TAKEDA ONCOLOGY

WE ASPIRE TO CURE CANCER

PHILIP ROWLANDS, PHD
Head, Oncology Therapeutic Area

ORIENTATION TO OUR ONCOLOGY R&D OVERVIEW

Focused Oncology R&D Strategy

- Building on foundational expertise in hematologic malignancies and a growing portfolio in lung cancer

Novel Discovery Strategy in Immuno-Oncology (I/O) and Advance in Cell Therapies

- Pursuing novel I/O targets and next-generation platforms with world class external partners
- Next-generation cell therapies will bring transformative potential to patients with cancer

Near Term Inflections

- FY2018-FY2020 will be highlighted by several submissions, approvals, pivotal trial starts, and novel assets entering clinical trials

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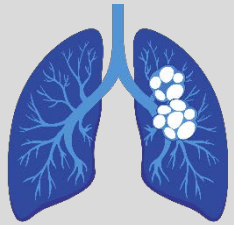
WE ASPIRE TO CURE CANCER

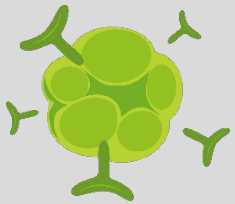
OUR MISSION

We endeavor to deliver novel medicines to patients with cancer worldwide through our commitment to science, breakthrough innovation, and passion for improving the lives of patients.

HEMATOLOGIC MALIGNANCIES



LUNG CANCER

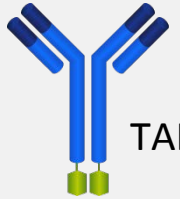


IMMUNO-ONCOLOGY (I/O)

BUILDING ON THE TAKEDA ONCOLOGY FOUNDATION IN HEMATOLOGIC MALIGNANCIES

GROWING LEADERSHIP POSITION IN HEMATOLOGIC MALIGNANCIES

Next Generation I/O



TAK-573

TAK-981

MDS	AML
Phase 3	Phase 3
pevonedistat	alisertib

Lymphoma

ADCETRIS® brentuximab vedotin | for injection

Chronic Myeloid Leukemia

ICLUSIG® (ponatinib) tablets

Improving Patient Outcomes in Multiple Myeloma

VELCADE® (bortezomib)

NINLARO® (ixazomib) capsules

RECENT PROGRESS AND NEXT STEPS

Current Status

Approved in 59 countries for Relapsed/Refractory Multiple Myeloma

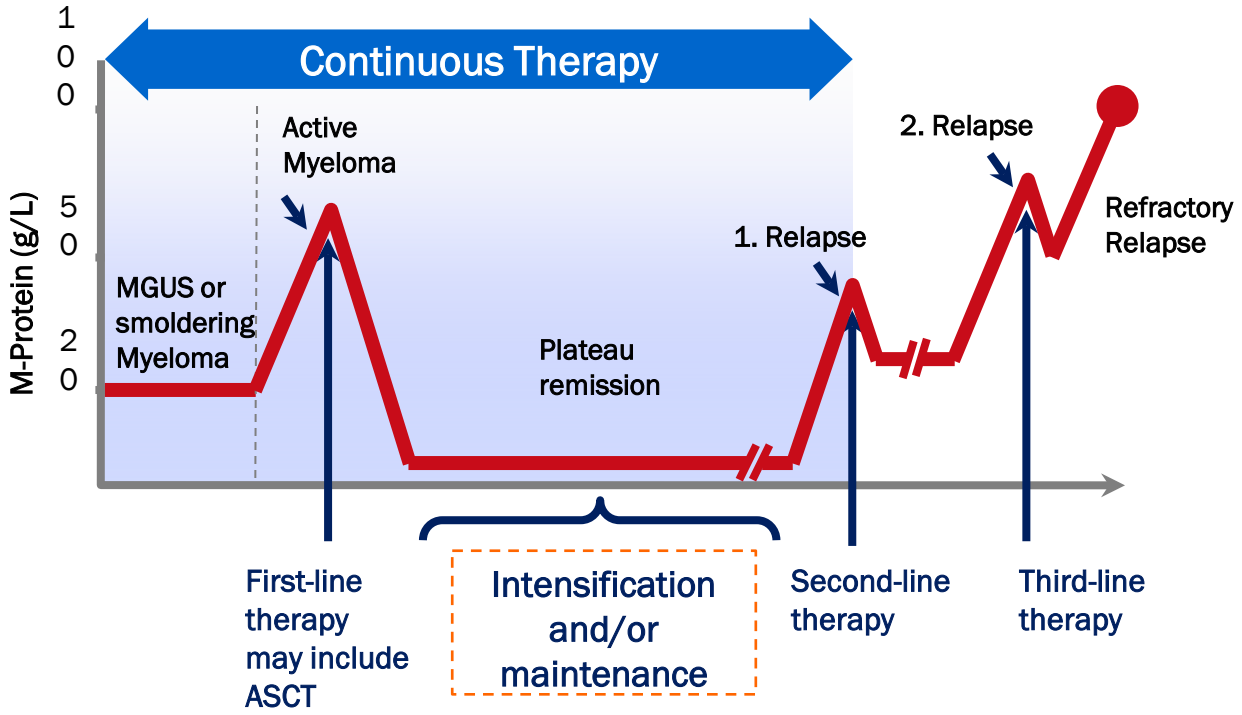
First Phase 3 maintenance readout (post-transplant)

Looking Forward

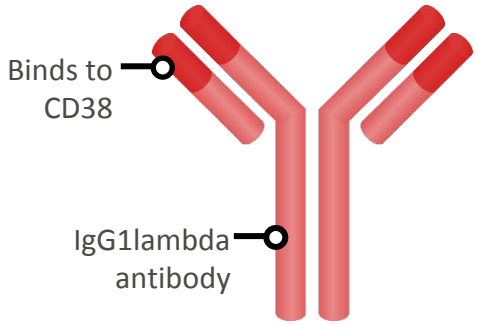
2019 Data Inflections:
MM2 (newly diagnosed)
MM4 (non-transplant maintenance)
AL1 (amyloidosis)
Evolution of real world evidence

Ideal Maintenance Therapies in Multiple Myeloma:

✓Easy to administer ✓Minimal toxicity ✓Maintain response

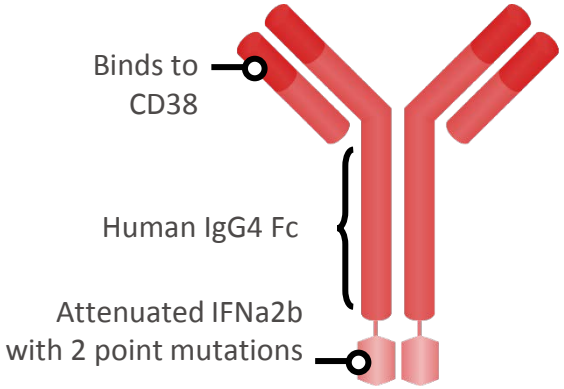


ADVANCE CD38 BIOLOGY FOR REFRACTORY MULTIPLE MYELOMA



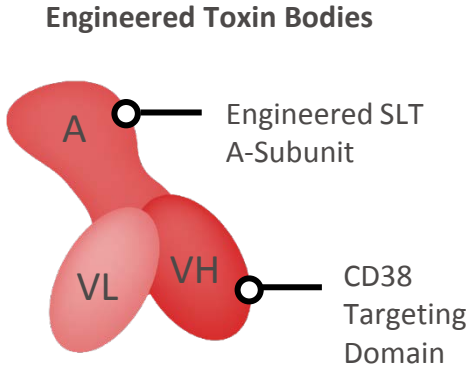
TAK-079

- A fully human, anti-CD38 cytolytic IgG1lambda antibody
- Potent and selective reduction of plasmablasts and NK cells
- Potential for convenient subcutaneous delivery
- Currently in Phase 1 for refractory multiple myeloma



TAK-573

- Novel immuno-cytokine approach
- Potential to overcome toxicity of unmodified interferon α and realize the true benefit in oncology
- Compelling pre-clinical data; Phase 1 enrolling for patients with refractory multiple myeloma

