









# Clinical Trial Summary

October 2021

# OVERVIEW OF CLINICAL TRIAL SUMMARY

	LCM <sup>1</sup>	WAVE 1	WAVE 2	
 <b>ONCOLOGY</b>	ALUNBRIG 1L ALK+ NSCLC ALUNBRIG 2L ALK+NSCLC H2H with alectinib ICLUSIG TKI res. Chronic phase CML ICLUSIG 1L Ph+ ALL NINLARO Maintenance ND MM post-SCT (MM3) NINLARO Maintenance ND MM no-SCT (MM4) NINLARO In-class transition (MM6)	EXKIVITY 2L NSCLC w/EGFR exon 20 insertion mutation EXKIVITY 1L NSCLC w/EGFR exon 20 insertion mutation TAK-007 CD19+ Heme malignancies	TAK-981 Multiple cancers TAK-981 Non-Hodgkin's lymphoma TAK-981 Solid tumors TAK-981 R/R multiple myeloma TAK-573 Solid tumors TAK-573 R/R multiple myeloma	TAK-605 Multiple cancers TAK-676 Solid tumors TAK-252 Solid tumors or lymphomas TAK-102 Solid tumors TAK-940 CD19+ Heme malignancy TAK-186 EGFR+ solid tumors
 <b>RARE GENETIC &amp; HEMATOLOGY</b>	ADYNOVATE Pediatric Hemophilia A VONVENDI vWD Adult prophylaxis, Pediatric TAKHZYRO HAE Pediatric TAKHZYRO Bradykinin-mediated angioedema OBIZUR Acquired Hemophilia A	maribavir R/R CMV infection in HSCT and SOT maribavir 1L CMV infection In HSCT TAK-755 cTTP TAK-611 MLD (IT) TAK-609 Hunter CNS (IT)	mezagitamab (TAK-079) ITP, MG TAK-607 Complications of prematurity TAK-755 iTTP TAK-755 SCD	
 <b>NEUROSCIENCE</b>		TAK-994 Orexin 2R ag NT1 and NT2 TAK-925 Narcolepsy, other sleep disorders Soticlestat Rare epilepsies – LGS, DS	TAK-341 Parkinson's Disease TAK-071 Parkinson's Disease TAK-861 Sleep disorders TAK-925 Post-Operative	
 <b>GI</b>	ENTYVIO GvHD Prophylaxis ENTYVIO UC/CD SC ENTYVIO Pediatric UC/CD ENTYVIO Antibiotic-refractory Pouchitis Alofisel Complex perianal fistulas in CD Vonoprazan H. Pylori China	TAK-721 Eosinophilic Esophagitis	TAK-951 Nausea & Vomiting TAK-510 Nausea & Vomiting TAK-105 Nausea & Vomiting TAK-906 Gastroparesis TAK-954 POGD sibofimloc Post-Op CD	
 <b>PDT</b>	HYQVIA CIDP HYQVIA Pediatric PID CUVITRU PID Japan CEPROTIN Congenital protein C deficiency			
 <b>VACCINES</b>		TAK-003 Dengue vaccine TAK-919 SARS-CoV-2 vaccine TAK-019 SARS-CoV-2 vaccine	TAK-426 Zika vaccine	

2 | 1. LCM = Life cycle management programs or marketed assets in development seeking new indications, new geographic expansions, fulfillment of regulatory requirements, new formulations/method of use, and/or enhancement in commercial/competitive profile.

# OVERVIEW OF CLINICAL TRIAL SUMMARY



# ALUNBRIG (BRIGATINIB): ALK INHIBITOR

Study	<a href="#">NCT02737501</a>	<a href="#">NCT03596866</a>
Indication	ALK-positive advanced lung cancer	ALK-positive non-small-cell lung cancer (NSCLC)
Phase	Phase III ALTA-1L	Phase III ALTA-3
# of Patients	N = 275	N = 246
Target Patients	ALK+ locally advanced or metastatic NSCLC patients who have not previously been treated with an ALK inhibitor	Patients with ALK+ locally advanced or metastatic NSCLC who have progressed on crizotinib
Arms/Intervention	<ul style="list-style-type: none"> <li>• Arm A: Brigatinib 180 mg QD with 7-day lead-in at 90 mg</li> <li>• Arm B: Crizotinib 250 mg BID</li> </ul>	<ul style="list-style-type: none"> <li>• Arm A: Brigatinib 90 mg to 180 mg QD</li> <li>• Arm B: Alectinib 600 mg PO BID with food</li> </ul>
Primary endpoint and key secondary endpoint(s)	Progression-Free Survival (PFS) as assessed by blinded Independent Review Committee (bIRC)	Progression-Free Survival (PFS) as assessed by blinded Independent Review Committee (bIRC)

