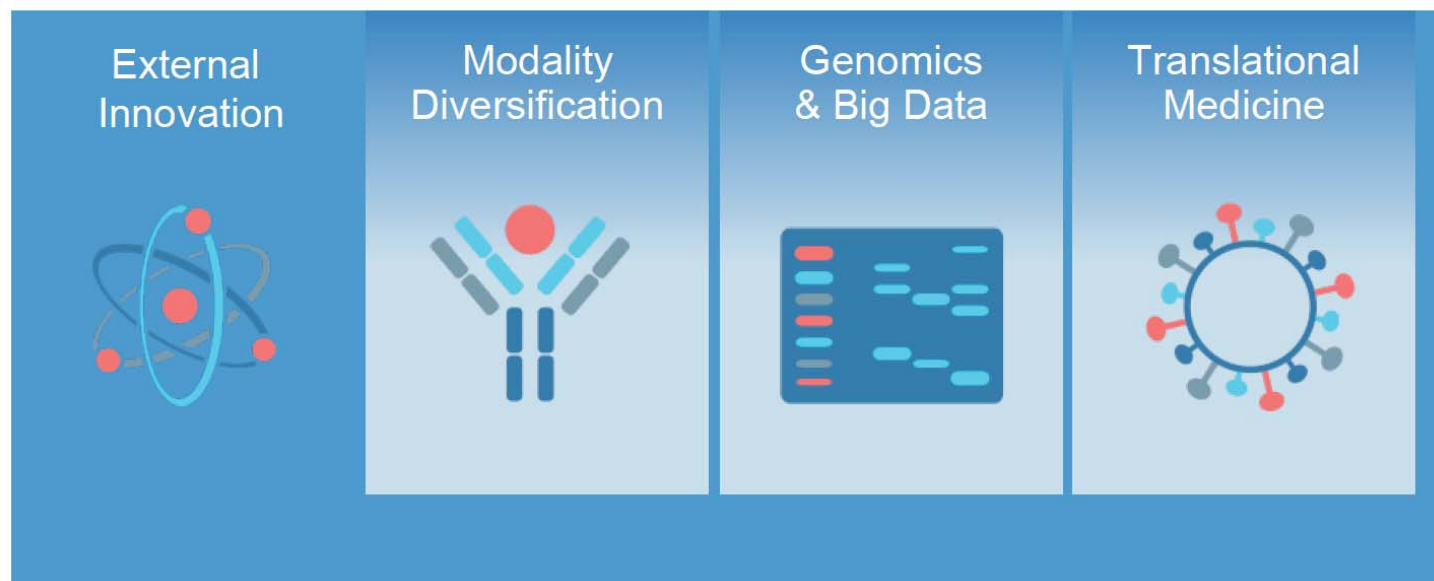
## 3 Enhance Capabilities

To optimize our pipeline using cutting-edge science and technology, we need enhanced capabilities in key areas





We are strengthening essential capabilities through further focus on external innovation

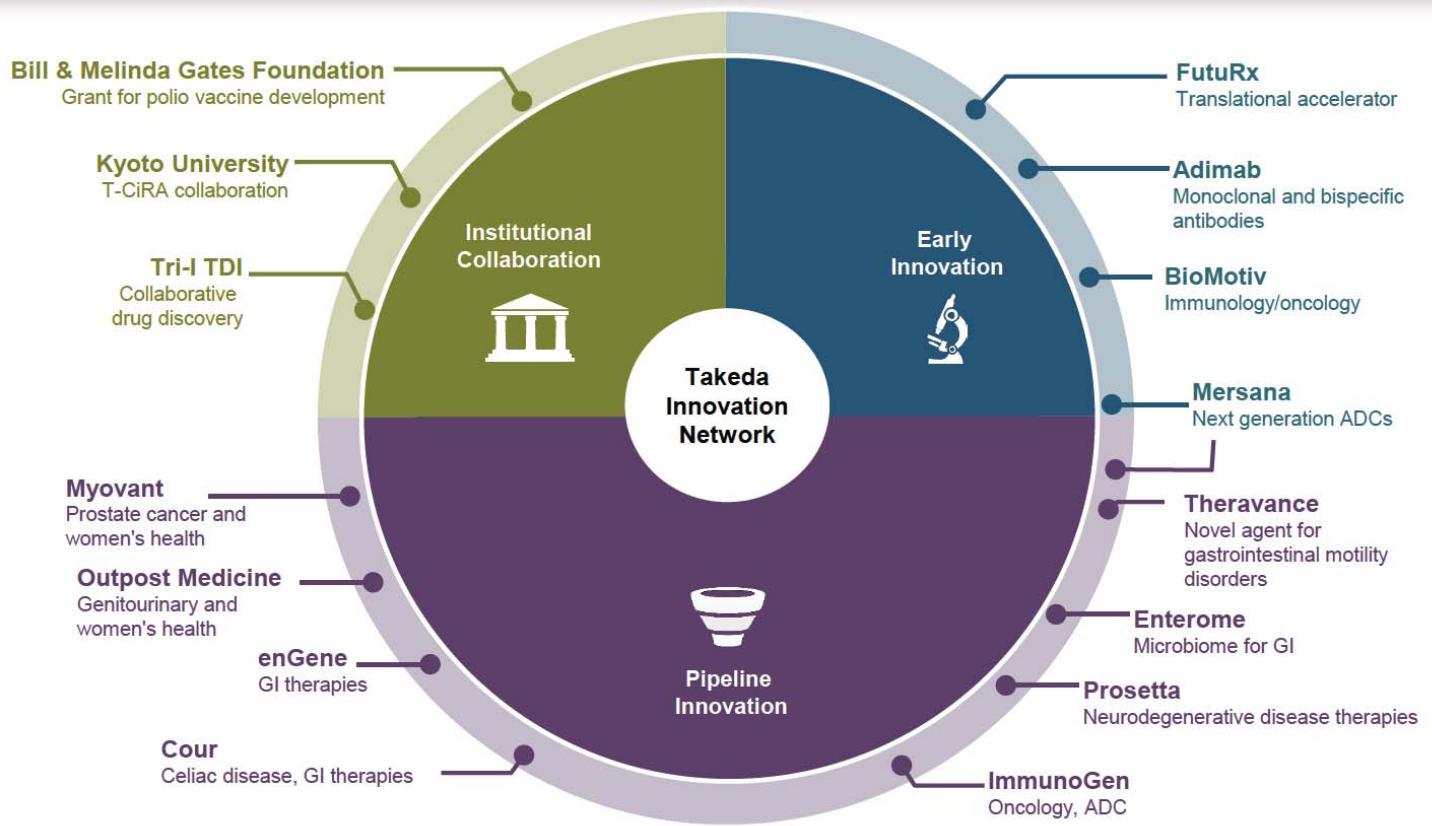


A robust innovation network is the core of our future



### 3 Enhance Capabilities

We are building a network through innovative models to become among the best partners in the industry

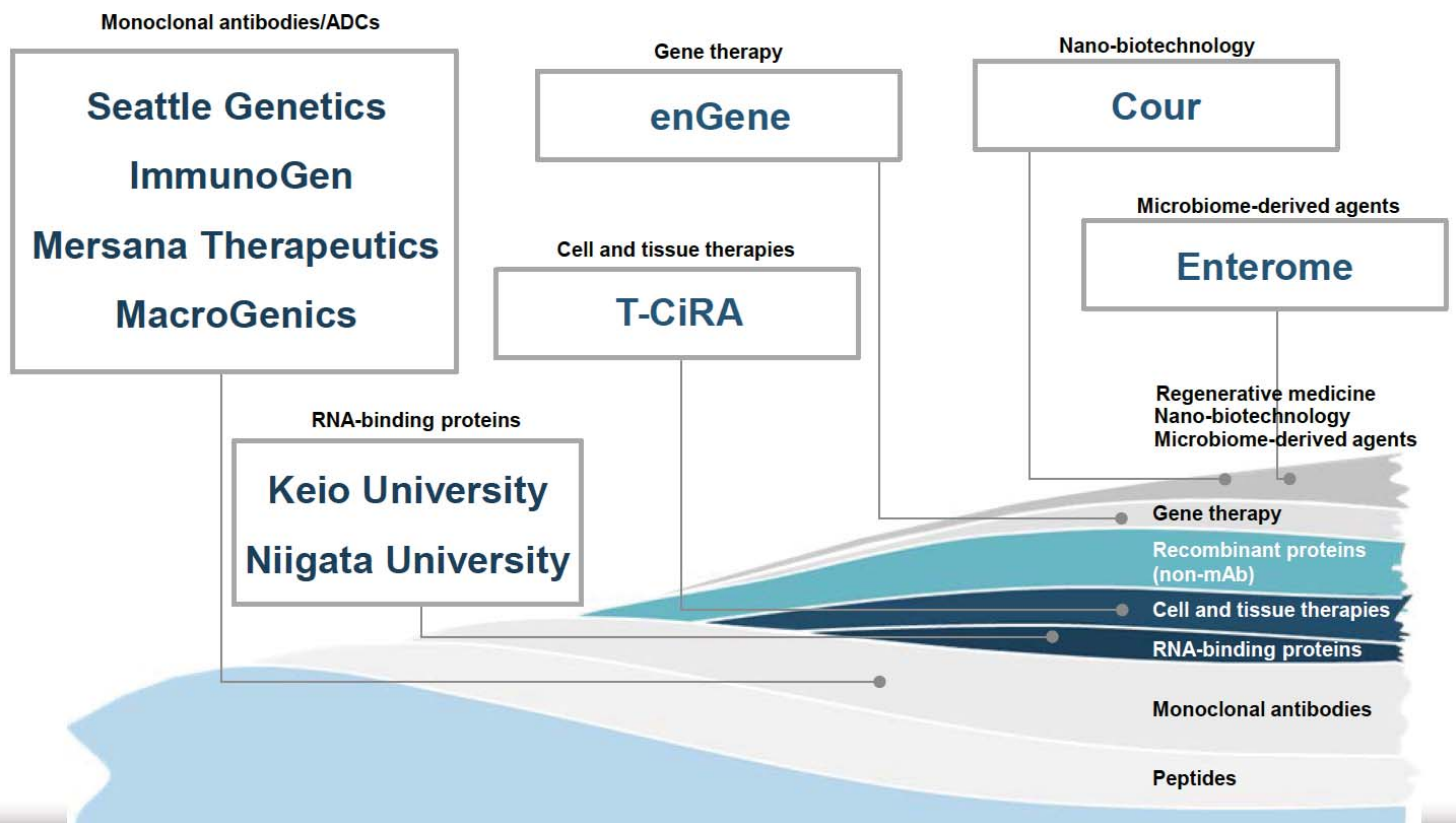


27 Note: Slide includes only select partnerships

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### 3 Enhance Capabilities

We are currently working in a variety of new modalities through our innovation network

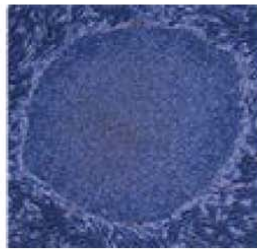


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### 3 Enhance Capabilities

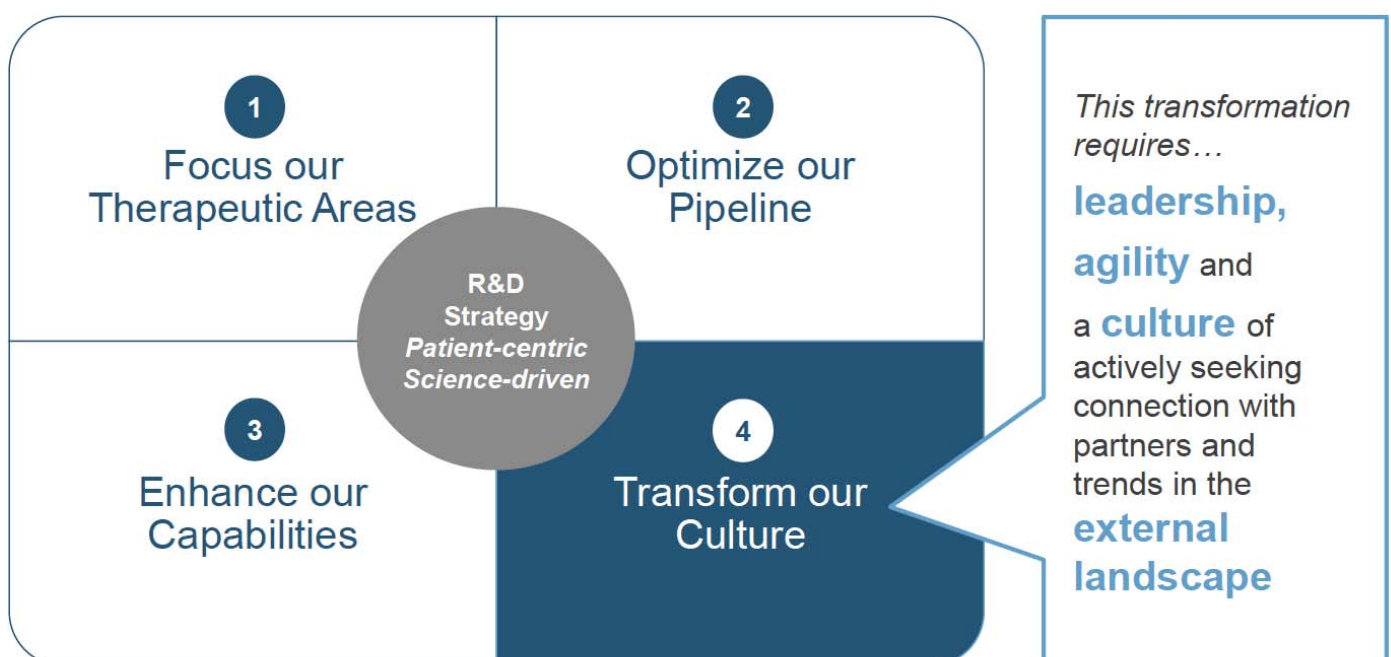
## Our T-CiRA partnership creates new modality opportunities across our therapeutic areas