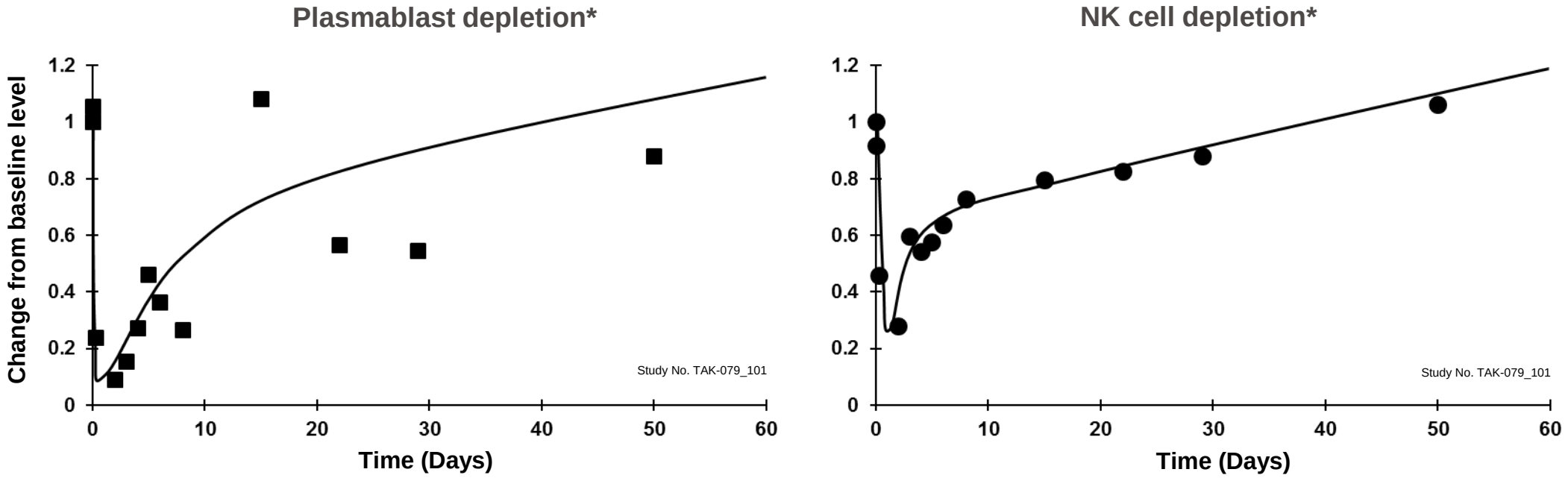


TAK-169

- 2nd generation Molecular Templates platform
- pM activity against CD38+ cells plus activity in daratumumab-resistant cells
- IND planned in 2019

TAK-079: IMPROVING UPON FIRST GENERATION ANTI-CD38 mAb FOR REFRACTORY MULTIPLE MYELOMA PATIENTS

A potent anti-CD38 mAb administered as a low volume subcutaneous (SC) injection



* After a single SC injection of 0.6 mg/kg into healthy volunteers (n=6)

Novel pharmacokinetic properties enhance potency and enable convenient administration

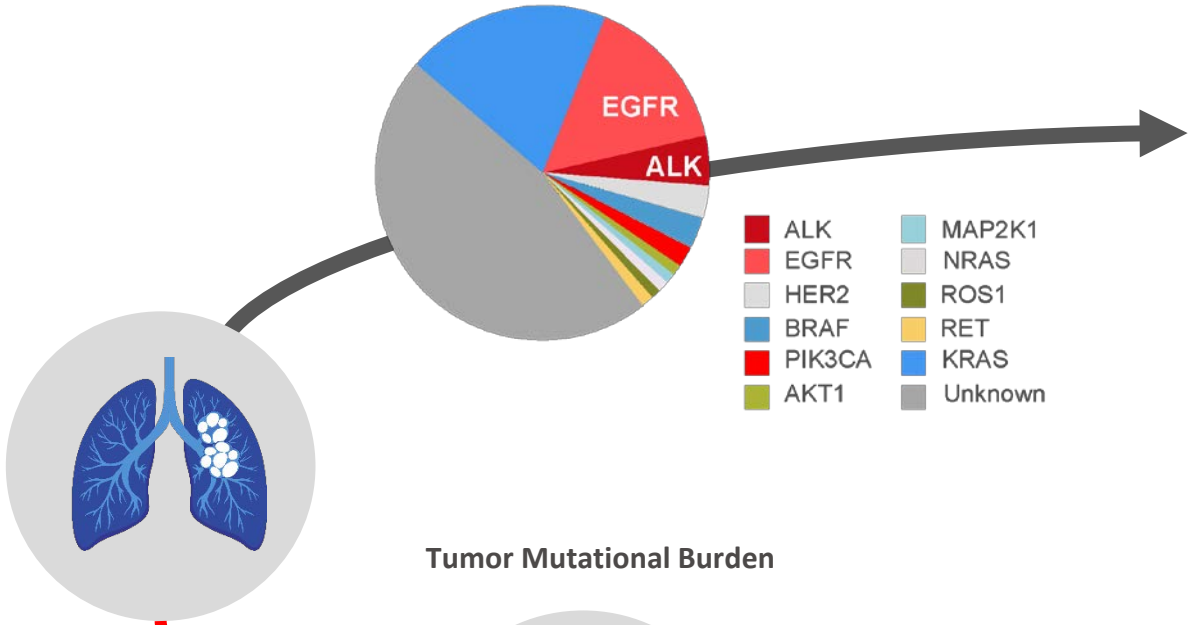
BRINGING NOVEL THERAPIES TO MDS AND AML

	PEVONEDISTAT IN HR-MDS	ALISERTIB IN AML
Unmet Need	**1 in 3 MDS** patients will progress to AML Overall **survival 1-1.5 years** in the relapse setting **No new therapies** in the last decade	AML: Current **5 year survival ~30%** Transplant remains only curative option
Clinical Status	PANTHER **Phase 3 trial initiated in 2018**	American Society of Hematology Helping hematologists conquer blood diseases worldwide **ASH 2018: Phase 2 Data Submitted** • Alisertib is a novel, first in class mechanism for front-line AML in combination with chemotherapy
Next Steps	FDA • Potential accelerated filing based upon Phase II data in 2019	• Exploring initiation of Phase 3 registration enabling study in frontline AML in 2019

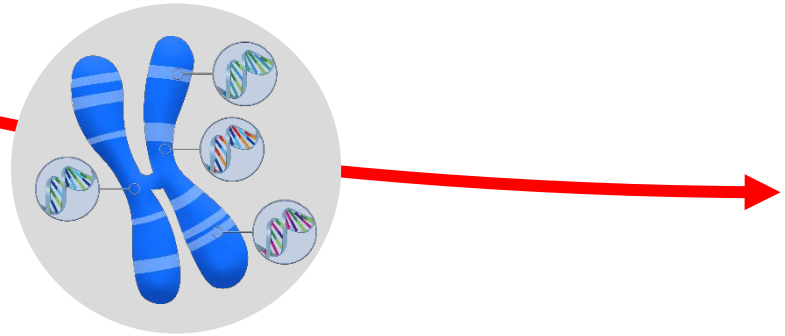
American Cancer Society – Survival Statistics for Myelodysplastic Syndromes, Tamamyan et al. *Critical Reviews in Oncology/Hematology* 2017, Yeung et al. *Biology of Blood and Marrow Transplantation* 2015, Courville et al. *BMC* Clinical *Pathology* 2017.