## Status

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| <ul style="list-style-type: none"> <li>• Study start date: April 2016</li> <li>• Primary completion date: June 2019</li> <li>• Final completion date: June 2021</li> </ul> <p>Publications:</p> <ul style="list-style-type: none"> <li>• Camidge DR, et al. N Engl J Med 2018;379(21): 2027-2039</li> <li>• Camidge DR, Kim HR, Ahn MJ, et al. J Clin Oncol 2020;38: 1-13</li> <li>• Camidge DR, Kim HR, Ahn MJ, et al. J Thoracic Oncol 2021<br/><a href="https://doi.org/10.1016/j.jtho.2021.07.035">https://doi.org/10.1016/j.jtho.2021.07.035</a></li> </ul> | <ul style="list-style-type: none"> <li>• Study Start Date: April 2019</li> <li>• Estimated primary completion date<sup>1</sup>: FY23</li> </ul> |
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4 | 1. The primary endpoint, PFS, is event driven and changes in event rate can lead to a change in the primary completion date.

# ICLUSIG (PONATINIB): *BCR-ABL INHIBITOR*

Study	<a href="#">NCT02467270</a>	<a href="#">NCT03589326</a>
<b>Indication</b>	Chronic myeloid leukemia (CML)	Ph+ acute lymphoblastic leukemia (ALL)
<b>Phase</b>	<b>Phase II OPTIC</b>	<b>Phase III Ph+ALLCON</b>
<b># of Patients</b>	N = 276	N = 230 (max)
<b>Target Patients</b>	Patients with resistant chronic phase chronic myeloid leukemia	Patients with newly-diagnosed Ph+ ALL
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Ponatinib 45 mg once daily</li> <li>• Ponatinib 30 mg once daily</li> <li>• Ponatinib 15 mg once daily</li> </ul>	<ul style="list-style-type: none"> <li>• Cohort A: Ponatinib/reduced intensity chemotherapy until progressive disease (PD) or stem cell transplant (SCT)</li> <li>• Cohort B: Imatinib/reduced intensity chemotherapy until PD or SCT</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	≤1% BCR-ABL1 at 12 months (time frame: 12 months)	<ul style="list-style-type: none"> <li>• Primary: Number of participants with Minimal Residual Disease (MRD) -Negative Complete Remission (CR) [Time frame: From Cycle 1 through Cycle 3 (approximately 3 months) (Cycle length is equal to 28 days)]</li> <li>• Secondary: EFS</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: August 2015</li> <li>• Primary completion date: May 2020</li> <li>• Estimated study completion: June 2024</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: January 2019</li> <li>• Estimated primary completion date<sup>1</sup>: FY24</li> </ul>

5 | 1. The key secondary endpoint, EFS, is event driven and changes in event rate can lead to a change in the primary completion date.