- Groundbreaking Takeda partnership with Center for iPS Cell Research and Application (CiRA), Kyoto University
- Collaboration led by Nobel laureate Prof. Shinya Yamanaka
- iPS cells can differentiate into any type of cell in the body, making them very promising for regenerative medicine, as well as drug discovery for a wide range of conditions including rare and intractable diseases
- Takeda hosts the joint collaboration to develop innovative treatments from iPS technology at our Shonan site
- Takeda is playing a unique role, fostering important medical innovation in Japan

### 4 Transform Culture

## We are transforming our culture to drive progress on our strategy



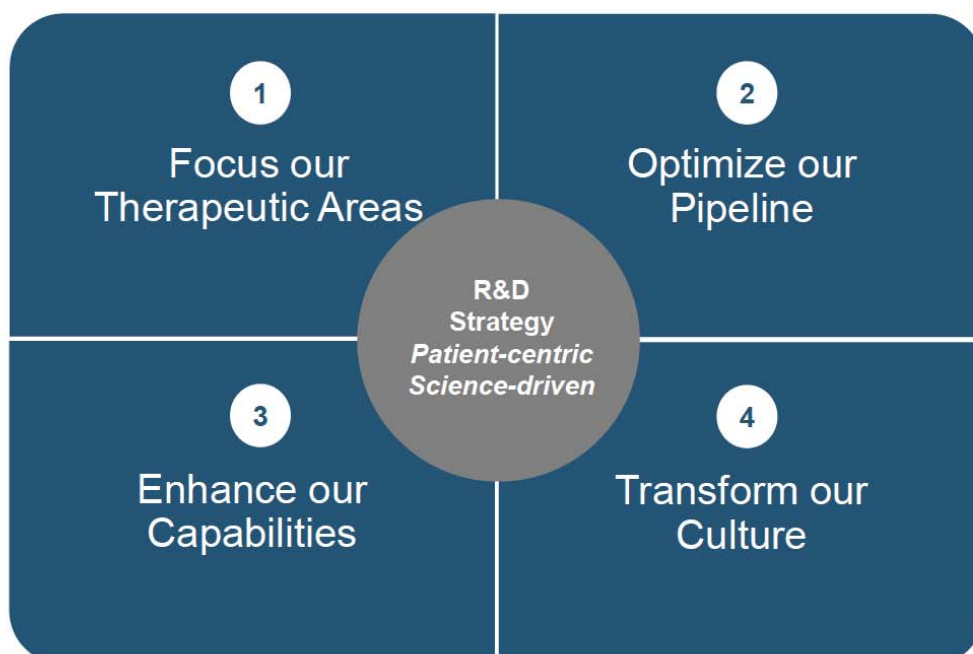


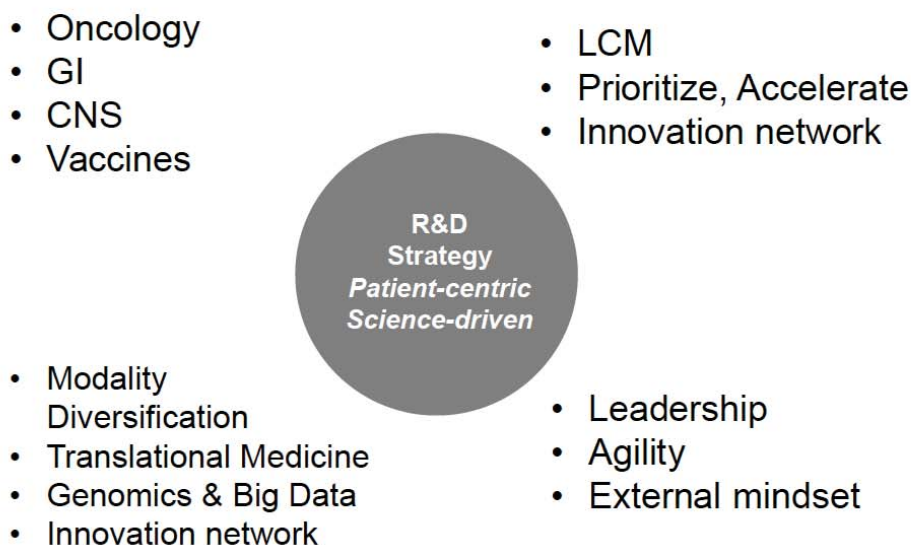
This focus permeates our R&D culture, reinforced by our investments and decisions



- Simplified leadership with clear accountability
  - Seasoned leadership team spanning Research, TAUs, externalization
  - Key enabling capabilities embedded in leadership structure
  - Building next generation of leaders in partnership with Massachusetts Institute of Technology
- Agile structure to implement strategy, seize opportunities and act swiftly
  - Key governance committee co-chaired with Commercial
  - Other decisions devolved to teams
- Streamlined external business development structure to build and maintain critical linkages with external partners
  - One leader (D. Curran) accountable for driving externalization across all Takeda R&D business development

We are rapidly becoming a focused, world class R&D organization





## Agenda



Building on our heritage

Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

Focus our Therapeutic Areas

Optimize our Pipeline

Enhance our Capabilities

Transform our Culture

### Therapeutic area R&D strategy highlights

#### **Oncology**

***Presented by Andy Plump***

Gastroenterology (GI)

Central Nervous System (CNS)

Vaccines

Summary

Our oncology strategy builds on current pipeline success and strengthens new capabilities through partnerships



## MAXIMIZE

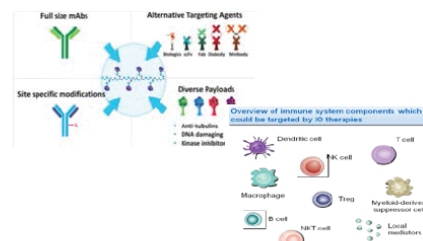
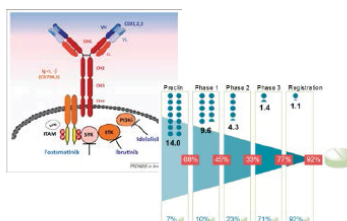
NINLARO  
& ADCETRIS

## PRIORITIZE

FOCUS ON KEY PIPELINE  
ASSETS WITH  
TRANSFORMATIVE  
POTENTIAL

## COLLABORATE

ANTIBODY DRUG  
CONJUGATES  
& PARTNERING IN  
IMMUNO-ONCOLOGY



Deliver to broader patient populations

Set high barriers to differentiate, sourcing from internal and external expertise

Bringing internal expertise in discovering and developing targeted therapies together with external cutting-edge platforms and capabilities

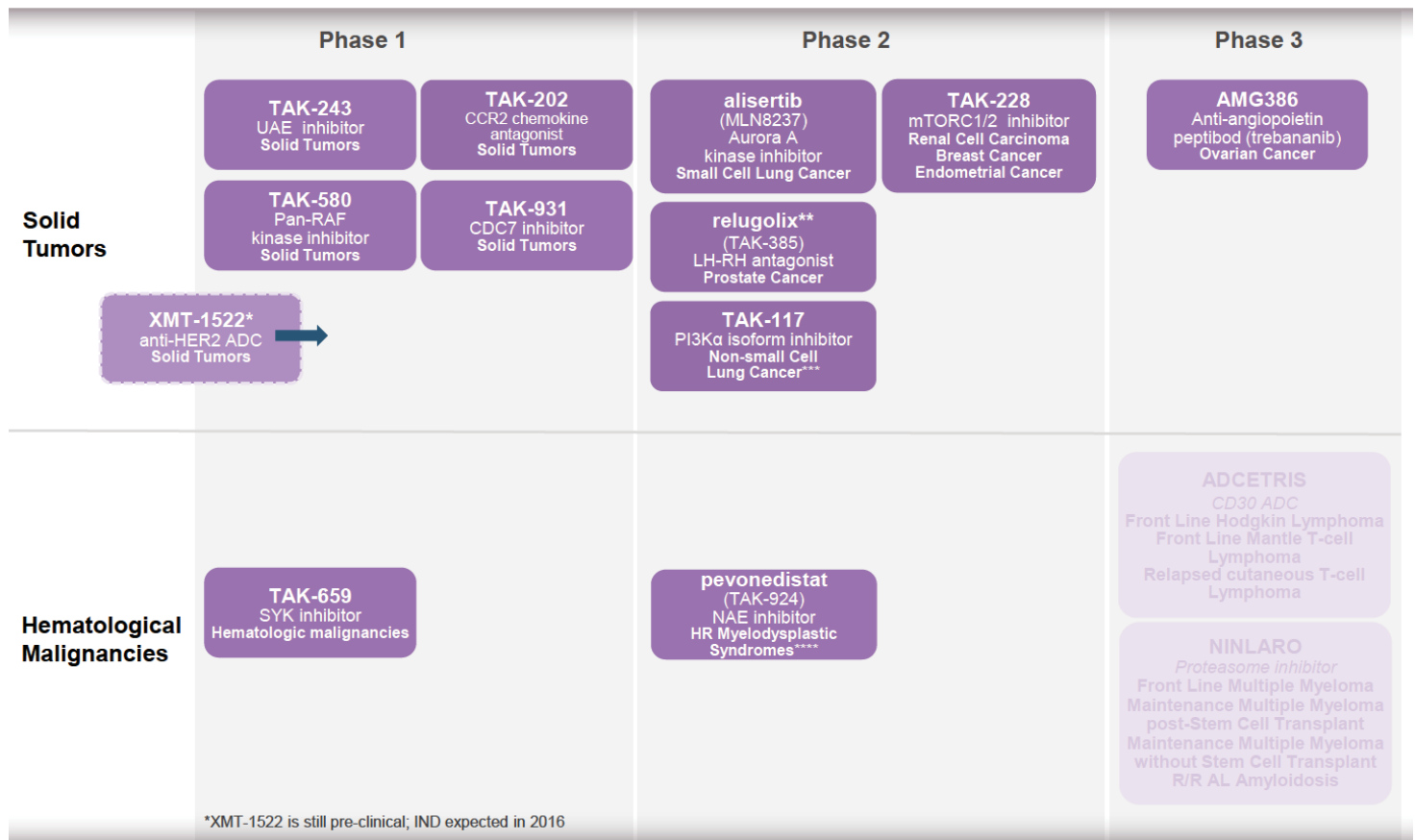
We are maximizing the clinical potential of our recently launched medicines NINLARO and ADCETRIS



	Phase 1	Phase 2	Phase 3
<b>Solid Tumors</b>	<div>TAK-243 UAE inhibitor Solid Tumors</div> <div>TAK-202 CCR2 chemokine antagonist Solid Tumors</div> <div>TAK-580 Pan-RAF kinase inhibitor Solid Tumors</div> <div>TAK-931 CDC7 inhibitor Solid Tumors</div> <div>XMT-1522* anti-HER2 ADC Solid Tumors</div>	<div>alisertib (MLN8237) Aurora A kinase inhibitor Small Cell Lung Cancer</div> <div>TAK-228 mTORC1/2 inhibitor Renal Cell Carcinoma Breast Cancer Endometrial Cancer</div> <div>relugolix (TAK-385) LH-RH antagonist Prostate Cancer</div> <div>TAK-117 PI3Ka isoform inhibitor Non-small Cell Lung Cancer</div>	<div>AMG386 Anti-angiopoietin peptide (trebananib) Ovarian Cancer</div>
<b>Hematological Malignancies</b>	<div>TAK-659 SYK inhibitor Hematologic malignancies</div>	<div>pevonedistat (TAK-924) NAE inhibitor HR Myelodysplastic Syndromes</div>	<div>ADCETRIS CD30 ADC Front Line Hodgkin Lymphoma Front Line Mantle T-cell Lymphoma Relapsed cutaneous T-cell Lymphoma</div> <div>NINLARO Proteasome inhibitor Front Line Multiple Myeloma Maintenance Multiple Myeloma post-Stem Cell Transplant Maintenance Multiple Myeloma without Stem Cell Transplant R/R AL Amyloidosis</div>