DUAL STRATEGY IN LUNG CANCER: TARGETING DRIVER MUTATIONS AND NEXT-GENERATION I/O

Molecularly-Targeted Precision Therapy



Tumor Mutational Burden



CURRENT PORTFOLIO

ALUNBRIG™ BRIGATINIB 30 mg TABLETS

TAK-788

EMERGING ASSETS

Sapanisertib (TAK-228)

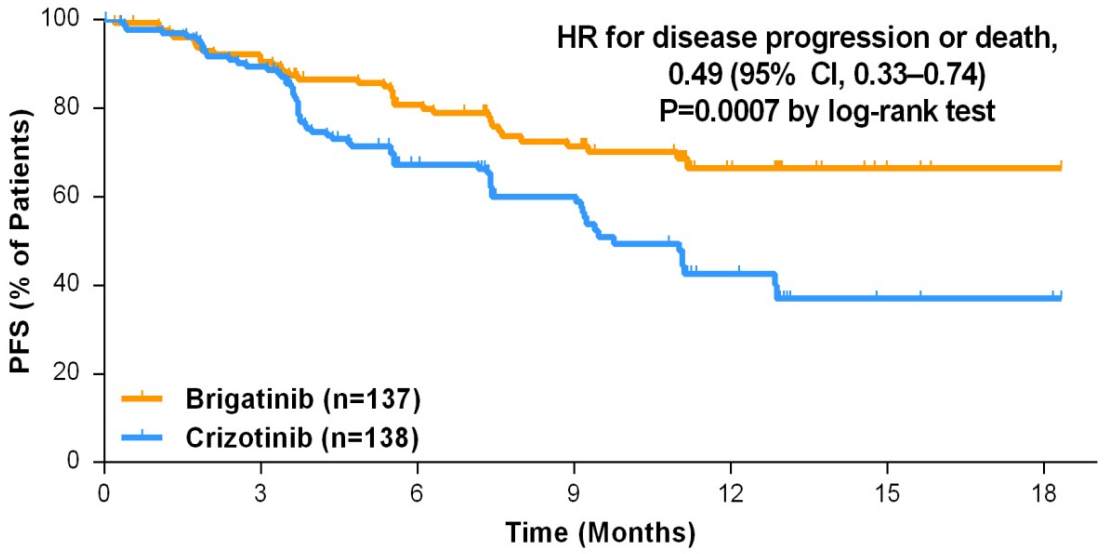
Next-generation kinase inhibitors

NEXT GENERATION TARGETS AND PLATFORM

SHATTUCK LABS

Crescendo® biologics

ALUNBRIG ALTA 1L— POTENTIAL BEST-IN-CLASS PROFILE IN ALK+ NSCLC

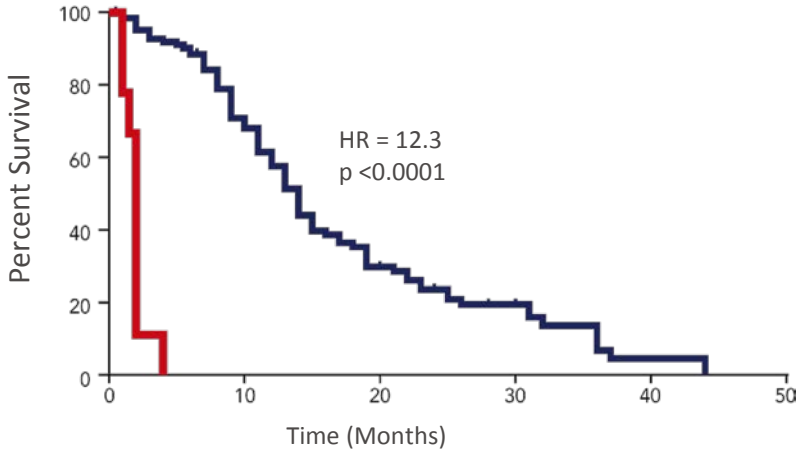


- Clear superiority to crizotinib and early separation in PFS curve
- Primary endpoint (PFS) hazard ratio is 0.49
- Risk/benefit profile consistent with the expectations of a best-in-class therapy

Camidge R., WCLC 2018

TAK-788: ADDRESSING UNMET NEED IN EGFR EXON20 MUTATIONS

RESPONSE TO CURRENT EGFR TKIs in EXON 20 INSERTIONS



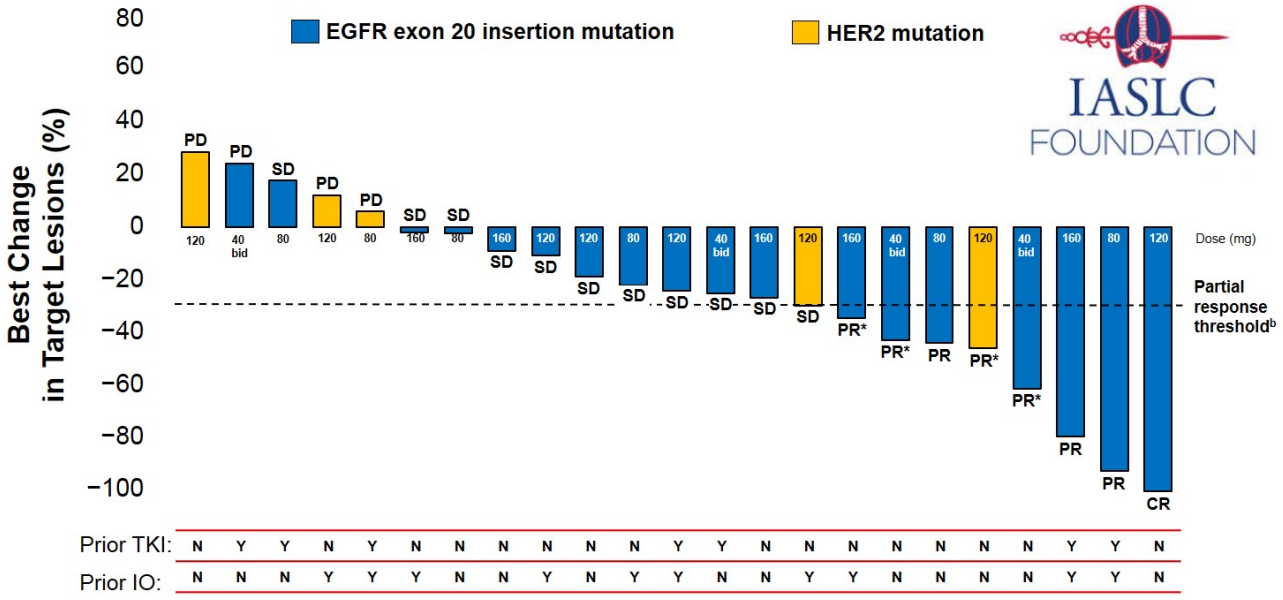
	Median PFS
EGFR Ex20 insertion (N=9)	2 months
Classical EGFR mut (N=129)	14 months

Overall survival <6 months for exon 20 insertions

Current therapies ineffective for these mutations

Robichaux et al. WCLC 2016

ANTITUMOR ACTIVITY IN ALL PATIENTS TREATED WITH TAK-788 AT A TOTAL DAILY DOSE OF ≥80–160 mg[a]



CR, complete response; PD, progressive disease; PR, partial response; SD, stable disease
[a] Includes 40 mg bid, 80 mg qd, 60 mg bid, 120 mg qd, and 160 mg qd dose groups
[b] Per RECIST v1.1
* Response awaiting confirmation