# NINLARO (IXAZOMIB): ORAL PROTEASOME INHIBITOR

Study	<a href="#">NCT02181413</a>	<a href="#">NCT02312258</a>
<b>Indication</b>	Multiple myeloma (MM) maintenance post-stem cell transplant	Multiple myeloma (MM) maintenance non-stem cell transplant
<b>Phase</b>	<b>Phase III TOURMALINE-MM3</b>	<b>Phase III TOURMALINE-MM4</b>
<b># of Patients</b>	N = 652	N = 706
<b>Target Patients</b>	Patients with multiple myeloma following autologous stem cell transplant	Patients with newly-diagnosed MM not treated with stem cell transplantation
<b>Arms/Intervention</b>	Arm A: Ixazomib <ul style="list-style-type: none"> <li>• Cycles 1-4: Ixazomib 3.0 mg PO days 1, 8, 15 / 28-day cycle</li> <li>• Cycles 5-26: Ixazomib 3.0 or 4.0 mg PO days 1, 8, 15 / 28-day cycle</li> </ul> Arm B: Placebo <ul style="list-style-type: none"> <li>• Cycles 1-4: Placebo 3.0 mg PO days 1, 8, 15 / 28-day cycle</li> <li>• Cycles 5-26: Placebo 3.0 or 4.0 mg PO days 1, 8, 15 / 28-day cycle</li> </ul>	Arm A: Ixazomib <ul style="list-style-type: none"> <li>• Cycles 1-4: Ixazomib 3.0 mg PO days 1, 8, 15 / 28-day cycle</li> <li>• Cycles 5-26: Ixazomib 3.0 mg or 4.0 mg PO days 1, 8, 15 / 28-day cycle</li> </ul> Arm B: Placebo <ul style="list-style-type: none"> <li>• Cycles 1-4: Placebo 3.0 mg PO days 1, 8, 15 / 28-day cycle</li> <li>• Cycles 5-26: Placebo 3.0 or 4.0 mg PO days 1, 8, 15 / 28-day cycle</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<ul style="list-style-type: none"> <li>• Primary: Progression Free Survival (PFS)</li> <li>• Secondary: Overall Survival (OS)</li> </ul>	<ul style="list-style-type: none"> <li>• Primary: Progression Free Survival (PFS)</li> <li>• Secondary: Overall Survival (OS)</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: July 2014</li> <li>• Primary completion date: April 2018</li> <li>• Interim OS analysis<sup>1</sup>: FY21; Final: FY24/25</li> </ul> Publications: <ul style="list-style-type: none"> <li>• Dimopoulos MA, et al. Lancet. 2019 Jan 19;393(10168): 253-264</li> <li>• Kaiser M, et al. Ann Hematol. 2020 Aug;99(8): 1793-1804</li> <li>• Goldschmidt H, et al. Leukemia. 2020 Nov;34(11): 3019-3027</li> <li>• Paiva B, et al., Presentation at EHA 2020</li> <li>• Paiva B, et al., Presentation at EHA 2021</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: April 2015</li> <li>• Primary completion date: August 2019</li> <li>• Interim OS analysis<sup>1</sup>: FY20; Final FY24</li> </ul> Publications: <ul style="list-style-type: none"> <li>• Bringhen S, et al. Presentation at ASH 2020</li> <li>• Paiva B, et al. Presentation at ASH 2020</li> <li>• Dimopoulos MA, et al. <a href="https://ascopubs.org/doi/full/10.1200/JCO.20.02060">https://ascopubs.org/doi/full/10.1200/JCO.20.02060</a></li> <li>• Paiva B, et al., Presentation at EHA 2021</li> <li>• Dimopoulos MA, et al., Presentation at COMy 2021</li> </ul>

6 | 1. A key secondary analysis, OS, is event driven and changes in event rate can lead to a change in the interim and final analysis.

# NINLARO (IXAZOMIB): ORAL PROTEASOME INHIBITOR

<b>Study</b>	<b><u>NCT03173092</u></b>
<b>Indication</b>	Non-transplant eligible patients with newly diagnosed multiple myeloma
<b>Phase</b>	<b>Phase IV MM6</b>
<b># of Patients</b>	N = 160
<b>Target Patients</b>	Patients with multiple myeloma previously receiving a bortezomib-based induction. In-class (proteasome inhibitor) transition after 3 cycles of bortezomib-based therapy.
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Ixazomib 4 mg + lenalidomide 25 mg + dexamethasone 40 mg</li> <li>• Transition from a bortezomib based regimen to IRD (ixazomib, lenalidomide, dexamethasone) may allow the long-term proteasome inhibition to be maximized while maintaining a manageable safety profile.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>Progression Free Survival (PFS).</p> <p>Key secondary endpoints: time to next therapy (TTNT), relative dose intensity (RDI) of the oral regimen, overall survival (OS), electronic patient reported outcomes (ePRO) and actigraphy (activity/sleep) data.</p>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: September 2017</li> <li>• Primary completion date: FY25</li> </ul> <p>Publications:</p> <ul style="list-style-type: none"> <li>• Kambhampati, et al., Presentation at AVAHO 2020</li> <li>• Manda S, et al., Clin Lymphoma Myeloma Leuk. 2020 Nov;20(11):e910-e925</li> <li>• Girnius, et al., Presentation at ASH 2020</li> <li>• Lyons RM, et al., Presentation at COMy 2021</li> </ul>