## Earlier clinical stage assets enrich the scope of our oncology pipeline



37

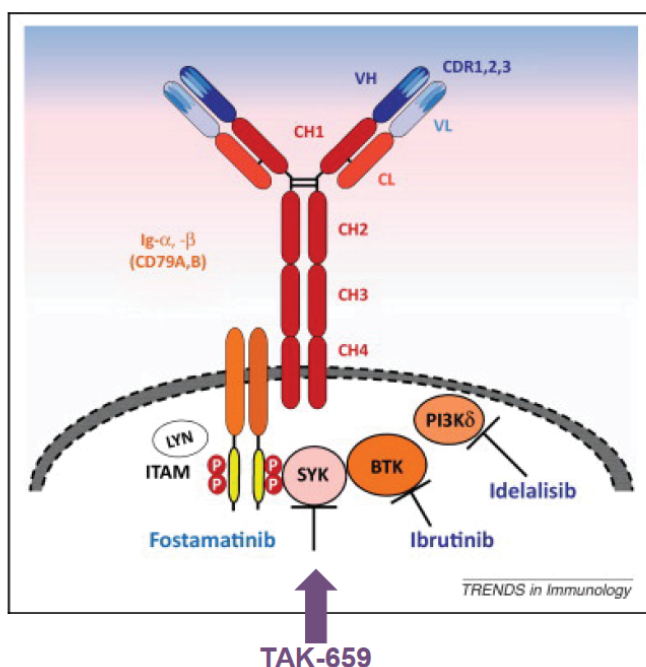
\*\* Also in Phase 3 for uterine fibroids, Phase 2 for endometriosis. Takeda has granted Myovant an exclusive, worldwide license to relugolix, excluding Japan and certain other Asian countries.  
\*\*\*Also in Gastric cancer in Phase 1; \*\*\*\*Also in Solid Tumors in Phase 1,

Takeda Pharmaceutical Company Limited

## TAK-659 is a SYK/FLT-3 dual inhibitor that is a potential innovative oral medicine for hematological malignancies



### B-Cell Receptor (BCR) Signaling



Source: Trends in Immunology December 2013, Vol. 34, No. 12

### BCR Clinical Precedence Established

- BTK: **Ibrutinib** (CLL, MCL, WM)
- PI3Kδ: **Idelalisib** (CLL, FL, SLL)

### TAK-659 SYK Inhibitor

- Unique SYK inhibitor with good pharmaceutical properties
- SYK signaling is critical for B-cell and myeloid malignancies

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CLL: chronic lymphocytic leukemia; MCL: mantle cell lymphoma; WM: Waldenström's macroglobulinemia, FL: follicular lymphoma, SLL: Small lymphocytic lymphoma

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We are pursuing three distinct hypotheses for TAK-659 based on evolving science and emerging data



## DIFFERENTIATED OPPORTUNITIES

### BCR Hypothesis

*Non-Hodgkin Lymphoma (NHL)*

- Ongoing Ph1 expansion in NHL
- Early efficacy data show: 8/21 DLBCL and 3/3 FL responders

### BTK Resistance

*BTK resistance: CLL and MCL*

- Ongoing Ph 1 study in ibrutinib relapse/refractory CLL/MCL patients

### Immuno-Oncology

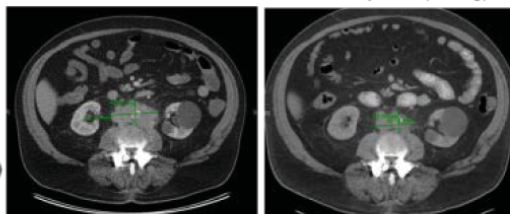
*Initiate PD-1 Combination Study*

- Evolving science on the diverse roles of SYK in immunological functions

**Partial Response** in a patient with DLBCL  
- Ann Arbor Stage III, GCB subtype;  
heavily pretreated f/u auto-HSCT

Baseline

End of Cycle 2 (60 mg)



PR  
(ongoing)

Ongoing  
Ph 1b/2  
Dose Escalation in  
Hematological &  
Solid Tumors

DLBCL  
CLL  
iNHL  
MCL  
PTLD

39 DLBCL: diffuse large B-cell lymphoma; CLL: chronic lymphocytic leukemia; iNHL: indolent Non-Hodgkin lymphoma; MCL: mantle cell lymphoma; PTLD: post transplant lymphoproliferative disorder

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Recent IO products have transformed patient outcomes, but only a portion of the immune system is currently harnessed



### Approved Drug

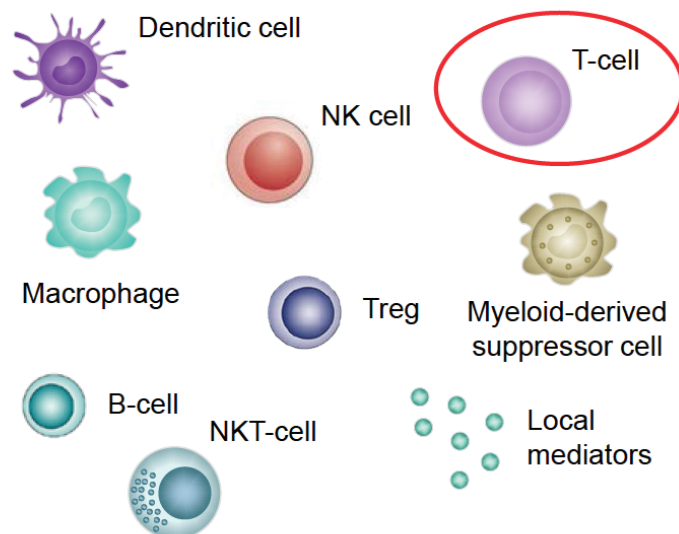
ipilimumab

pembrolizumab

nivolumab

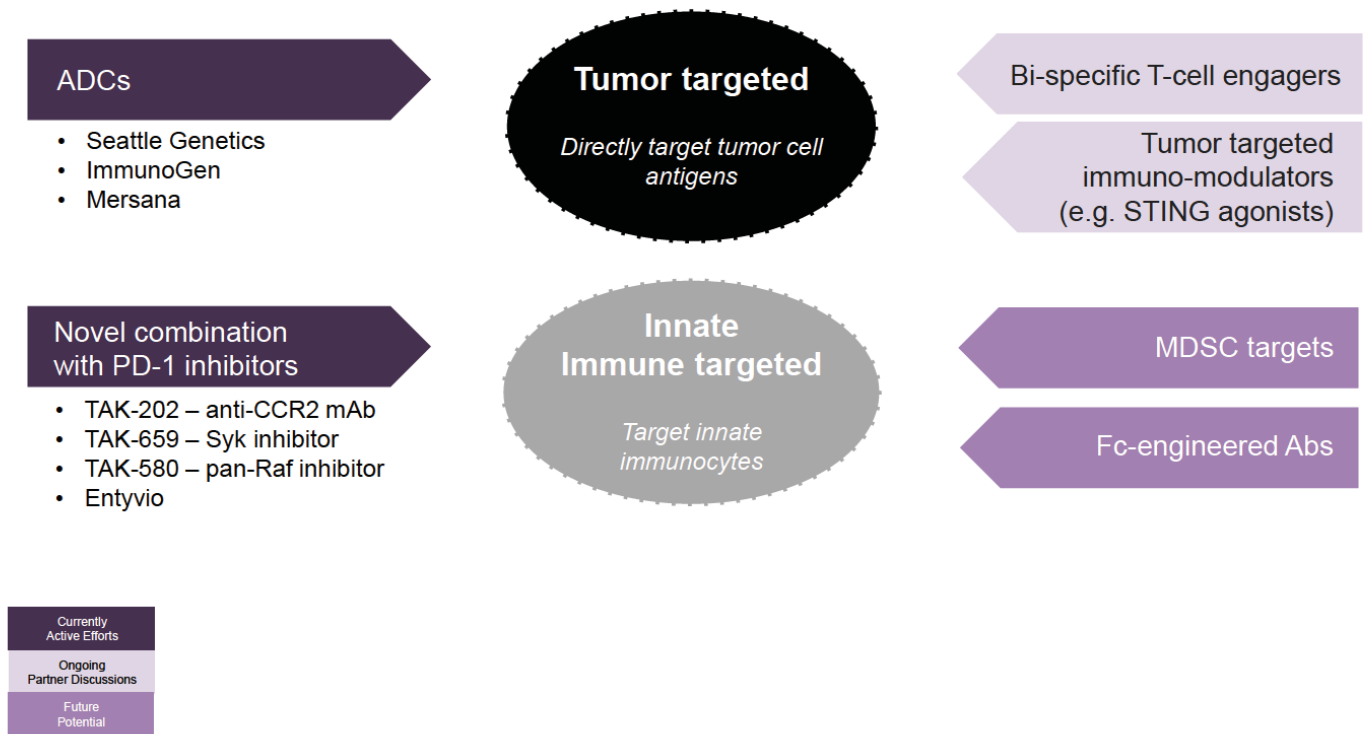
blinatumomab

### Overview of immune system components which could be targeted by IO therapies



*There is still a broad range of targets for IO mechanisms beyond the approach of currently approved products*

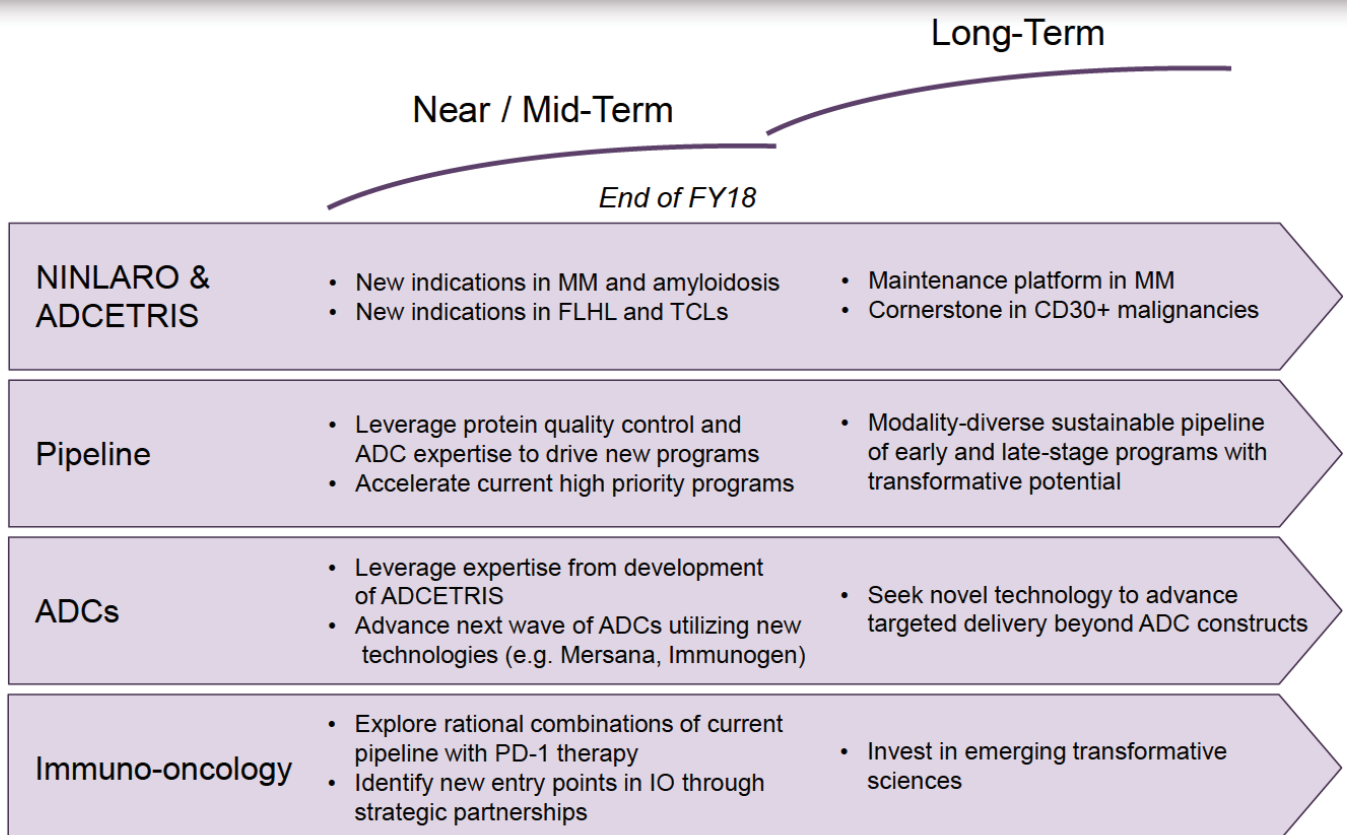
# Takeda's immuno-oncology R&D strategy focuses on identifying IO entry points beyond T-cell checkpoints