Neal et al., WCLC 2018

Expected to begin registration-enabling Phase 2 trial in FY2018

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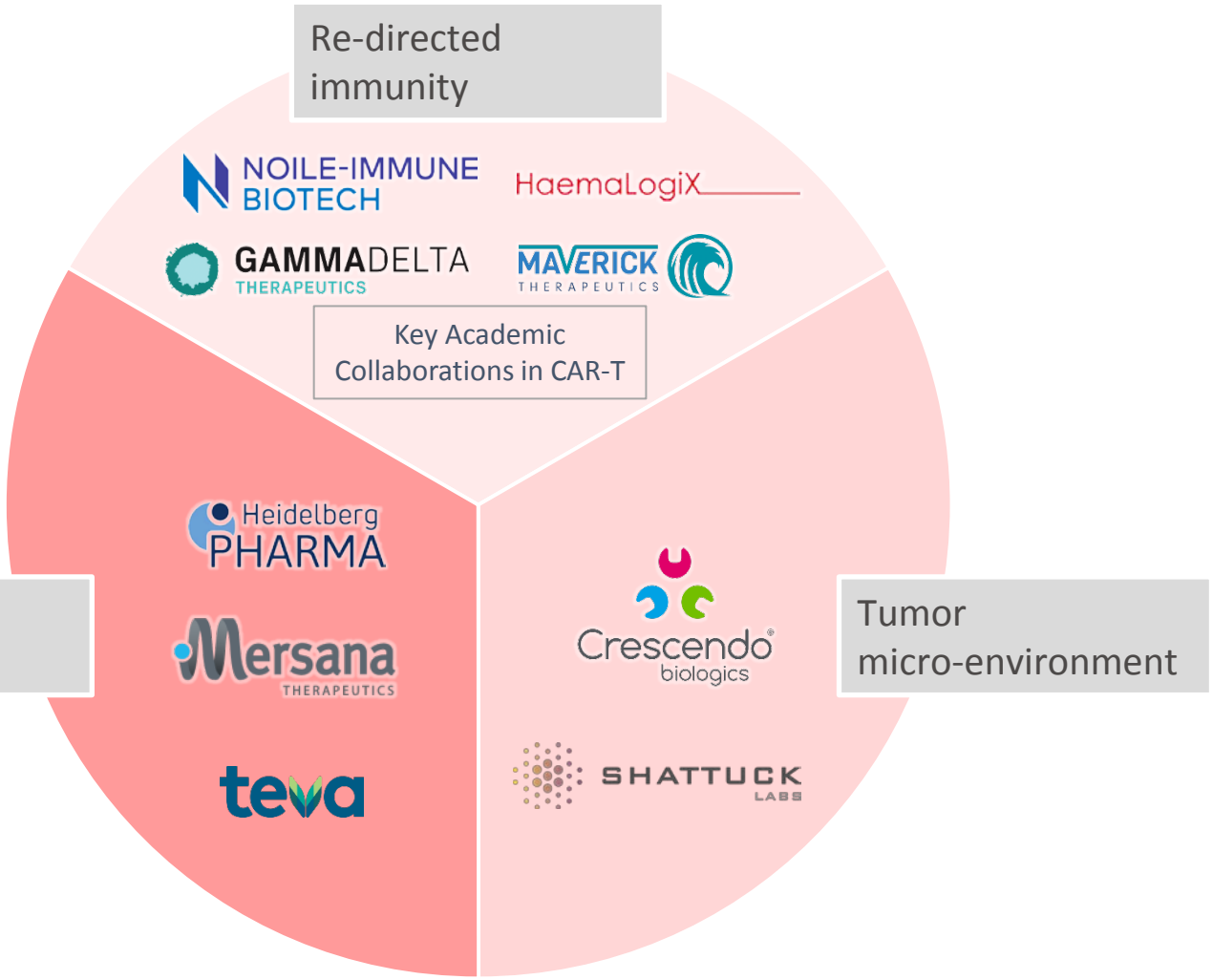
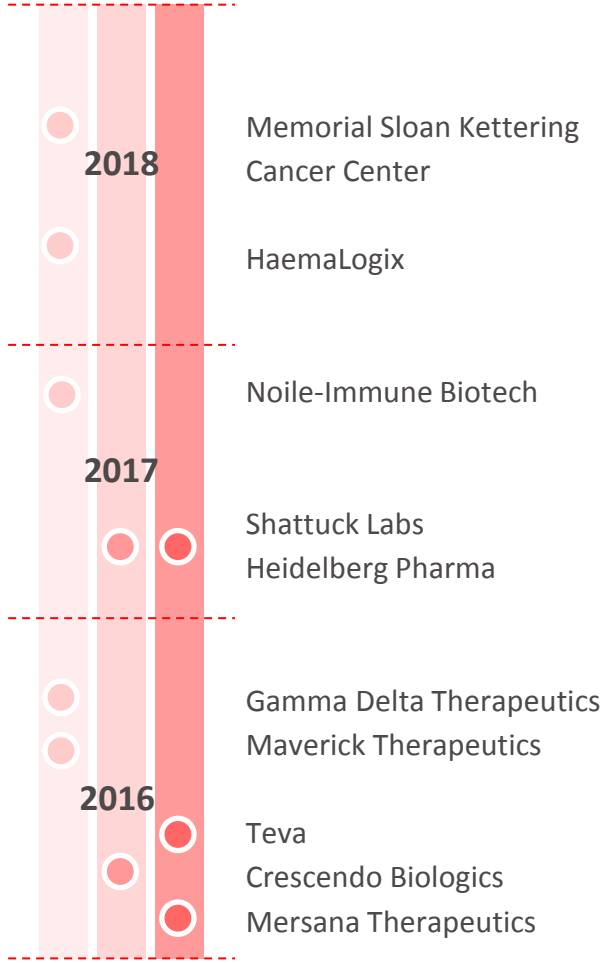
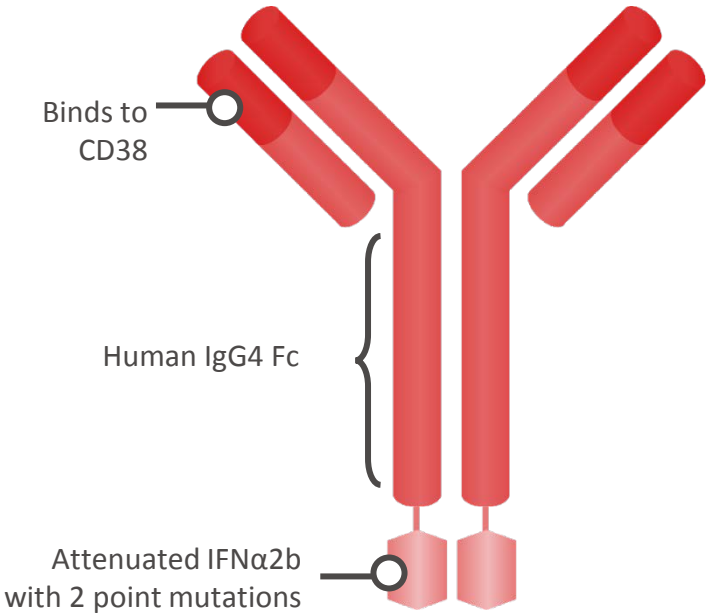
WORLD CLASS PARTNERS FUELING THE I/O PIPELINE

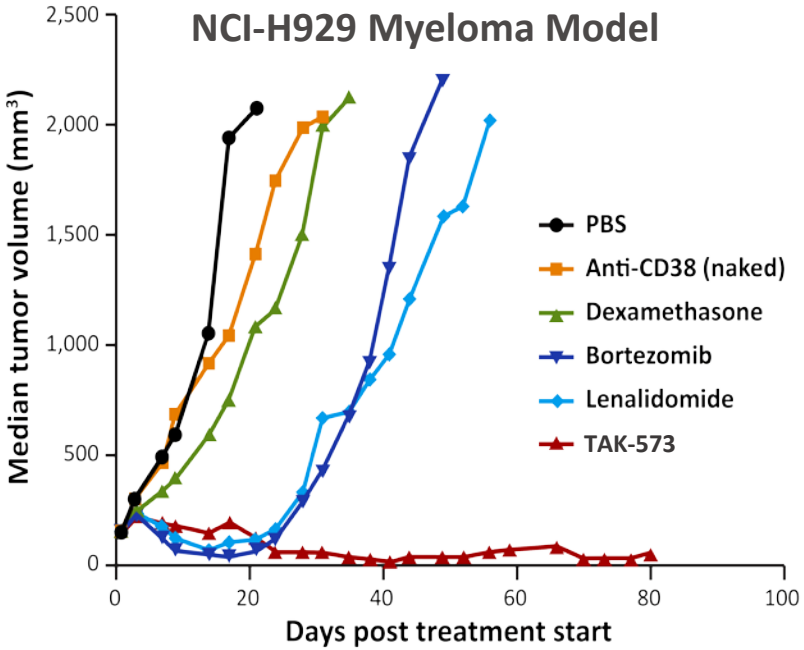




TAK-573: BRINGING A NOVEL IMMUNO-CYTOKINE APPROACH TO MULTIPLE MYELOMA

Targeted delivery of attenuated interferon α to CD38 - a known target in multiple myeloma





Highly compelling pre-clinical data with TAK-573 in a core area of our clinical development expertise in multiple myeloma
Ph 1 currently enrolling for patients with refractory multiple myeloma

Pogue et al. PLOS ONE 2016

TAKEDA ONCOLOGY AIMS TO BECOME A LEADER IN CELL THERAPIES

TRANSFORMATIVE POTENTIAL UTILIZING NEXT GENERATION CELL THERAPY PLATFORMS

GAMMADELTA THERAPEUTICS

NOILE-IMMUNE BIOTECH

T-CiRA

(Takeda-CiRA) Joint Program Framework

Key Academic Collaborations in CAR-T

Cell therapy engine for Takeda R&D

FY2019: Differentiated CAR-Ts in Phase I
FY2020+: Other Hematologic Malignancy and Solid Tumor CAR-Ts