# EXKIVITY (MOBOCERTINIB): EGFR/HER2 EXON 20 INHIBITOR

Study	<a href="#">NCT02716116</a>	<a href="#">NCT04129502</a>
Indication	2L NSCLC exon 20 insertion mutation	1L NSCLC exon 20 insertion mutation
Phase	Registration enabling Phase I/II EXCLAIM	Phase III EXCLAIM-2
# of Patients	N = 334	N = 318
Target Patients	2L+ NSCLC harboring EGFR in-frame exon 20 insertion mutations	1L NSCLC harboring EGFR in-frame exon 20 insertion mutations
Arms/Intervention	<ul style="list-style-type: none"> <li>Single arm: Mobocertinib 160 mg QD</li> </ul>	<ul style="list-style-type: none"> <li>Arm A: Mobocertinib 160 mg QD</li> <li>Arm B: Platinum-based chemotherapy</li> </ul>
Primary endpoint and key secondary endpoint(s)	Confirmed ORR assessed by IRC DoR as assessed by IRC (key secondary endpoint)	PFS as assessed by blinded Independent Review Committee (IRC) OS (key secondary endpoint)
Status	<ul style="list-style-type: none"> <li>Study start date: June 2016</li> <li>Primary completion date: May 2020</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: January 2020</li> <li>Estimated primary completion date for interim analysis<sup>1</sup>: FY22</li> <li>Estimated primary completion date for final analysis: FY22</li> </ul>

8 | 1. The primary endpoint, PFS, is event driven and changes in event rate can lead to a change in the primary completion date.



# TAK-007: CD19 CAR NK

<b>Study</b>	<b><u>NCT03056339</u><sup>1</sup></b>
<b>Indication</b>	Relapsed refractory B-lymphoid malignancies
<b>Phase</b>	Phase I/II
<b># of Patients</b>	N = 37
<b>Target Patients</b>	Patients with relapsed and refractory CD19+ B lymphoid malignancies
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Fludarabine 30 mg/m<sup>2</sup> by vein on days -5 to -3</li> <li>• Cyclophosphamide 300 mg/m<sup>2</sup> by vein on days -5 to -3</li> <li>• iC9/CAR.19/IL15-Transduced CB-NK Cells: Infusion of iC9/CAR.19/IL15-transduced CB-NK cells on Day 0 by vein; starting dose: 10E5</li> <li>• AP1903: If participant has graft-versus-host disease (GvHD) or cytokine release syndrome after the NK cell infusion, they will receive AP1903 0.4 mg/kg administered as an intravenous infusion.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety and efficacy
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: June 2017</li> </ul> <p>Publication:</p> <ul style="list-style-type: none"> <li>• Liu E, Marin D, Banerjee P, et al. N Engl J Med 2020;382(6): 545-553</li> </ul>

9 | 1. Trial managed by MD Anderson Cancer Center. The CD19 CAR-NKs evaluated in this study are generated with the same CAR construct used for TAK-007 but with a different formulation and cannot be equated with TAK-007.