41 IO: immuno-oncology; MDSC: myeloid-derived suppressor cells; mAbs: monoclonal antibodies; Abs: antibodies; Fc: fragment crystallizable

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## We will expand cornerstone hematology presence and build in ADCs and IO







**Asit Parikh,  
M.D., Ph.D.**

Head of GI  
Therapeutic Area Unit



**Emiliangelo  
Ratti, Ph.D**

Head of CNS  
Therapeutic Area Unit



**Rajeev  
Venkayya, M.D.**

President, Global Vaccines  
Business Unit

## Agenda



Building on our heritage

Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

Focus our Therapeutic Areas

Optimize our Pipeline

Enhance our Capabilities

Transform our Culture

### Therapeutic area R&D strategy highlights

Oncology

**Gastroenterology (GI)**

***Presented by Asit Parikh***

Central Nervous System (CNS)

Vaccines

Summary

We seek to become the global GI leader via an R&D engine that maximizes a diverse portfolio with ENTYVIO as a cornerstone



## MAXIMIZE

CURRENT GI PORTFOLIO



- Inflammatory bowel disease (IBD)
- Acid related disease
- Constipation

## PRIORITIZE

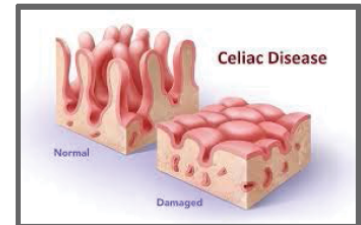
INNOVATIVE SCIENCE



- ENTYVIO for oncology-related disease
- Next generation IBD
- GI drug discovery unit

## COLLABORATE

TO BUILD A COMPELLING EARLY STAGE PIPELINE



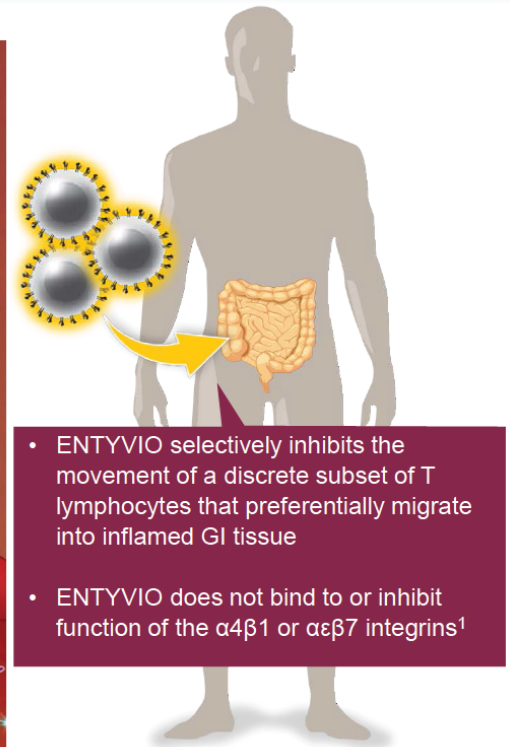
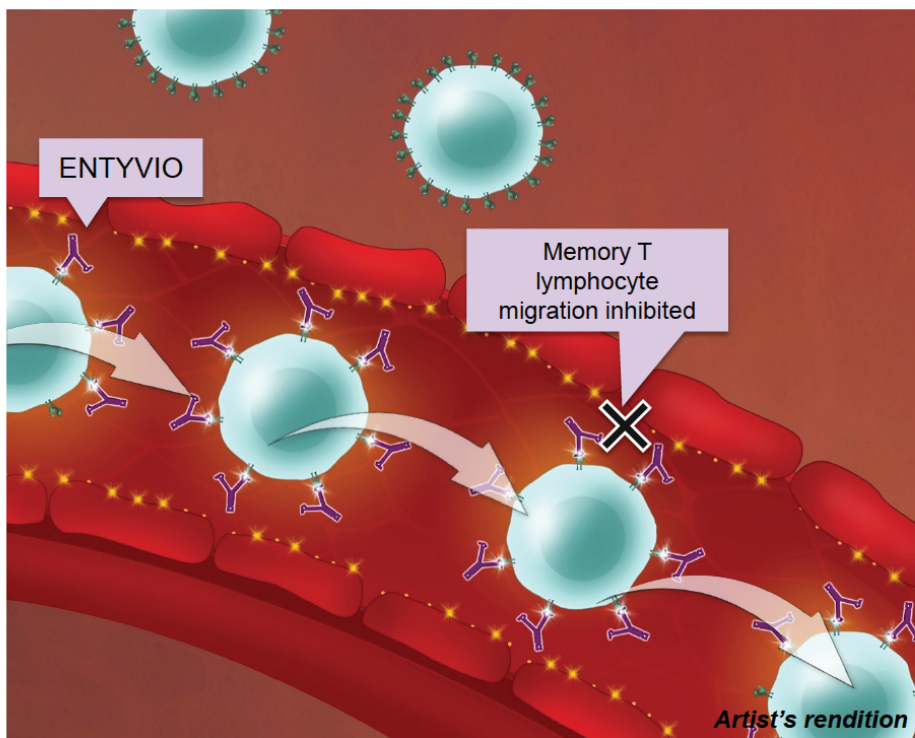
- Motility disorders
- Liver disease
- Celiac disease
- Microbiome

We have a robust GI portfolio with which we are exploring ways to maximize value



	Phase 1	Phase 2	Phase 3
IBD/ IBD-Related	<b>ENTYVIO</b> Humanized monoclonal antibody against $\alpha 4\beta 7$ integrin IO Colitis  <b>TAK-828</b> ROR $\gamma$ l inverse agonist Crohn's Disease		<b>ENTYVIO</b> Humanized monoclonal antibody against $\alpha 4\beta 7$ integrin  UC/CD JP, SubQ UC/CD Adalimumab H2H
GI Motility Disorders		<b>TD-8954</b> Selective 5-HT $_4$ receptor agonist Enteric Feeding Intolerance	<b>AMITIZA</b> Chloride channel activator New Formulation, Pediatric Constipation
Acid Disorders		<b>TAKECAB</b> Potassium-competitive acid blocker PPI Partial Responders	<b>TAKECAB</b> Potassium-competitive acid blocker ARD (Asia)
Other	<b>ENTYVIO</b> Humanized monoclonal antibody against $\alpha 4\beta 7$ integrin GvHD		<b>ENTYVIO</b> Humanized monoclonal antibody against $\alpha 4\beta 7$ integrin PSC

## ENTYVIO's specific binding action inhibits lymphocyte trafficking to the inflamed gut, reducing inflammation



47 1. U.S prescribing information for ENTYVIO

Takeda Pharmaceutical Company Limited

## ENTYVIO's current clinical development programs help create significant potential for treatment of IBD



Nearly 40,000 patients treated

Increasing use as first-line biologic

Approved in 50 countries\*

Global submissions ongoing

\*As of May 2016

Long-term safety data published in *Gut*

Long-term efficacy data presented at ECCO/DDW

AGA / ECCO recommended as a first-line biologic in UC

### European Crohn's and Colitis Organisation (ECCO)

Congress 2016, March 16-19, 2016  
Amsterdam, The Netherlands

**12**

Takeda abstracts

**10**

Independent  
ENTYVIO abstracts

### Digestive Disease Week (DDW)

May 21-24, 2016  
San Diego, California, USA

**13**

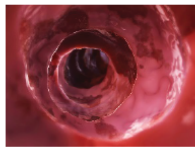
Takeda abstracts

**18**

Independent  
ENTYVIO abstracts



## Mucosal Healing in Crohn's Disease



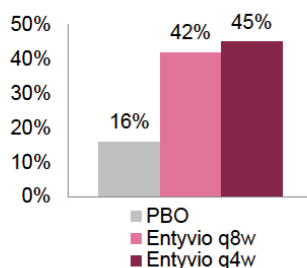
Increasingly considered goal of Crohn's disease therapy since it is associated with improved outcomes<sup>1</sup>



Aligns ENTYVIO dataset with expectations for biologics  
Endoscopic remission readout expected in H1 FY2017

## Head to Head in Ulcerative Colitis

52w Clinical Remission in UC<sup>2</sup>



Landmark study to establish superiority vs anti-TNF

Data could establish ENTYVIO as standard of care for moderate to severe UC

Clinical remission readout expected in H1 FY2018

49 1. De Cruz et al, Inflamm Bowel Dis. 2013; 19:429-44  
2. Feagan et al, New Eng J Med. 2013; 369:699-710

Note: all data readout projections are current estimates and subject to change

## Japan Development



IV formulation pivotal studies for UC and Crohn's

Increasing prevalence of IBD across Japan, especially for Crohn's<sup>1</sup>

Clinical remission readout expected in H1 FY2017

## Subcutaneous (SC) Formulation



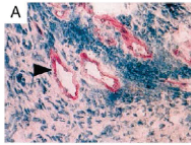
Patients prefer convenience of SC injection, especially when in remission following IV induction

Randomized placebo controlled studies include Japan

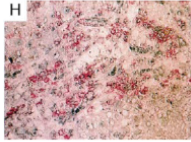
Clinical remission readout expected in H2 FY2018

## Primary Sclerosing Cholangitis (PSC)

### MAdCAM1 in PSC<sup>1</sup>



### $\alpha_4\beta_7$ in PSC<sup>1</sup>

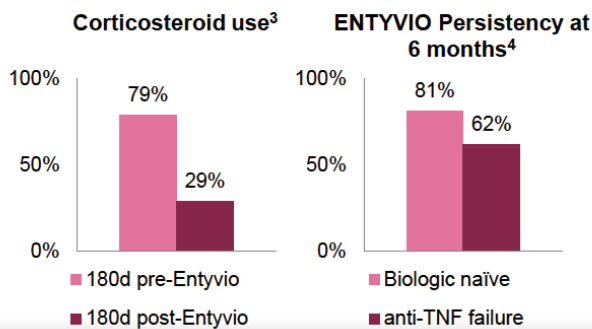


Significant liver disease often seen alongside UC

$\alpha_4\beta_7$  mediated trafficking is proposed to cause hepatic complications<sup>2</sup>

Histology readout expected in FY2021

## Real World Evidence Generation



Reflects real world experience to address important scientific questions about ENTYVIO use for IBD

>6,000 patients currently being studied

51 1. Grant et al, Hep. 2001; 33:1065-1072  
2. Adams and Eksteen, Nat Rev Immunol. 2006; 6:244-51  
3. Raluy et al, J of Crohn's and Colitis, 2016; 10:S238  
4. Raluy et al, J of Crohn's and Colitis, 2016; 10:S173-4 **Takeda Pharmaceutical Company Limited**  
Note: all data readout projections are current estimates and subject to change

## ENTYVIO's mechanism of action could have use in oncology for intestinal graft-versus-host disease (GvHD)

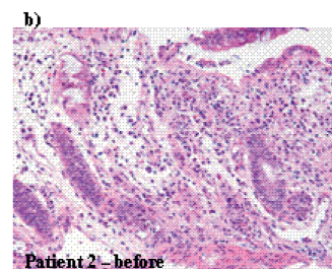
### Rationale

- $\alpha_4\beta_7$  plays an essential role in T trafficking that leads to intestinal acute graft versus host disease (GvHD)

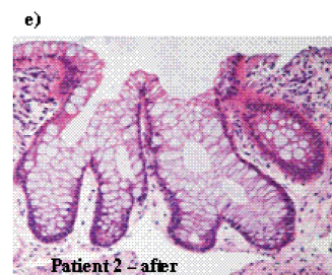
### Evidence to date

- Increase of  $\alpha_4\beta_7$  on peripheral T cells and intestinal infiltrate in intestinal GvHD<sup>1</sup>
- Small open-label case series in steroid refractory patients suggests activity<sup>2</sup>

### Vedolizumab treatment of SR intestinal GvHD<sup>3</sup>



Patient 2 - before



Patient 2 - after

52 1. Chen YB et al. Biol Blood Marrow Transplant. 2009; 15:1066-76  
2. Lundin et al. Inflamm Bowel Dis. 2016; 22:S30-31  
3. Floisand et al. Blood 2015; 126:3137

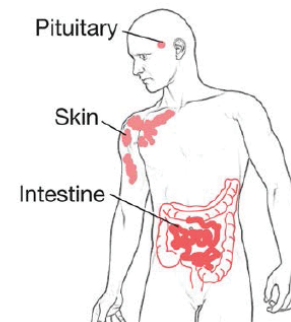
## ENTYVIO could also play a role in supportive care for immuno-oncology (IO) therapy related colitis