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AN INNOVATIVE PIPELINE ENHANCED WITH EXTERNAL PARTNERSHIPS

	Discovery/preclinical*	Phase 1	Phase 2	Phase 3	Approved**
Hematologic Malignancies	Mtem: TAK-169 CD38 SLTA	TAK-079 RR MM, SLE CD38 *mAB*	TAK-659 Lymphoma SYK, FLT-3 *Small Molecule* Alisertib AML AURORA A *Small Molecule*	Pevonedistat HR-MDS/AML NEDD 8 *Small Molecule*	NINLARO Amyloidosis, ND MM, R/R MM dara combo, R/R MM Ninlaro/dex,, Maint. MM post-SCT PROTEASOME *Small Molecule* Incyte / Otsuka: ICLUSIG 2nd-Line Chronic Phase CML, Ph+ ALL BCR-ABL *Small Molecule* SeattleGenetics: ADCETRIS FL HL, FL PTCL, CTCL (JP) R/R HL (CN), sALCL (CN) CD30 *mAB ADC*
Lung Cancer		TAK-788 NSCLC Exon 20 EGFR/HER2 *Small Molecule*	Sapanisertib Endometrial Cancer Lung Cancer mTORC1/2 *Small Molecule*		ALUNBRIG 2L post-crizotinib ALK+NSCLC (EU, JP, CN), FL ALK+ NSCLC ALK *Small Molecule*
Immuno-Oncology	SHATTUCK LABS: PD-1/OX40L TAK-676 STING	teva: TAK-573 RR MM CD38 Attenukine *mAB Fusion Protein* TAK-981 SUMOYLATION *Small Molecule*			
Solid Tumors		Mersana: TAK-522 Solid Tumors HER2 *mAB ADC* TAK-164 Solid Tumors GCC *mAB ADC*	TAK-931 Solid Tumors CDC7 *Small Molecule*	MYOVANT SCIENCES: relugolix Prostate Cancer (JP) GnRH antagonist *Small Molecule*	TESARO: niraparib*** Ovarian Cancer. ***PARP 1/2*** *Small Molecule* EXELIXIS: cabozantinib*** 1L/2L RCC, 2L HCC ***Multi-RTK*** *Small Molecule*

Pipeline as of September 23, 2018

* *Assets shown in discovery/preclinical and Phases 1-3 explicitly refer to new molecular entities*

** *With active development seeking new or supplemental indications, or approvals in new territories*

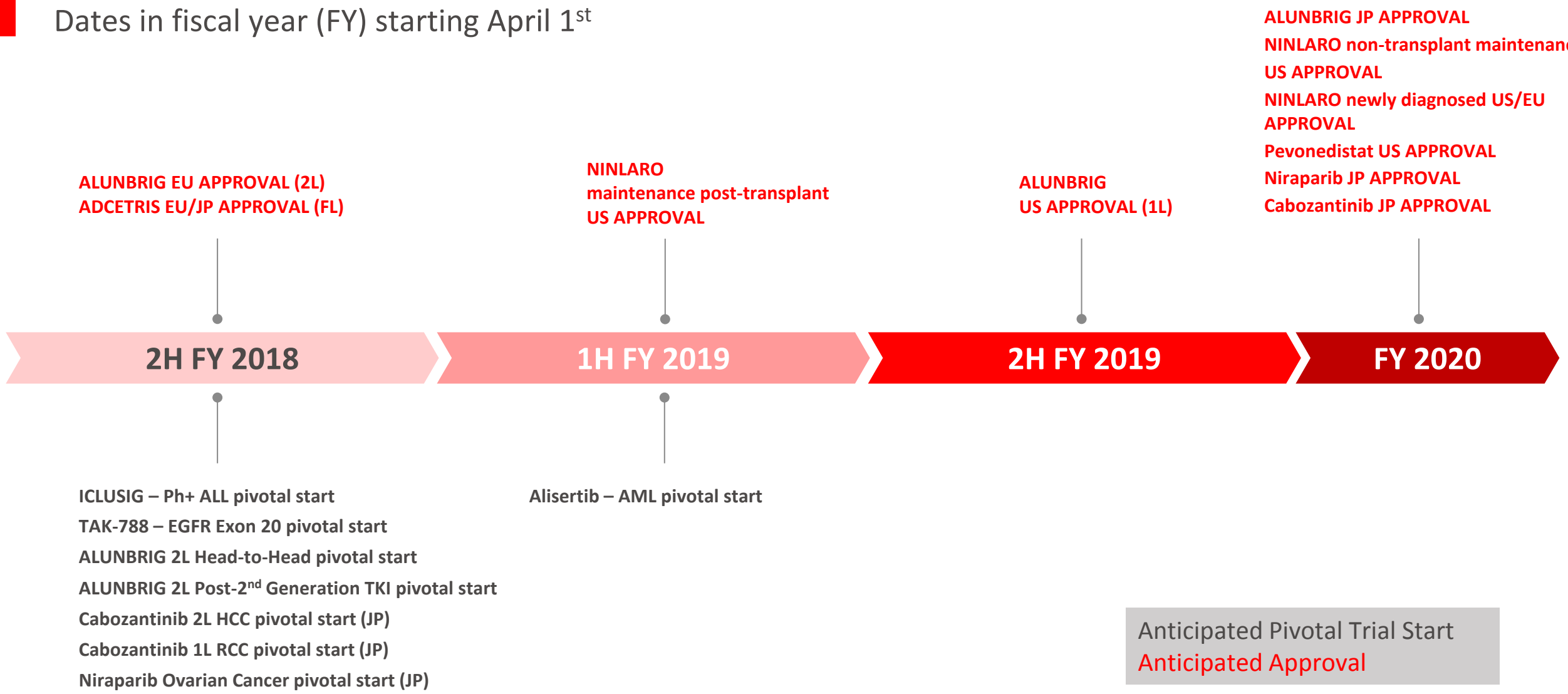
*** *In pivotal trial for Japan approval*

External collaboration

Note: Takeda holds the right to develop and commercialize Adcetris in ex-US/Canada. For Niraparib and Cabozantinib, Takeda holds the right to develop and commercialize in Japan and selected Emerging Markets

EXPECTED KEY ONCOLOGY PORTFOLIO INFLECTION AND MILESTONES

Dates in fiscal year (FY) starting April 1st



Anticipated Pivotal Trial Start
Anticipated Approval

Projected timelines as of September 23, 2018, subject to change

CONCLUSION

1. Focused on delivering the next approvals for NINLARO, ALUNBRIG, and pevonedistat
2. Expanding transformative treatment options in our focus areas of hematologic malignancies and lung cancer with alisertib, TAK-788 and novel CD38 targeted mechanisms
3. Harnessing the power of external innovation with a diverse set of world-class partnerships, accelerating novel therapies into the clinic

R&D DAY AGENDA – CAMBRIDGE, OCTOBER 11, 2018

Time	Agenda
12:00 – 12:30	Registration and Lunch
12:30 – 13:10	R&D Transformation, Progress To Date, Future Outlook Andy Plump
13:10 – 13:45	Oncology Phil Rowlands
13:45 – 14:05	Gastroenterology Asit Parikh
14:05 – 14:20	Break
14:20 – 14:40	Neuroscience Emiliangelo Ratti
14:40 – 15:00	Vaccines Rajeev Venkayya
15:00 – 16:05	Looking Ahead Andy Plump Panel Q&A Session
16:10 – 17:30	Reception

TAKEDA GASTROENTEROLOGY

A GLOBAL LEADER IN GASTROENTEROLOGY

ASIT PARIKH MD, PHD
Head, Gastrointestinal Therapeutic Area

WE ARE A LEADING GI COMPANY

GASTROENTEROLOGY

OUR VISION

Restore Life to Living for patients suffering with GI and liver diseases

OUR MISSION

Deliver **innovative, life-changing therapeutics** for patients with GI and liver diseases

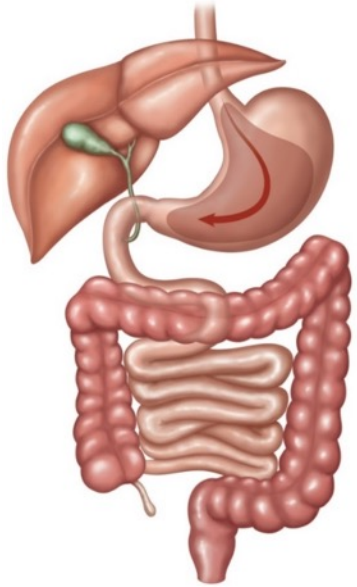
OUR STRATEGY EXPANDS THE PORTFOLIO ACROSS CORE DISEASE AREAS SUPPORTED BY PLATFORM TECHNOLOGIES