# SUBASUMSTAT (TAK-981): *SUMO-ACTIVATING ENZYME<sup>1</sup> INHIBITOR*

Study	<a href="#">NCT03648372</a>	<a href="#">NCT04074330</a>
Indication	Solid tumors, hematologic malignancies	Non-Hodgkin’s lymphoma (NHL)
Phase	Phase I	Phase I/II
# of Patients	N = 216	N = 130
Target Patients	Adult participants with advanced or metastatic solid tumors or relapsed/refractory hematologic malignancies	Patients with relapsed/refractory CD20 positive NHL
Arms/Intervention	<ul style="list-style-type: none"> <li>TAK-981, intravenously, administered as 60 minute-infusion, once on Days 1, 4, 8, and 11 for 2 consecutive weeks, followed by 1 week rest in a 21-day treatment cycle</li> </ul>	<ul style="list-style-type: none"> <li>Phase 1, aNHL/iNHL: TAK-981 (10-160 mg) + rituximab 375 mg/m<sup>2</sup></li> <li>Phase 2, Cohort A: r/r DLBCL progressed to CAR T-cell therapy</li> <li>Phase 2, Cohort B: r/r DLBCL with no CAR T-cell prior therapy</li> <li>Phase 2, Cohort C: r/r FL progressed to systemic therapies</li> </ul>
Primary endpoint and key secondary endpoint(s)	Safety, tolerability and PK	Safety, tolerability and RP2D
Status	<ul style="list-style-type: none"> <li>Study start date: October 2018</li> <li>Estimated primary completion date: December 2022</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: October 2019</li> <li>Estimated primary completion date: September 2022</li> </ul>

# SUBASUMSTAT (TAK-981): SUMO-ACTIVATING ENZYME<sup>1</sup> INHIBITOR

Study	<a href="#">NCT04381650</a>	<a href="#">NCT04776018</a>
Indication	Solid tumors	Multiple Myeloma
Phase	Phase Ib/II	Phase Ib/II
# of Patients	N = 242	N= 81
Target Patients	Patients with select advanced or metastatic solid tumors	Patients with relapsed and/or refractory multiple myeloma
Arms/Intervention	<ul style="list-style-type: none"> <li>Escalating doses of TAK-981 with starting dose of 40 mg, intravenous (IV) infusion, on Days 1, 4, 8 and 11 in each 21-day treatment cycle and pembrolizumab 200 mg, IV infusion, as a fixed dose every 3 weeks in 21-day treatment cycle until RP2D is determined (for a maximum of 24 months).</li> <li>TAK-981 at RP2D as IV infusion on Days 1, 4, 8 and 11 in each 21-day treatment cycle up to disease progression or 12-months and pembrolizumab 200 mg IV infusion as a fixed dose every 3 weeks in 21-day treatment cycle for a maximum of 24 months.</li> </ul>	<ul style="list-style-type: none"> <li>Phase 1b: Dose escalation of TAK-981 in combination with fixed doses of mezagitamab or daratumumab and hyaluronidase-fihj, respectively in patients with RRMM.</li> <li>In Phase 1b each 28-day treatment cycle will consist of TAK-981 administered IV in one of the following schedules:                             <ul style="list-style-type: none"> <li>BIW on Days 1, 4, 8, 11, and 15 during Cycles 1 and 2, then once every 2 weeks during Cycles 3 through 6, followed by monthly dosing, OR</li> <li>QW on Days 1, 8, 15, 22 during Cycles 1 and 2, then once every 2 weeks during Cycles 3 through 6, followed by monthly dosing thereafter until PD.</li> </ul> </li> <li>Phase 2: Explore the efficacy and safety of TAK-981 in combination with an anti-CD38 antibody (mezagitamab or daratumumab and hyaluronidase-fihj) in patients with RRMM. A schedule will be selected for continued evaluation based on data from Phase 1b,</li> </ul>
Primary endpoint and key secondary endpoint(s)	Safety and tolerability	Safety, tolerability and RP2D
Status	<ul style="list-style-type: none"> <li>Study start date: August 2020</li> <li>Estimate primary completion date: October 2022</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: April 2021</li> <li>Estimated primary completion date: October 2024</li> </ul>