### Reducing immune related GI toxicities

- IO biologic treatment results in significant overall survival benefit<sup>1</sup>
- Immune-related adverse events such as diarrhea and colitis limit treatment duration
- Addressing GI symptoms offers potential for completing therapy and, possibly, increasing survival

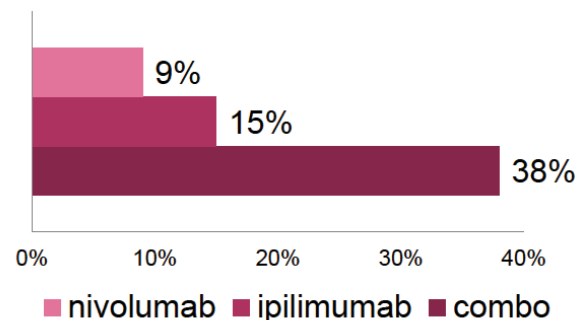
### IO Adverse Events<sup>2</sup>



### Proof of concept in advanced melanoma

- First patient in during H1 FY2016

### IO Treatment Discontinuation<sup>3</sup>



53 1. Postow et al, AACR Meeting 2016, Abstract CT002  
2. Mellman et al, Nature 2011; 480:480-89  
3. Larkin et al, New Eng J Med. 2015; 373:23-34

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## TAKECAB is expanding its ability to address patient needs for acid related diseases



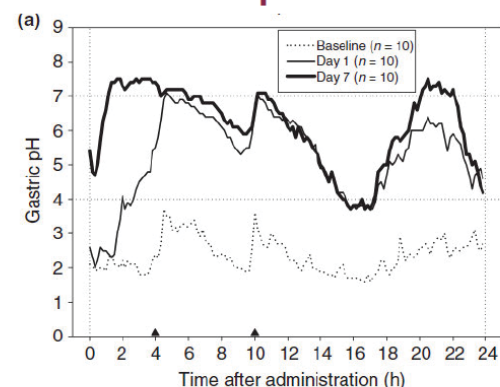
### Current approvals

- Rapid, long-lasting acid neutralization resulted in approval for 7 indications in Japan

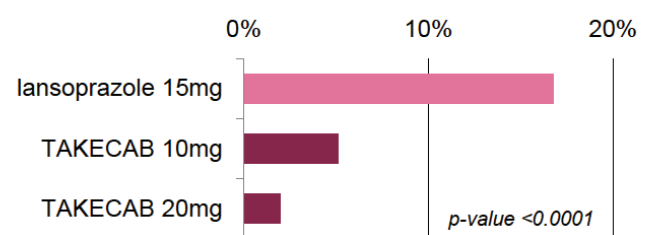
### Future clinical studies

- Data on superior symptom control in severe GERD patients only partially responsive to PPI expected FY2017
- Healing and prevention of relapse in erosive esophagitis (EE) in China/Asia expected to finish in H2 FY2018

### TAKECAB pH Profile<sup>1</sup>



### EE recurrence rate at week 24<sup>2</sup>



As per protocol testing, non-inferiority of TAKECAB10mg and 20mg to lansoprazole 15mg was confirmed. Post hoc analysis for superiority showed difference in favor of TAKECAB\*  
\*TAKECAB 20mg vs. lansoprazole P<0.0001, TAKECAB 10mg vs. lansoprazole P=0.0002; Fisher exact test exact test

54 1. Sakurai et al, Aliment Pharmacol Ther. 2015; 42:719-30  
2. Umegaki et al, Gastro. 2014; 146:S738

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We are building an early stage GI portfolio in which we are prioritizing high science and unmet medical need



	Phase 1	Phase 2	Phase 3
IBD/ IBD-Related	<b>ENTYVIO</b> Humanized monoclonal antibody against α4β7 integrin I/O Colitis  <b>TAK-828</b> RORγt inverse agonist Crohn's Disease		<b>ENTYVIO</b> Humanized monoclonal antibody against α4β7 integrin UC/CD JP, SubQ UC/CD, Adalimumab H2H
GI Motility Disorders		<b>TD-8954</b> Selective 5-HT4 receptor agonist Enteric Feeding Intolerance	<b>AMITIZA</b> Chloride channel activator New Formulation, Pediatric Constipation
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Other	<b>ENTYVIO</b> Humanized monoclonal antibody against α4β7 integrin GvHD		<b>ENTYVIO</b> Humanized monoclonal antibody against α4β7 integrin PSC

55

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TAK-828 is a first in class molecule for IBD that offers potential to restore immune balance

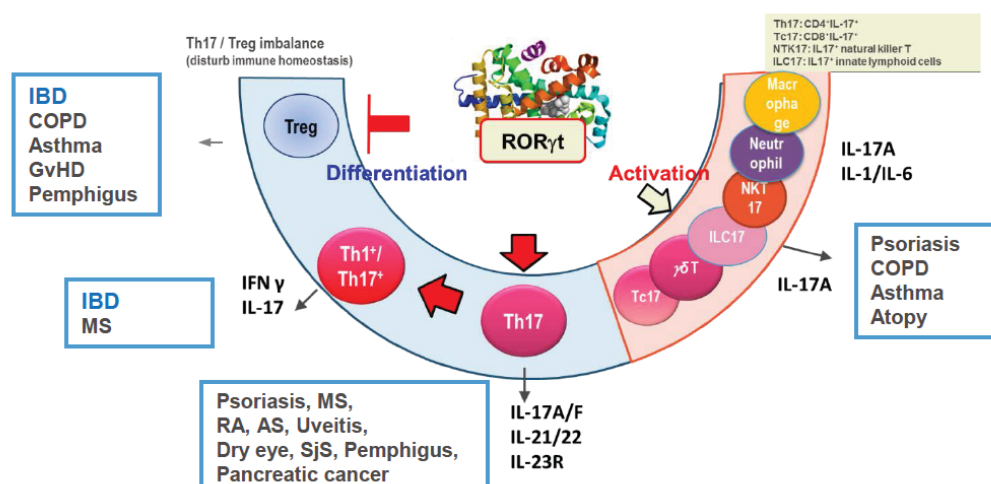


### TAK-828 Rationale

- RORγt plays a critical role in TH17 cell driven immunity via IL17, IL23
- Clinical proof of concept in psoriasis

### 2016 Milestones

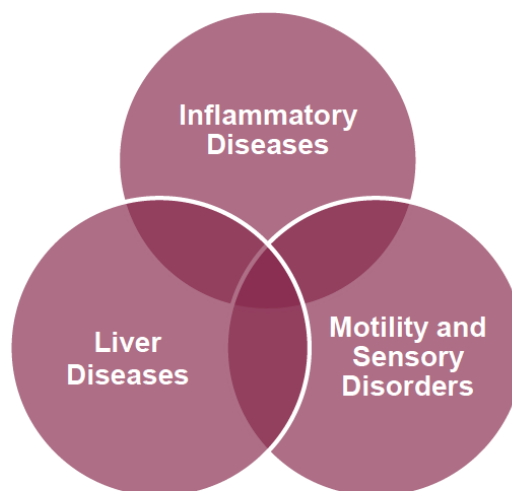
- Phase 1 Single Dose completed
- Initiation of Ph1b Multiple Dose Study in H1 FY2016



As part of Takeda's R&D strategy, GI has built an externally facing Drug Discovery Unit to accelerate promising programs

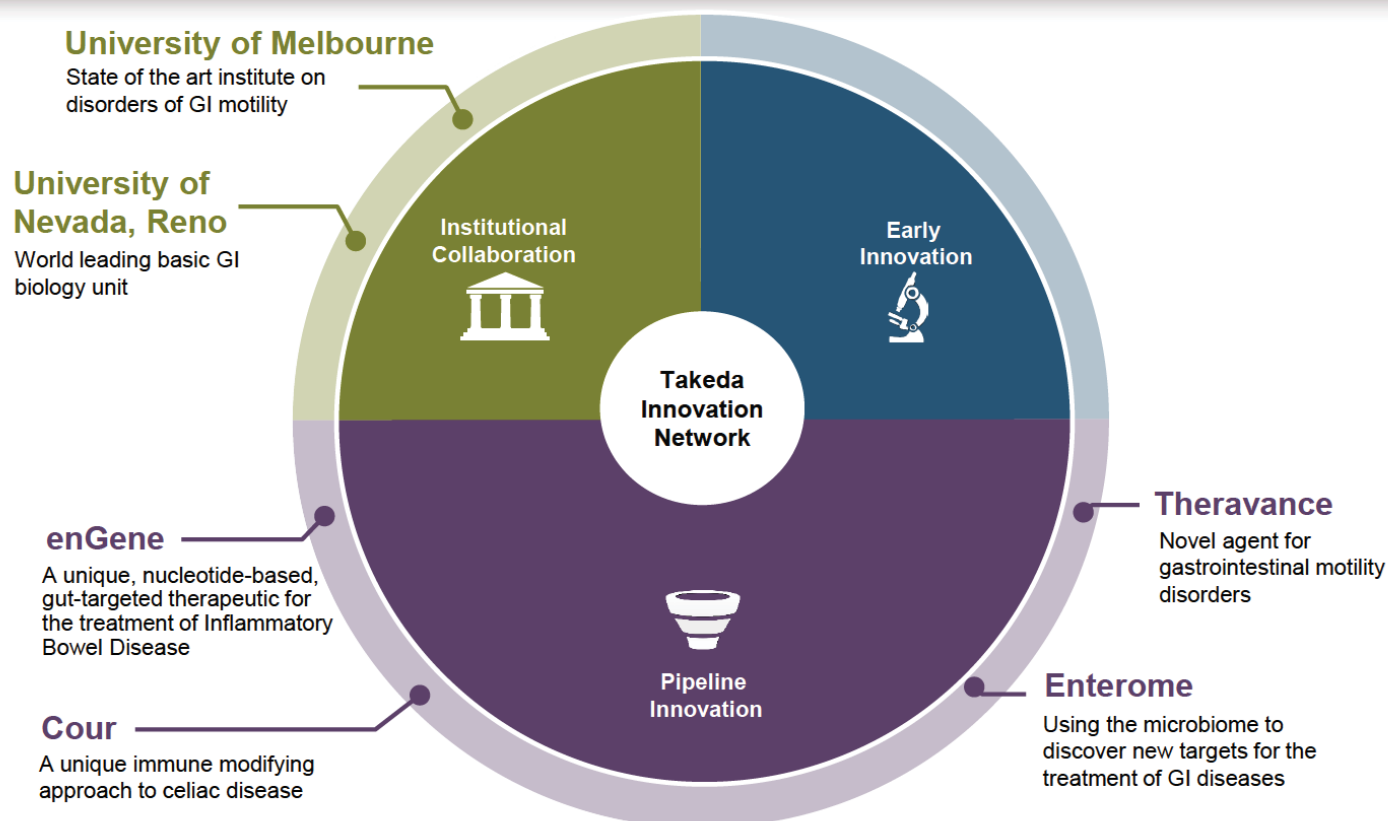


- Newly created, highly matrixed drug discovery unit with a strong external focus
- Prioritizes collaboration over infrastructure
- Broad base conducive to new target ID and access to state of the art technology
- Emphasizes modality diversification



**>75% of Takeda GI discovery investment is external facing**

Exciting partnerships established in FY2015 are providing access to cutting-edge modality diversification



Building on our heritage

Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

Focus our Therapeutic Areas

Optimize our Pipeline

Enhance our Capabilities

Transform our Culture

## Therapeutic area R&D strategy highlights

Oncology

Gastroenterology (GI)

**Central Nervous System (CNS)**

*Presented by Emiliangelo Ratti*

Vaccines

Summary

Our focus in CNS is on patients with neuropsychiatric disorders who have no adequate treatments



Our current pipeline focuses on:

## Schizophrenia

Cognitive Impairment Associated with Schizophrenia (CIAS)  
& Negative Symptoms

## Depression

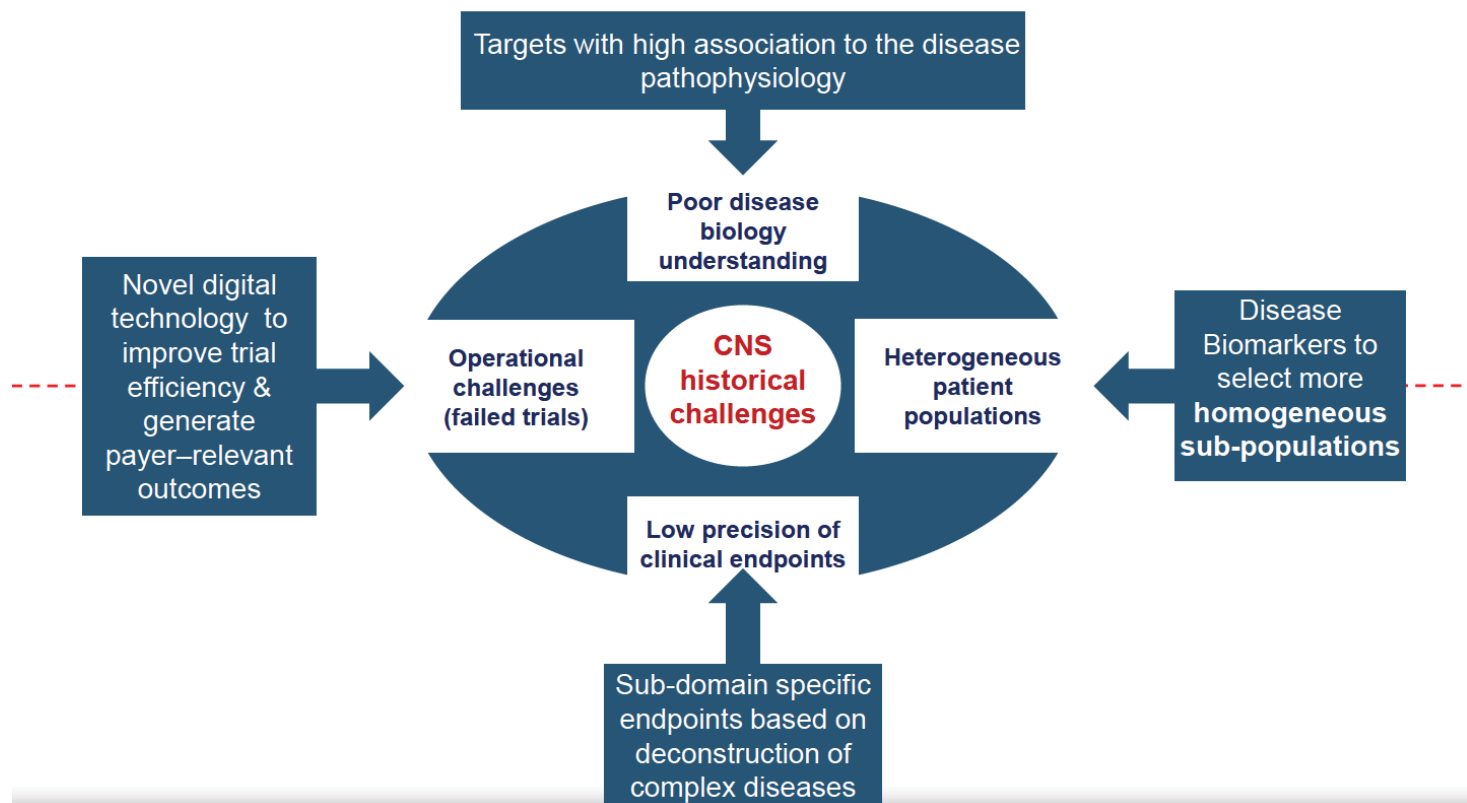
Treatment Resistant Depression (TRD)

## Selected Neurological Diseases

Assets primarily progressed through external partnerships



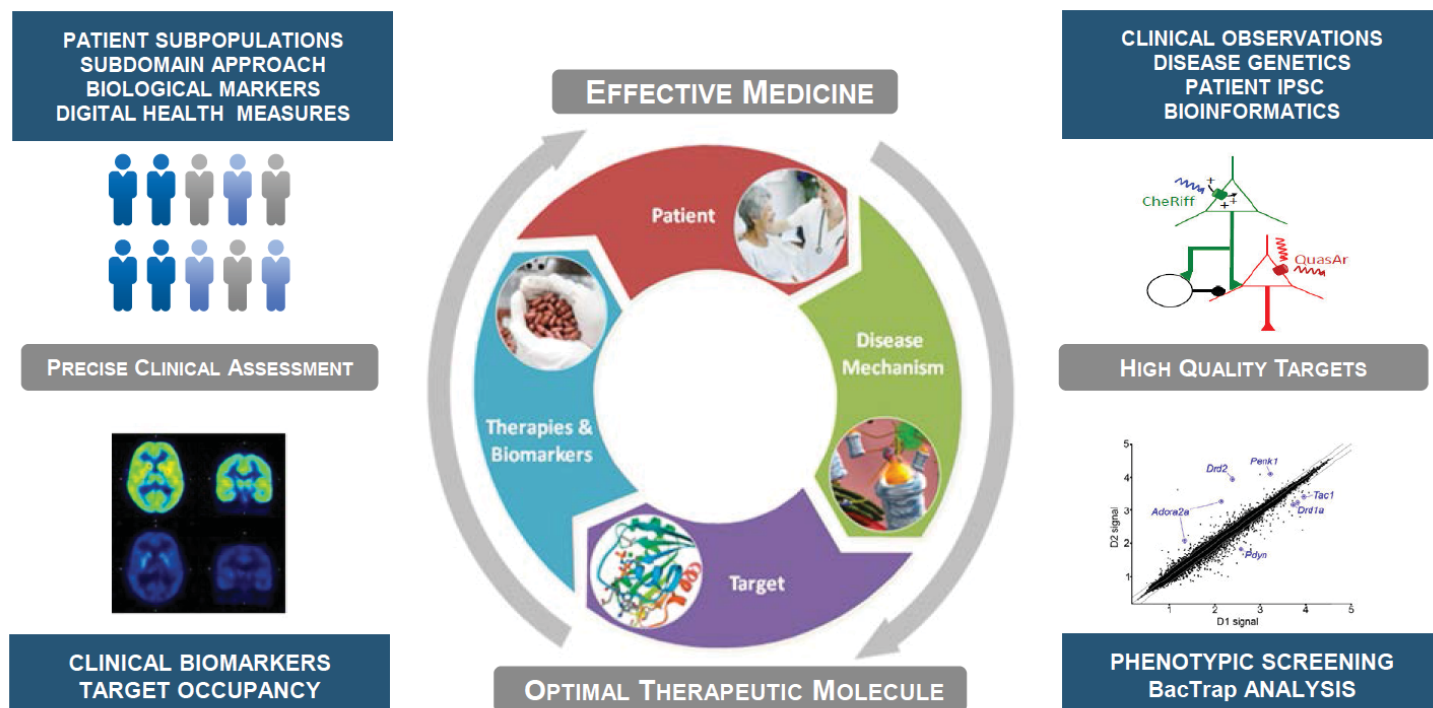
## We are addressing past R&D challenges in CNS



61

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## Our approach to developing new medicines is deeply rooted in translational science and precise clinical assessment



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We will build on TRINTELLIX<sup>1</sup> and leverage internal and external innovation to accelerate our CNS early pipeline



## MAXIMIZE



Strengthen position in MDD  
Further establish cognitive benefit in MDD and beyond

## PRIORITIZE



Prioritize the best science  
Leverage human patient data  
Robust translational package  
De-risk early pipeline in selected subpopulations

## COLLABORATE



Capture external innovation  
Accelerate CNS pipeline development

63 MDD: major depressive disorder  
1 TRINTELLIX was formerly known as BRINTELLIX. Co-developed with H. Lundbeck A/S

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Our near-term focus is on maximizing TRINTELLIX and expanding our CNS presence in Japan with AZILECT



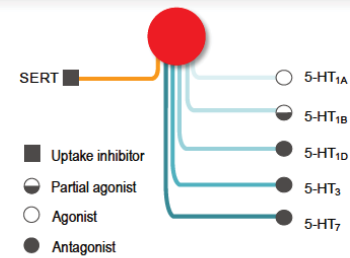
	Phase 1	Phase 2	Phase 3
Psychiatry	TAK-831 DAO inhibitor CIAS; Neg Symptoms SCZ; Ataxia	TAK-063 PDE10 inhibitor Schizophrenia	AD-4833 TOMM40 Mitochondrial growth modulator Delay of MCI
	TAK-058 5-HT3 receptor antagonist CIAS	TRINTELLIX Multimodal anti-depressant ADHD	TRINTELLIX Multimodal anti-depressant Major Depressive Disorder
	TAK-041 GPR139 agonist CIAS; Neg. Symptoms SCZ		
	TAK-653 AMPA receptor potentiator Treatment Resistant Depression		
Neurology	TAK-071 M1 PAM LBD; AD		AZILECT MAOB inhibitor Parkinson's Disease - JP
	TAK-915 PDE2A inhibitor LBD; AD		
	TAK-935 CH24H inhibitor Epilepsy/ EE		

# TRINTELLIX is an effective antidepressant with demonstrated cognitive benefit



## Differentiated Mechanism

- SSRI + direct effect on serotonin receptors
- Modulates a range of neurotransmitter systems implicated in cognitive processing



## Cognitive Dysfunction in Depression – Major Unmet Need

- Typically inadequately addressed/treated by standard therapies for depression
- ~ 2/3 of depressed patients – associated with disability in functioning, greater severity of illness and increased disease burden

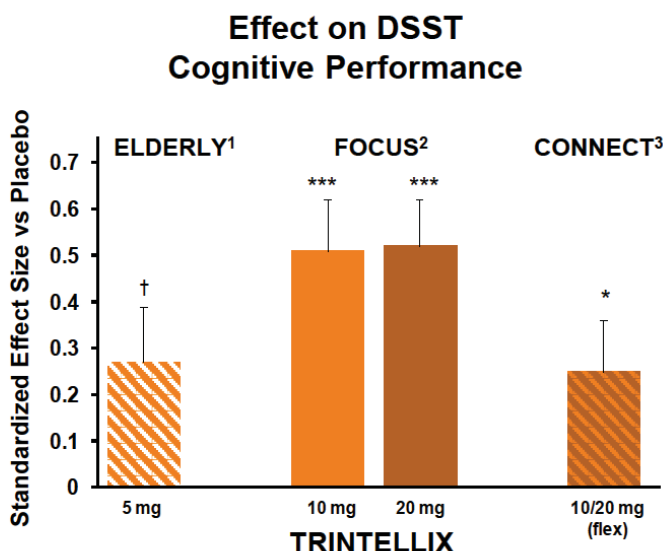
## Cognitive Dysfunction in Depression – Efficacy

- TRINTELLIX has demonstrated efficacy in cognitive dysfunction and functional capacity in patients with depression

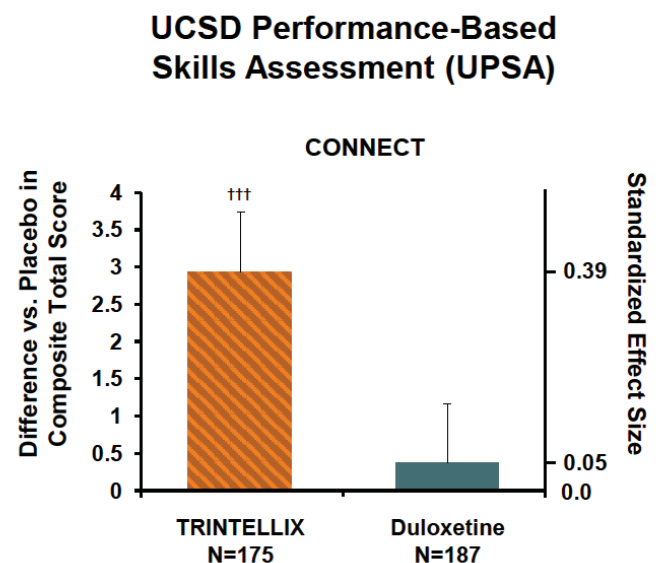
65 SSRI: selective serotonin reuptake inhibitor

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# TRINTELLIX improves cognitive performance and functional capacity in depression