IBD

- Build upon success of Entyvio with new formulations
- Expand treatment options with Alofisel

Motility disorders

- Focus on select high unmet medical need areas including gastroparesis and enteral feeding intolerance



Celiac disease

- Advance approaches for the prevention of immune responses to gluten

Liver diseases

- Target early-stage investments in liver fibrosis

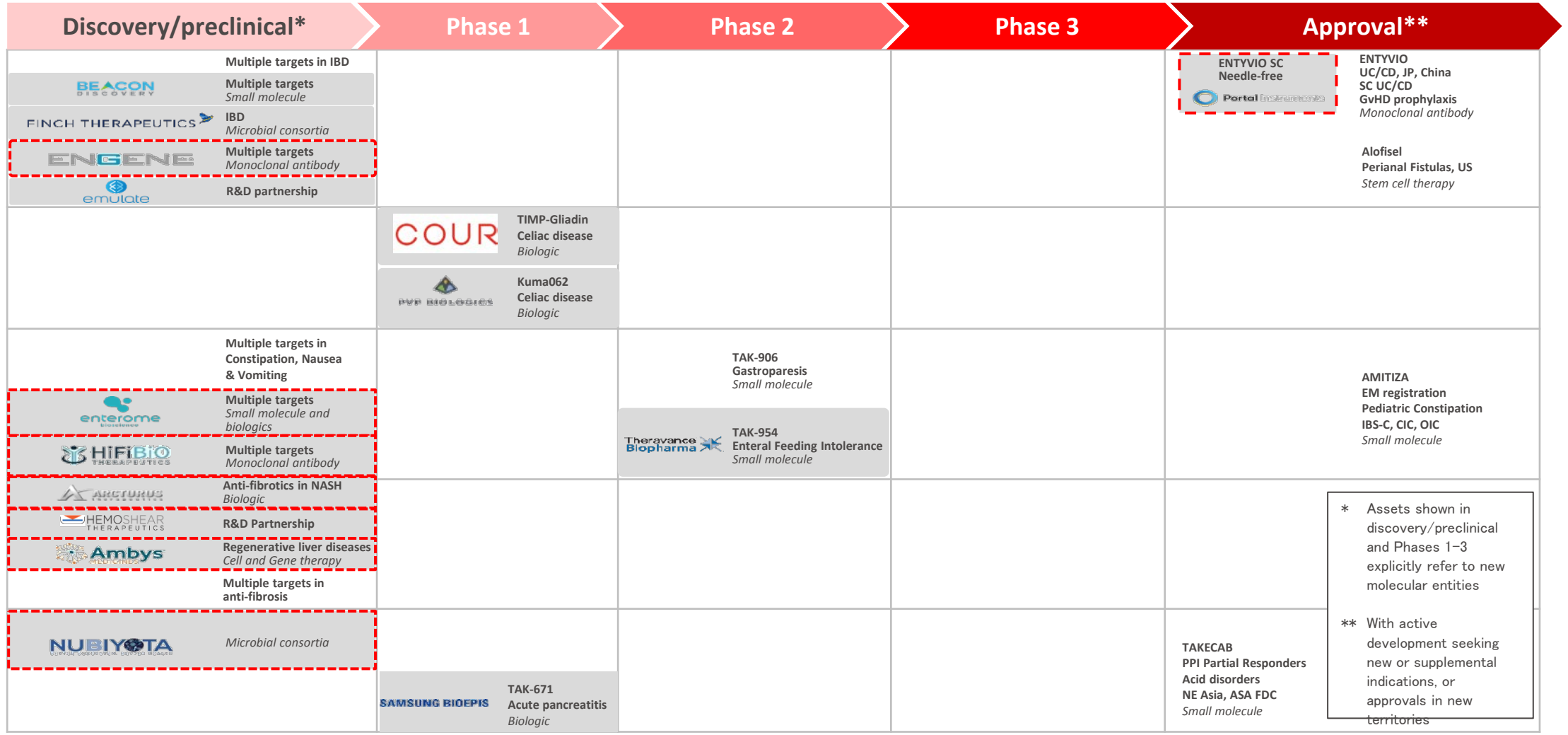
Luminal platforms

- Accelerate microbiome investments
- Invest in selective drug delivery technologies

Acid related diseases franchise will continued to be supported, but new pipeline investment will be deprioritized relative to above disease areas.

Abbreviations: IBD, Inflammatory Bowel Disease e.g., Ulcerative Colitis, Crohn's disease

WE ARE EXECUTING ON OUR STRATEGY THROUGH A RICH, DIVERSIFIED PIPELINE FUELED BY STRONG EXTERNAL PARTNERSHIPS



External collaboration *Platform*

Pipeline as of September 23, 2018

Abbreviations: IBD, Inflammatory Bowel Disease e.g., Ulcerative Colitis (UC), Crohn's disease (CD); SC, Subcutaneous; PPI, Proton pump inhibitor

WE ARE BUILDING ON THE SUCCESS OF ENTYVIO TO ADDRESS CONTINUED UNMET NEED IN IBD PATIENTS

1. Geographic expansion
2. New formulations
3. Expanded patient populations
4. New evidence generation

Entyvio® vedolizumab — ***First and only*** biologic specifically targeting gut inflammation

ALOFISEL — **First-in-class mesenchymal stem cell therapy for fistulizing Crohn's disease**

Abbreviations: IBD, Inflammatory Bowel Disease e.g., Ulcerative Colitis, Crohn's disease

WE ARE CONTINUOUSLY IMPROVING THE VALUE OF ENTYVIO FOR PATIENTS

GEOGRAPHIC EXPANSION

- Japan NDA approval for UC
- Potential China approval in **FY2020***
- Approved in **58 countries****
- Nearly **90,000***** IBD patients treated

* On Aug 8th 2018, a total of 48 products marketed outside of China were selected by the CDE based on urgent medical needs, companies are encouraged to apply for NDA with overseas data including data demonstrating lack of ethnic differences. Priority review/approval process will be applied.
** As of April 2018
*** For FY 2017

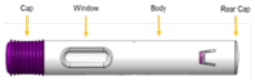
NEW FORMULATIONS

ENTYVIO SUBCUTANEOUS

- Positive topline results from VISIBLE UC trial; **filing Q4 FY2018 in US for UC,** and in **EU for both UC and CD**
- Anticipate readout in **H2 FY2019** from VISIBLE CD

Prefilled syringe

Autoinjector pen

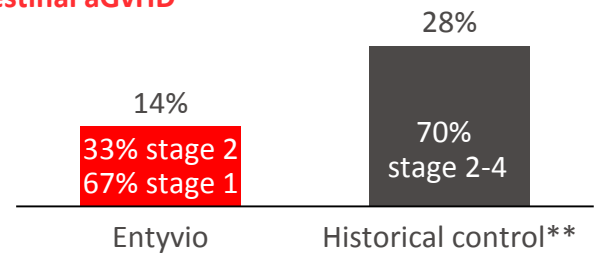


Portal needle-free

EXPANDED PATIENT POPULATIONS

- GvHD prophylaxis Ph3 first patient expected **Dec 2018**
- GvHD prophylaxis Ph3 readout expected **H1 FY2021**

Phase 1b data (N = 21): 6 month incidence of intestinal aGvHD*



* The safety profile of Entyvio in the GvHD patient population remains unchanged and is consistent with the approved US labelling

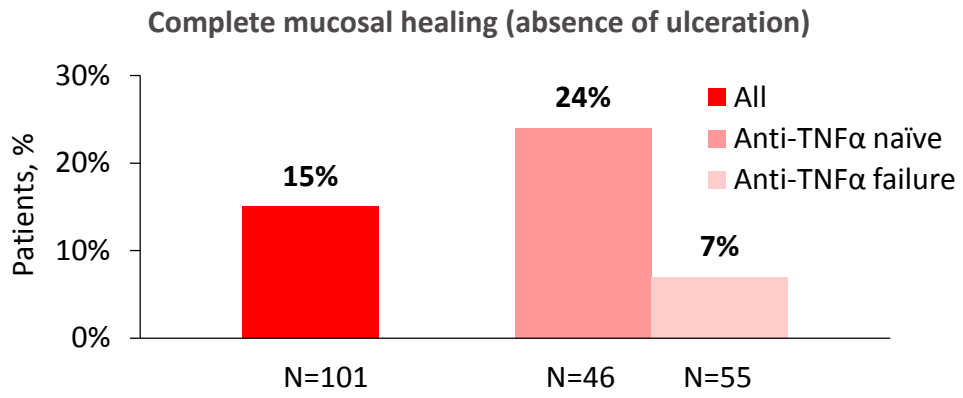
** Adjusted for patient population including allogenic stem cell transplant characteristics with similar conditioning regimen