# MODAKAFUSP ALFA (TAK-573): *FIRST-IN-CLASS ANTI-CD38/ATTENUATED IFN $\alpha$ FUSION PROTEIN*

Study	<a href="#">NCT04157517</a>	<a href="#">NCT03215030</a>
Indication	Solid tumors	Relapsed/refractory multiple myeloma
Phase	Phase I/II	Phase I/II
# of Patients	N = 143	N = 151
Target Patients	Patients with locally advanced or metastatic solid tumors	Patients with relapsed/refractory multiple myeloma
Arms/Intervention	<ul style="list-style-type: none"> <li>• TAK-573 0.1 to 6 milligram per kilogram (mg/kg), infusion, intravenously, once on Day 1 of each 21-days treatment cycle for up to 1 year.</li> <li>• Phase 2 Dose Expansion in combination with pembrolizumab:               <ul style="list-style-type: none"> <li>➢ Unresectable/metastatic cutaneous melanoma with primary resistance or acquired resistance to no more than 2 prior lines of anti-PD1 containing treatments.</li> <li>➢ Unresectable/metastatic cutaneous melanoma naïve to prior anti-PD1 containing treatments.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Phase 1 cohort: TAK-573 0.001 to 14 milligram per kilogram (mg/kg), infusion, intravenously, once on Days 1, 8, 15 and 22 of each 28-day treatment cycle up to 1 year.</li> <li>• Phase 2 cohort: TAK-573 TBD as a single agent. Participants in at least 1 cohort will receive TAK-573 TBD and dexamethasone 40 mg, orally, once weekly of each 28-day treatment cycle until treatment discontinuation.</li> </ul>
Primary endpoint and key secondary endpoint(s)	Safety and tolerability	Safety and tolerability
Status	<ul style="list-style-type: none"> <li>• Study start date: December 2019</li> <li>• Estimated primary completion date: Q3 2023</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: October 2017</li> <li>• Estimated primary completion date: Oct 2021</li> </ul>

# TAK-605: ONCOLYTIC VIRUS ENCODING TRANSGENES FOR FLT3 LIGAND, ANTI-CTLA-4 ANTIBODY, AND IL-12 CYTOKINE

<b>Study</b>	<b><a href="#">NCT04301011</a><sup>1</sup></b>
<b>Indication</b>	Solid tumors
<b>Phase</b>	Phase I/IIa
<b># of Patients</b>	N = 84
<b>Target Patients</b>	Patients with advanced solid tumors
<b>Arms/Intervention</b>	<ul style="list-style-type: none"><li>• Arm A: TBio-6517 (TAK-605) dose escalation administered alone by direct injection into tumor(s) x 4. Booster injections of TBio-6517 are permitted for up to 24 months.</li><li>• Arm B: TBio-6517 and pembrolizumab Dose escalation of TBio-6517 administered in combination with pembrolizumab. TBio-6517 will be directly injected into tumor(s) x 4. Booster injections of TBio-6517 are permitted for up to 24 months. Pembrolizumab will be administered beginning at Day 8 via intravenous (IV) infusion every 3 weeks for up to 24 months.</li><li>• TBio-6517 and pembrolizumab in MSS-CRC Doses of TBio-6517 will be administered by direct injection into tumor(s) x 4 in combination with pembrolizumab beginning at Day 8 given every 3 weeks for up to 24 months in patients with microsatellite stable colorectal carcinoma (MSS-CRC). Booster injections of TBio-6517 are permitted for up to 24 months.</li><li>• TBio-6517 and pembrolizumab in TNBC Doses of TBio-6517 will be administered by direct injection into tumor(s) x 4 in combination with pembrolizumab beginning at Day 8 given every 3 weeks for up to 24 months in patients with triple negative breast cancer (TNBC). Booster injections of TBio-6517 are permitted for up to 24 months.</li></ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Recommended Phase 2 dose (RP2D)
<b>Status</b>	<ul style="list-style-type: none"><li>• Study start date: August 2020</li></ul>