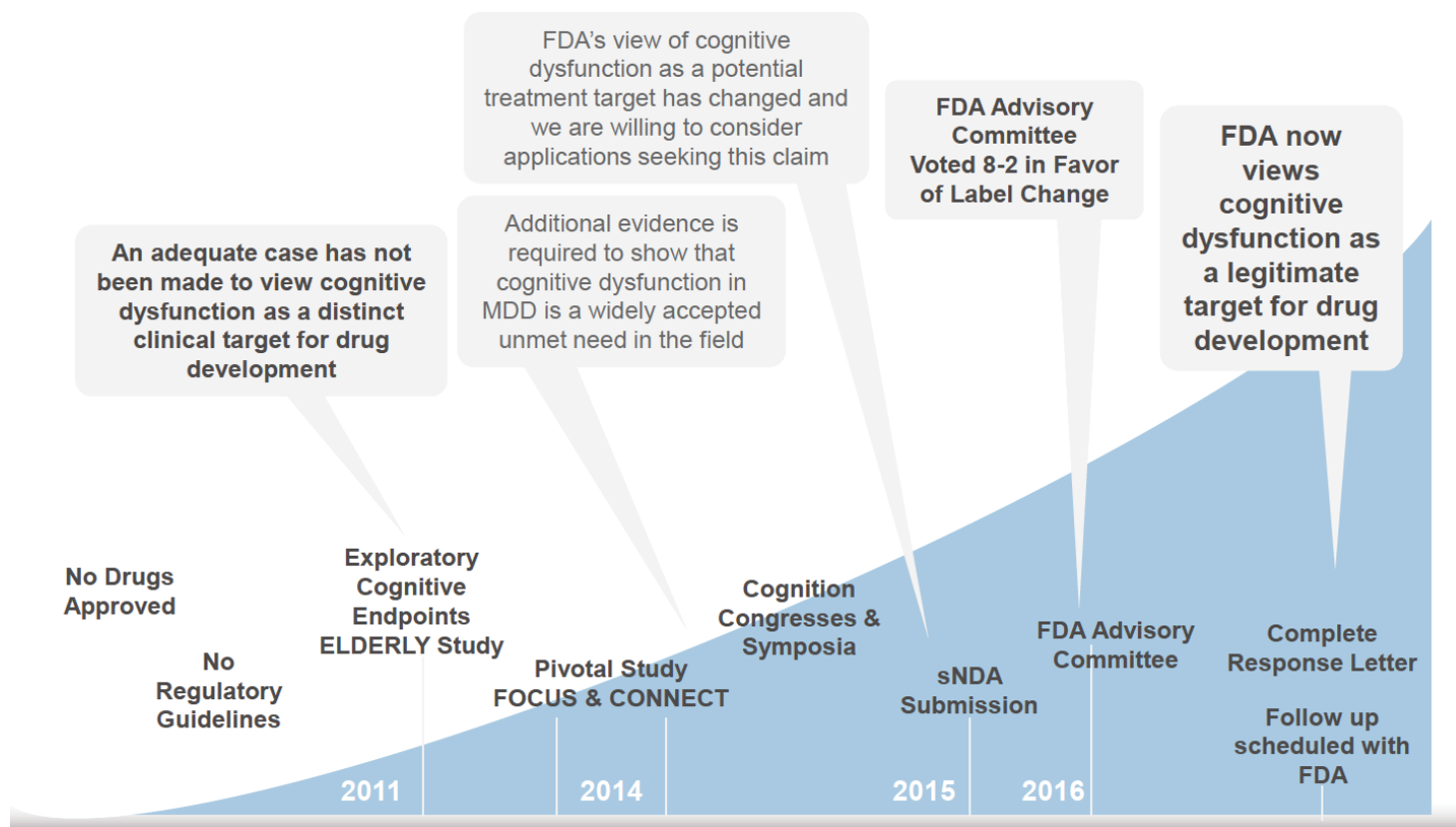
\*p<0.05, \*\*\*p<0.001 vs placebo, nominal † p<0.05 vs placebo;



††† p<0.001 vs placebo



# We are pioneering the understanding of cognitive dysfunction in depression with TRINTELLIX



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# Our CNS discovery engine has delivered an innovative early portfolio pipeline of NMEs

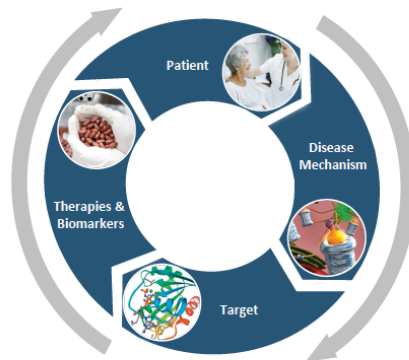


	Phase 1	Phase 2	Phase 3
Psychiatry	<b>TAK-831</b> DAO inhibitor CIAS; Neg Symptoms SCZ; Ataxia	<b>TAK-063</b> PDE10 inhibitor Schizophrenia	<b>AD-4833 TOMM40</b> Mitochondrial growth modulator Delay of MCI
	<b>TAK-058</b> 5-HT3 receptor antagonist CIAS	<b>TRINTELLIX</b> Multimodal anti-depressant ADHD	<b>TRINTELLIX</b> Multimodal anti-depressant Major Depressive Disorder
	<b>TAK-041</b> GPR139 agonist CIAS; Neg. Symptoms SCZ		
	<b>TAK-653</b> AMPA receptor potentiator Treatment Resistant Depression		
Neurology	<b>TAK-071</b> M1 PAM LBD; AD		<b>AZILECT</b> MAOB inhibitor Parkinson's Disease - JP
	<b>TAK-915</b> PDE2A inhibitor LBD; AD		
	<b>TAK-935</b> CH24H inhibitor Epilepsy/ EE		

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# TAK-831, a D-Amino Acid Oxidase Inhibitor (DAOi), a potential innovative treatment for cognitive and negative symptoms in schizophrenia



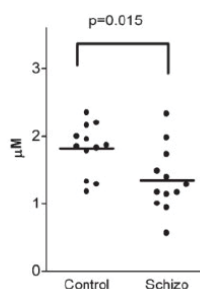
69

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## Patient Data Led to the Identification of DAO

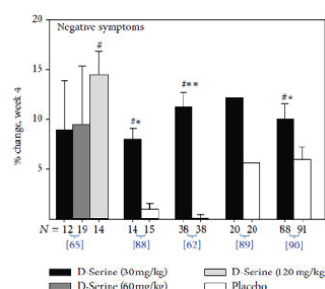
Target with a High Degree of Association with the Human Disease Pathophysiology

### Lower levels of D-Serine in SCZ patients



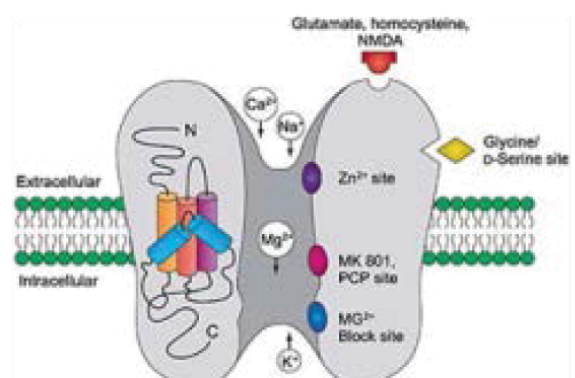
Bendikov et al 2007

### D-Serine Improves Neg. Symptoms in SCZ

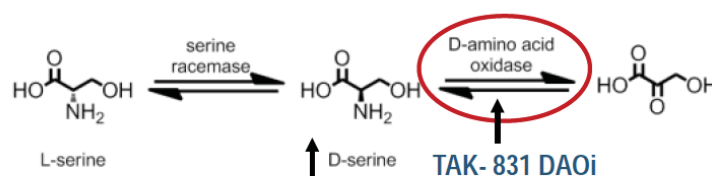


Durrant et al 2014

### NMDA Hypo Function Hypothesis



### Target: D-Amino acid Oxidase (DAO)



TAK-831 has a robust preclinical and translational biomarker package to support evaluation in patient sub-population

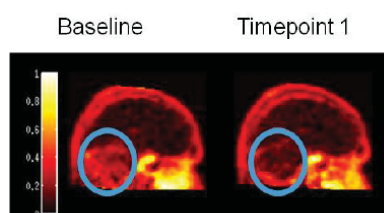


### TAK- 831, potent and selective DAOi

- PK/PD of D-Serine Plasma and Brain levels
- Efficacy in a range of preclinical models of Schizophrenia

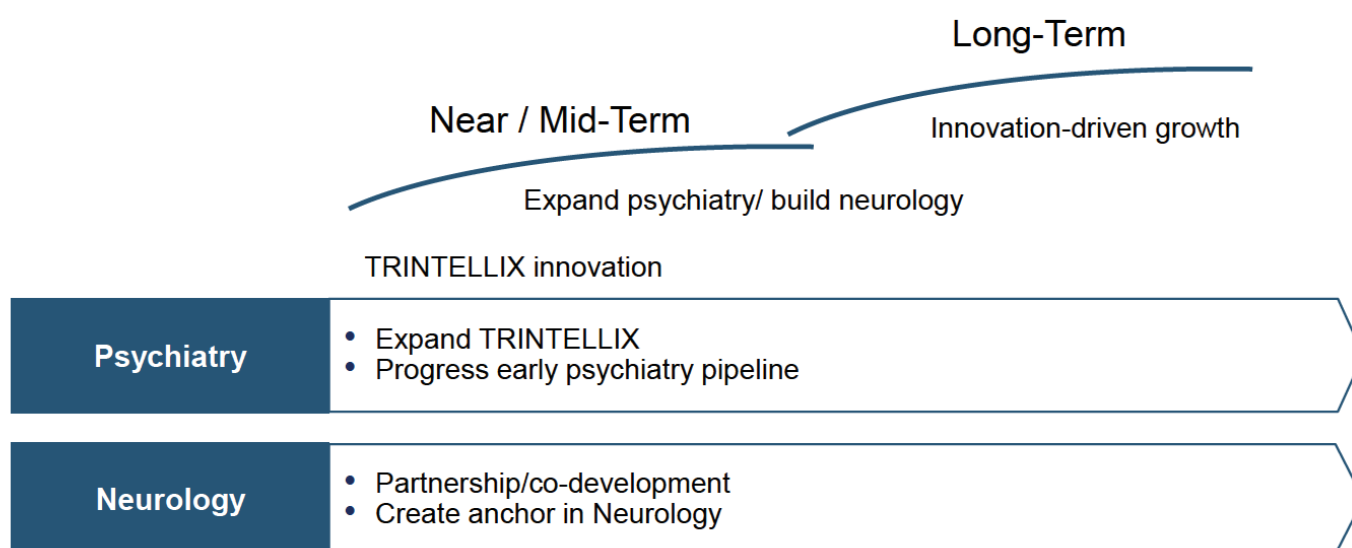
#### Translational Biomarker Package

- PK/PD of D-Serine Plasma and CSF levels
- PET Receptor Occupancy
- EEG (mismatch negativity)



PoC Study in biomarker-enriched Schizophrenia patient sub-population

We are committed to being a global player in CNS





Building on our heritage

Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

Focus our Therapeutic Areas

Optimize our Pipeline

Enhance our Capabilities

Transform our Culture

## Therapeutic area R&D strategy highlights

Oncology

Gastroenterology (GI)

Central Nervous System (CNS)

**Vaccines**

*Presented by Rajeev Venkayya*

Summary

Our vaccine business is leveraging world-class capabilities to address important priorities in global public health



### MAXIMIZE

WIN IN JAPAN



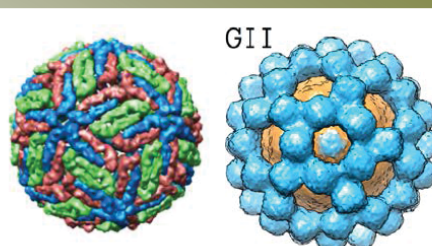
Maximize the potential of the only fully integrated vaccine business in Japan

VaxemHib (TAK-816)  
Varicella

Pandemic Influenza  
Seasonal Influenza (TAK-850)

### PRIORITIZE

DELIVER PIPELINE



Dengue virus

Norovirus

Advance one of the most exciting late-stage pipelines in the industry, targeting more than one billion infections/year

Dengue (TAK-003)  
Norovirus (TAK-214)

### COLLABORATE

ADDRESS GLOBAL NEEDS

BILL & MELINDA  
GATES foundation

Leverage manufacturing technologies to expand capacity and achieve impact in all regions

Polio (TAK-195)<sup>1</sup>

## Our pipeline tackles high-impact infectious diseases



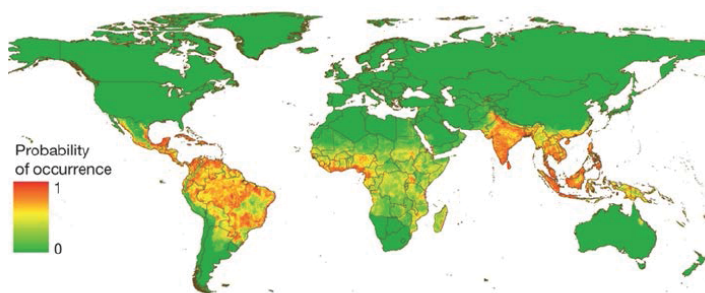
### Prophylactic Vaccines for Infectious Diseases

	Phase 1	Phase 2	Phase 3
Dengue		<b>TAK-003</b> Dengue	
Norovirus		<b>TAK-214</b> Norovirus	
Seasonal Influenza		<b>TAK-850</b> Influenza	
Enterovirus 71	<b>TAK-021</b> Enterovirus 71		
Sabin-strain Inactivated Polio Vaccine	<b>TAK-195*</b> sIPV →		

75 \*TAK-195 is still pre-clinical; Phase 1 start expected in Q4 FY2016

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## Dengue: "The Most Important Mosquito-Borne Viral Disease"<sup>1</sup>