Abbreviations: IBD, Inflammatory Bowel Disease e.g., Ulcerative Colitis (UC), Crohn's disease (CD); aGvHD, Acute Graft vs. Host Disease

ENTYVIO CONTINUES TO DELIVER AGAINST UNMET NEED FOR PATIENTS

NEW EVIDENCE GENERATION

MUCOSAL HEALING IN CROHN'S DISEASE – PREVIOUSLY A GAP FOR ENTYVIO



Vedolizumab can induce endoscopic remission and complete mucosal healing over 26 weeks of treatment[1] at levels comparable to other biologic therapies

OTHER DATA

- Head-to-head vs. adalimumab readout expected in **H1 FY2019**
- Long-term safety data published in Gut[2]
- Real world propensity score matched analyses by the VICTORY Consortium[3] trended favorable to superior profile for Entyvio vs. anti-TNFs

1 Danese S, et al. ECCO 2018. Oral presentation OP023.
2 Colombel J, Sands BE, Rutgeerts P, et al. The safety of vedolizumab for ulcerative colitis and Crohn's disease. Gut 2017;66:839-851.
3 References for the Victory Consortium Studies:
Bohm et al—CD propensity; (https://academic.oup.com/ecco-jcc/article/12/supplement_1/S018/4807655)
Faleck et al—UC propensity; (https://academic.oup.com/ecco-jcc/article/12/supplement_1/S019/4807661)

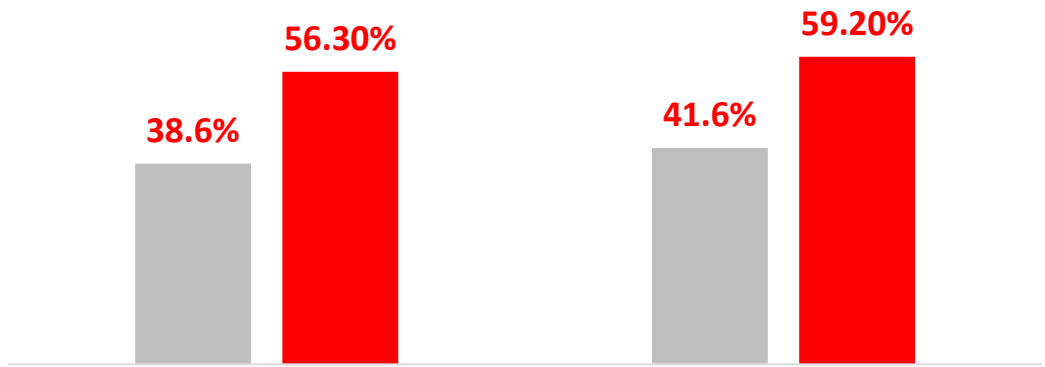
Abbreviations: SES-CD, Simple Endoscopic Score for CD; TNFα, tumor necrosis factor alpha.

ALOFISEL: FIRST AND ONLY APPROVED (EU) MESENCHYMAL STEM CELL THERAPY FOR FISTULIZING CROHN'S DISEASE

ADDRESSES THE HIGHEST UNMET NEED IN IBD, PERIANAL CROHN'S

- ~5% of Crohn's patients experience perianal fistulas, resulting in drainage, pain, and multiple surgeries
- Biologic therapies do not address the depth of unmet need
- Patients experience an average of 4 medical treatments and 5.4 surgeries with >50% failure rate and risk of permanent fecal incontinence
- Patient anxiety regarding maintenance of bodily function, **shame**, **fear of unknown** and **depression**
- ADMIRE-2 Phase 3 study for US registration ongoing in EU/Israel, first US patient expected **Q1 FY2019**

CX601 MEANINGFULLY IMPROVES STANDARD OF CARE IN ACHIEVING REMISSION (52 WK)*



20.4% of patients in the Cx601 group vs. 26.5% in the control group experienced treatment related adverse events

* Panés J, et al., Gastroenterology. Published online 18th December 2017.
** Combined = clinical + radiologic

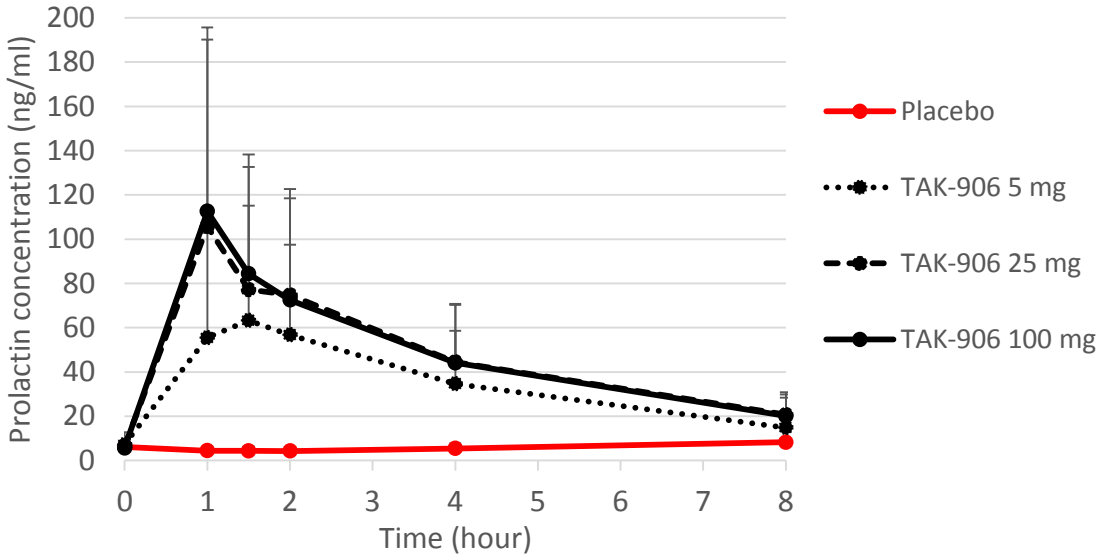
Abbreviations: SOC, Standard of care

TAK-906: DISTINCTIVE MECHANISM OF ACTION (ORAL D2/D3 RECEPTOR ANTAGONIST) THAT FILLS A LARGE UNMET NEED IN GASTROPARESIS

CURRENT THERAPIES DO NOT MEET THE SIGNIFICANT UNMET NEED IN GASTROPARESIS

- Gastroparesis affects ~45M people globally
- Key symptoms are nausea, vomiting
- No drug approved in the US to treat all forms of gastroparesis, inadequate options elsewhere

TAK-906: PHASE 2A STUDY DEMONSTRATES TARGET ENGAGEMENT AND ENABLES DOSE SELECTION



- No QTc prolongation in Healthy Volunteer study
- No QTc prolongation or drug-related neurological AEs in Phase 2a study in GP patients*
- Phase 2b dose-range finding study expected to initiate in Q4 2018

Abbreviations: AE, Adverse event; HV, healthy volunteer; GP, Gastroparesis

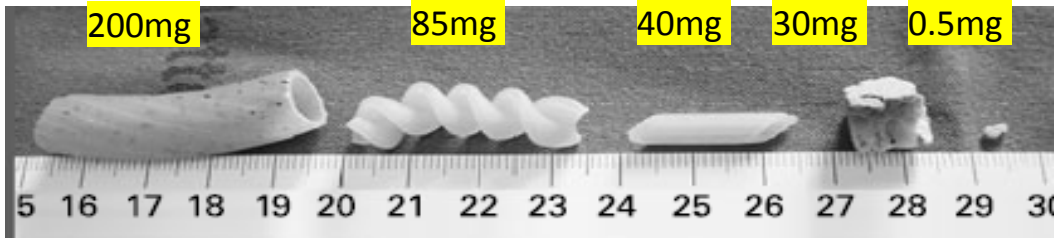
* Other AEs observed in Phase 2a study not related to TAK-906 administration included a case of tremor in a subject with history of depression, anxiety, T2DM and Neurontin use. Also, acute kidney insufficiency in a patient with urinary tract infection and in a patient with prior chronic renal failure.