### TAK-003: Tetravalent Dengue Vaccine Candidate

#### Stage

- Phase 2 demonstrated safety & immunogenicity to all four serotypes in endemic and naïve populations
- Phase 3 to begin in 2016: pivotal efficacy trial in multiple countries across Latin America and Asia

#### Profile

- Aimed at prevention of dengue fever of any severity due to any serotype
- Injectable, live attenuated vaccine engineered to elicit broad protection against all four virus types



**3.9 billion at risk for dengue infection with 400 million infections each year**

More than 40% of the world's population<sup>2</sup> in 128 countries are at risk



### Growing Global Threat

Transmission is expanding in the US, Japan and Southern Europe. The Tokyo outbreak of 2014 was first in Japan since 1945



### Demand for Vaccine

There remains a need for a vaccine that is safe and effective against all four strains of dengue, and in all populations<sup>3</sup>

## TAK-003 could address important unmet needs in dengue prevention



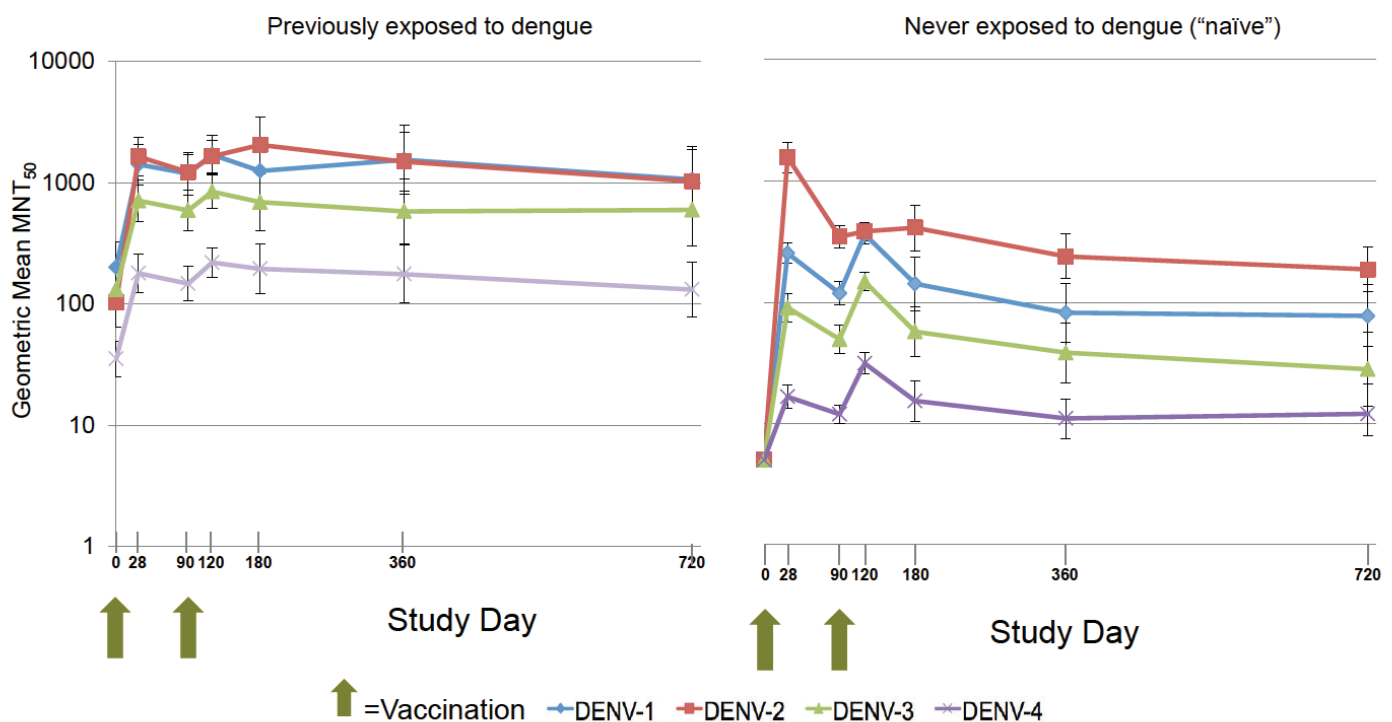
- All four vaccine strains in TAK-003 are based on the Dengue Type 2 virus
- TAK-003 induces sustained antibody responses to all four dengue strains, in both naïve and previously-exposed populations
- The dengue virus backbone induces cell-mediated immune responses to all dengue proteins, which could play a role in protection
- The proposed schedule (two doses over three months) would be suitable for all populations, including naïve travelers to dengue-endemic regions
- Thus far, TAK-003 has demonstrated an acceptable safety profile in all populations evaluated

## TAK-003 induces a sustained antibody response to all strains of dengue in all populations, which persists for at least two years<sup>1</sup>



### Antibody responses in children and adults aged 18 months to 45 years

Full analysis set with 95% confidence intervals

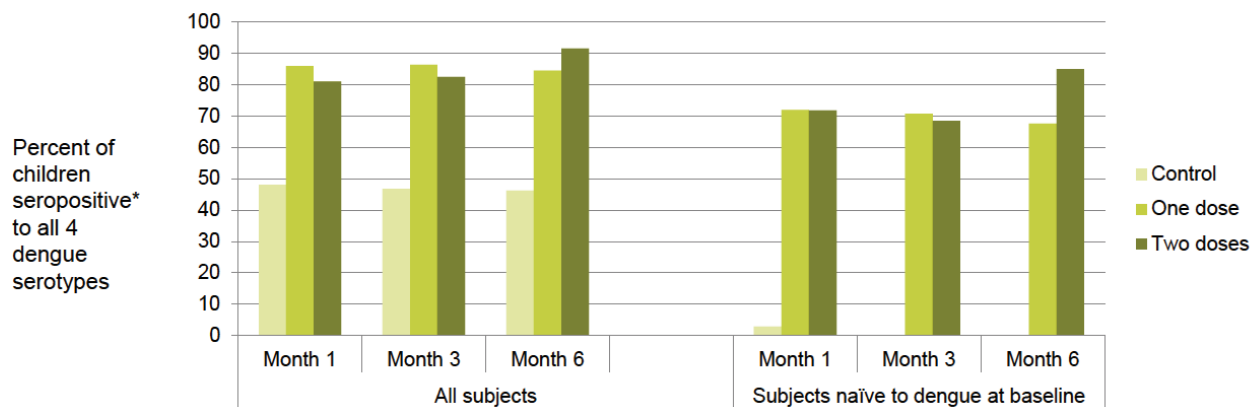




## TAK-003 induces broad antibody responses in subjects after two doses administered over three months<sup>1</sup>



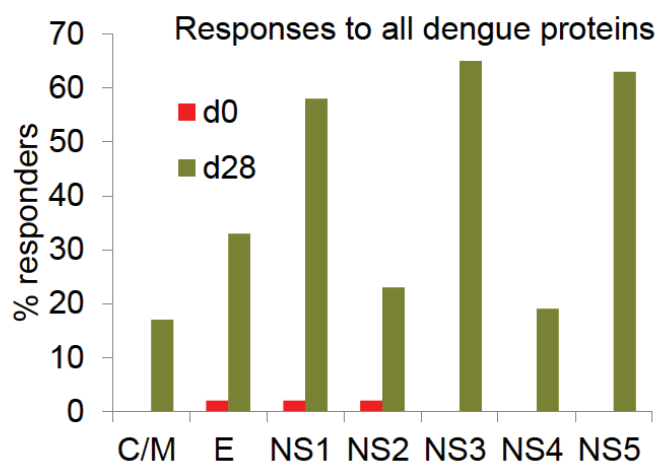
### Antibody responses to all four strains of dengue, in children aged 2 to 18



- More than 90% of children (naïve or previously exposed to dengue) develop or get a boost to neutralizing antibody responses to all 4 dengue serotypes after 2 doses of TAK-003
- Approximately 95% of naïve individuals develop responses to at least 3 of the 4 dengue serotypes after a single dose of TAK-003

\*seropositive = MNT<sub>50</sub> titer ≥ 10

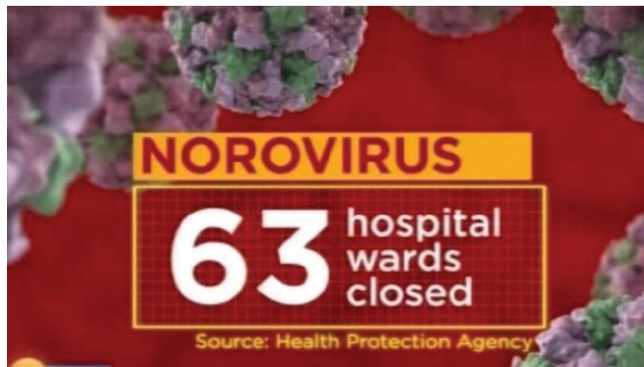
## TAK-003 induces broad cellular immune responses due to the dengue virus backbone



- Cell-mediated immunity (CMI) may play a role in protection against dengue infection<sup>1,2</sup>
- TAK-003 stimulates CMI to all dengue proteins<sup>3</sup>, due in part to the dengue backbone
- TAK-003 induces cellular immune responses to at least one dengue protein in >95% subjects<sup>3</sup>



Study conducted by Walter Reed Army Institute of Research (WRAIR)



## TAK-214: Norovirus Vaccine Candidate

### Stage

- Phase 2 studies have demonstrated safety, immunogenicity and potential for efficacy.
- Phase 2b field efficacy study to begin shortly, results expected in 2018.

### Profile

- First-in-class vaccine candidate to protect against norovirus, the most advanced in clinical development
- Injectable formulation of proteins that mimic outer shell of virus, designed for protection across strains



Each year, norovirus causes **more than 600 million cases of diarrheal illness**, over 200,000 deaths and a global economic burden of more than \$60 billion<sup>1,2</sup>



### Leading Cause of Gastroenteritis Worldwide

Safe and effective vaccine is in demand by public health agencies<sup>3</sup>



### Zero Vaccines

No vaccines are currently available, and Takeda's vaccine is the only product in clinical trials

81 1. Lopman BA, 2016; 2. Bartsch SM 2016; 3. Patel MM J, Clin Virol, 2009

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## Agenda



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Recognizing increasing demand for innovation

Four major components in our strategy for focused world class R&D

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Vaccines

## Summary



- We recognize the increasing demand for innovation to develop medicines that meet patient and payer needs
- Our strategy for focused world class R&D is patient-centric and science-driven, as we focus our therapeutic areas, optimize our pipeline, enhance our capabilities and transform our culture
- R&D success is a pillar of Takeda's strategic roadmap that will deliver the long-term aspiration to be recognized as best in class because of agility and innovation, qualities that help us build a steady pipeline and deliver growth



# Glossary of Abbreviations

AD	Alzheimer’s disease	HR MDS	high risk myelodysplastic syndromes	RCC	renal cell cancer
ADC	antibody drug conjugate	IBD	inflammatory bowel disease	SCLC	small cell lung cancer
ADHD	attention deficit hyperactivity disorder	iNHL	indolent non-Hodgkin lymphoma	SCT	stem cell transplant
ARD	acid-related diseases	IO	immuno-oncology	SCZ	schizophrenia
ASCT	autologous stem cell transplant	LBD	Lewy Body Dementia	sIPV	sabin inactivated polio vaccine
BTK	Bruton's tyrosine kinase	mAb	monoclonal antibodies	SjS	Sjögren's syndrome
CD	Crohn's disease	MAOB	monoamine oxidase B	SSRI	serotonin-specific reuptake inhibitors
CIAS	cognitive impairment associated with schizophrenia	MCI	mild cognitive impairment	SubQ	subcutaneous formulation
CLL	chronic lymphocytic leukemia	MCL	mantle cell lymphoma	T2DM	type 2 diabetes mellitus
CNS	central nervous system	MDSC	myeloid-derived suppressor cells	UC	ulcerative colitis
COPD	chronic obstructive pulmonary disease	MM	multiple myeloma		
CRL	complete response letter	MS	multiple sclerosis		
CSF	cerebrospinal fluid	MTCL	mature T-cell lymphoma		
CTCL	cutaneous T Cell Lymphoma	Neg	negative		
DLBCL	diffuse large B-cell lymphoma	NSCLC	non-small cell lung cancer		
EEG	electroencephalogram	PD-1	programmed cell death protein 1		
FLHL	front line Hodgkin's lymphoma	PET	positron emission tomography		
GI	gastrointestinal	PPI	proton pump inhibitor		
GvHD	graft versus host disease	PSC	primary sclerosing cholangitis		
H2H	head to head	PTLD	post transplant lymphoproliferative disorder		
HCTZ	hydrochlorothiazide	R/R	relapsed/refractory		
HL	Hodgkin's lymphoma	RA	rheumatoid arthritis		