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

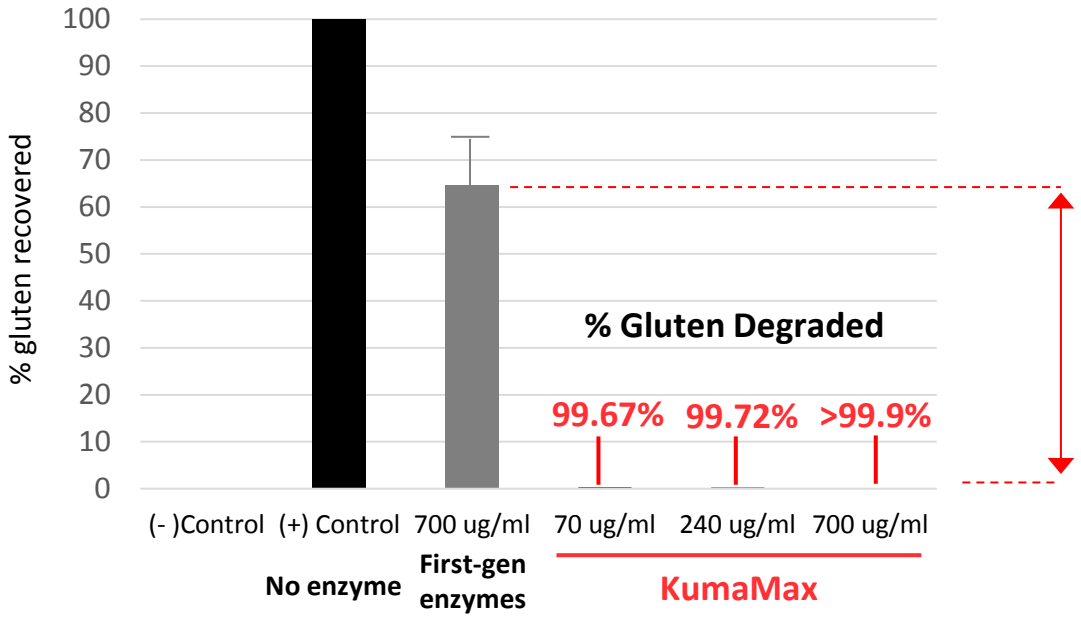
CELIAC DISEASE

- Affects ~1% of the population[1], rising prevalence
- Triggered by exposure to omnipresent gluten peptides
- Manifests via immune reaction in gut causing distressing symptoms
- Only existing treatment is a gluten free diet (GFD)

As little as 50-100mg of gluten exposure per day can trigger celiac disease



GLUTEN RECOVERY FROM RAT STOMACHS 30MINS AFTER DIGESTION OF A HIGH-GLUTEN BREAD SLURRY



- Kuma062 is a computationally engineered super glutenase
- Proof-of-mechanism (POM) study enabling go/no-go decision initiated **July 2018**, readout anticipated **H1 FY2019**

[1] Pooled global prevalence; Clin Gastroenterol Hepatol. 2018 Jun;16(6):823-836
Abbreviations: POM, Proof of mechanism

WE HAVE STRENGTHENED OUR COMMITMENT TO ADDRESSING LIVER DISEASES THROUGH EARLY RESEARCH PARTNERSHIPS

TARGETING LIVER FIBROSIS PREVENTION AND REVERSAL THROUGH NEW PLATFORMS, NEW PROJECTS AND BUSINESS DEVELOPMENT FOCUSED ON PERI-IND OPPORTUNITIES

HEMOSHEAR THERAPEUTICS

Human cell system for new target identification and validation for liver fibrosis

ARCTURUS therapeutics

Liver-targeted delivery of nucleotide therapeutics with anti-fibrotic MOAs

Ambys MEDICINES

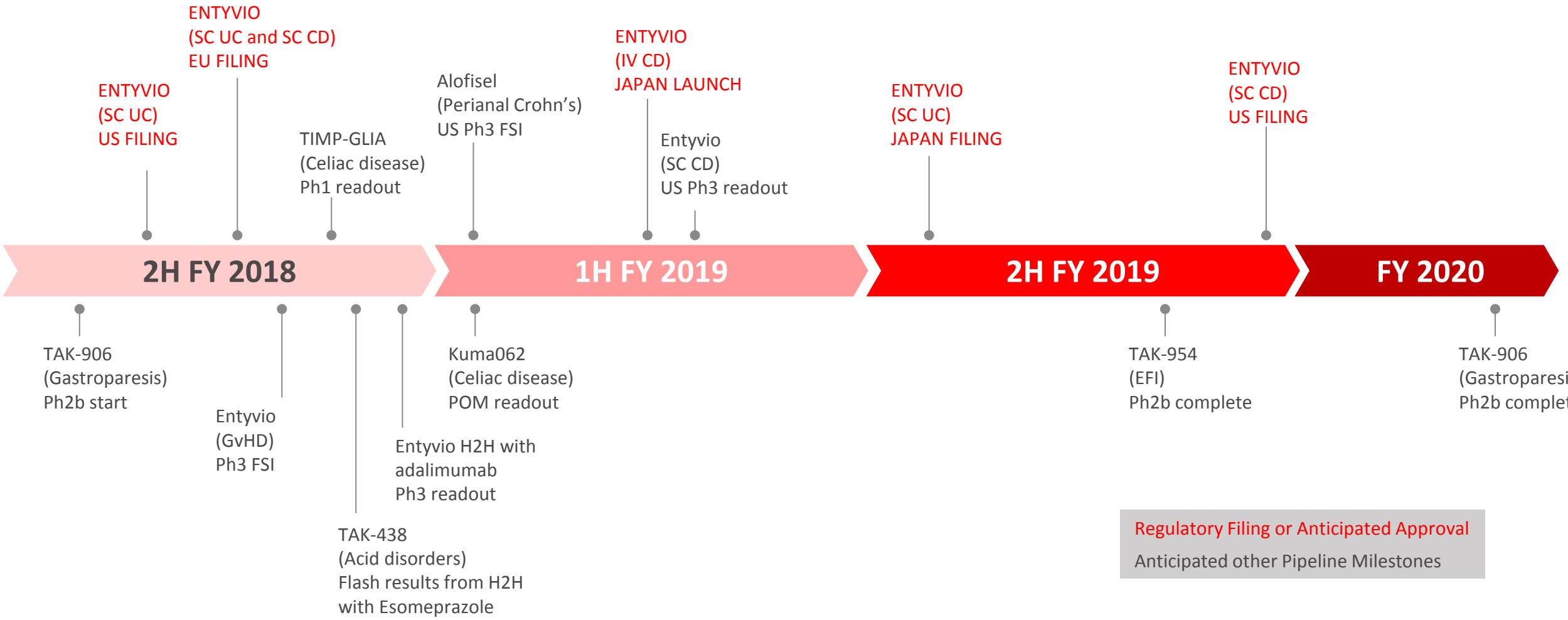
Takeda co-founded with Third Rock Ventures to focus on cell and gene therapy for end-stage liver diseases

Series A announced August 2018

Abbreviations: MOA, Mechanism of action

EXPECTED KEY GI PORTFOLIO INFLECTIONS AND MILESTONES

Dates in fiscal year (FY) starting April 1st



Regulatory Filing or Anticipated Approval

Anticipated other Pipeline Milestones

Projected timelines as of September 23, 2018, subject to change

Abbreviations: FSI, First subject in; SC, Subcutaneous; IV, Intravenous; UC, Ulcerative colitis; CD, Crohn's disease; GvHD, Graft vs. host disease; POM, Proof of mechanism; EFI, Enteral feeding intolerance; H2H, head to head.

CONCLUSION

1 Maximizing the potential of ENTYVIO and delivering ALOFISEL to global markets

2 Progressing several early to mid-stage assets including TAK-906 for gastroparesis and KUMA062 for celiac disease

3 Continuing to capture opportunities early through industry-leading scientific talent, sophisticated in-house evaluation capabilities and rapid decision-making