# TAK-676: STING AGONIST

Study	<a href="#">NCT04420884</a>	<a href="#">NCT04879849</a>
Indication	Solid tumors	Solid tumors
Phase	Phase I	Phase I
# of Patients	N = 76	N = 46
Target Patients	Adult patients with advanced or metastatic solid tumors	Adult patients with advanced or metastatic solid tumors
Arms/Intervention	<ul style="list-style-type: none"> <li>• Arm 1: Dose escalating single agent TAK-676, starting with a safety lead-in at 0.1 mg IV on Days 1, 8, 15 in 21-day treatment cycles, and capping at 2.5 mg IV on Days 1, 8 and 15 in a 21-day cycle.</li> <li>• Arm 2: Dose escalating TAK-676 along the above parameters in combination with fixed dose pembrolizumab at 200 mg IV administered on D1 in a 21-day cycle.</li> </ul>	<ul style="list-style-type: none"> <li>• Image-guided radiation therapy between Day -8 and Day -1 followed by fixed dose pembrolizumab at 200 mg IV administered on D1 of a 21-day cycle in combination with dose escalating TAK-676, starting at 0.2 mg IV and capping at 2.5 mg IV on Days 1, 8 and 21 in a 21-day cycle.</li> </ul>
Primary endpoint and key secondary endpoint(s)	<ul style="list-style-type: none"> <li>• Primary endpoints: Safety and tolerability</li> <li>• Secondary objectives: Recommended Phase 2 dose (RP2D), overall response rate (ORR)</li> </ul>	<ul style="list-style-type: none"> <li>• Primary endpoints: Safety and tolerability</li> <li>• Secondary objectives: Recommended Phase 2 dose (RP2D), overall response rate (ORR)</li> </ul>
Status	<ul style="list-style-type: none"> <li>• Study start date: August 2020</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: July 2021</li> </ul>

# TAK-252: PD1-FC OX40L ARC

<b>Study</b>	<b><a href="#">NCT03894618<sup>1</sup></a></b>
<b>Indication</b>	Advanced solid tumors or lymphomas
<b>Phase</b>	<b>Phase I</b>
<b># of Patients</b>	N = 87
<b>Target Patients</b>	Patients with advanced solid tumors or lymphomas
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>Escalating doses of TAK-252 (SL-279252) with starting dose of 0.0001 mg/kg, intravenous (IV) infusion, on Days 1, 8, and 15 in the first 28-day treatment cycle, followed by IV infusion on D1 and D15 of each 28-day cycle.</li> <li>Escalating doses of TAK-252 (SL-279252) with starting dose of 0.3 mg/kg, intravenous (IV) infusion, administered once weekly on Days 1, 8, 15 and 22 of each 28-day treatment cycle.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety, maximum tolerated dose (MTD). Recommended Phase 2 dose (RP2D), preliminary antitumor activity by iRECIST, immunogenicity and PK characterization of TAK-252
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: March 2019</li> <li>Estimated primary completion date: February 2022</li> </ul>

# TAK-102: GPC3 CAR-T

<b>Study</b>	<b><u>NCT04405778</u><sup>1</sup></b>
<b>Indication</b>	Solid tumors
<b>Phase</b>	<b>Phase I</b>
<b># of Patients</b>	N = 18
<b>Target Patients</b>	Adult patients with GPC3-expressing previously treated solid tumors
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Cohort 1: <math>1 \times 10^7</math> CAR (+) cells/body [starting dose]</li> <li>• Cohort 2: <math>1 \times 10^8</math> CAR (+) cells/body</li> <li>• Cohort 3: <math>1 \times 10^9</math> CAR (+) cells/body</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<ul style="list-style-type: none"> <li>• Primary endpoint: Incidence of dose-limiting toxicities, treatment-emergent adverse events (AEs) and AEs of clinical interest</li> <li>• Primary objective: To evaluate the safety and tolerability of TAK-102 and to determine the recommended Phase 2 dose of TAK-102</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: July 2020</li> </ul>



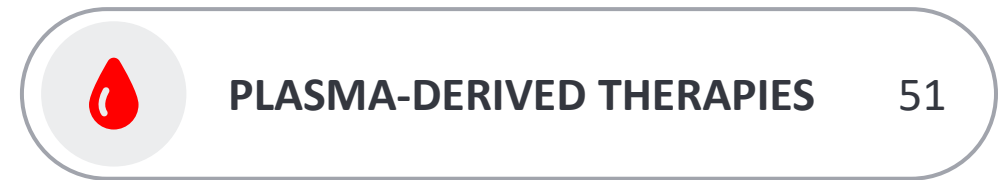
# TAK-940: CD19 CAR-T

<b>Study</b>	<b><u>NCT04464200</u><sup>1</sup></b>
<b>Indication</b>	Relapsed/refractory B-cell cancers
<b>Phase</b>	<b>Phase I</b>
<b># of Patients</b>	N = 30
<b>Target Patients</b>	Adult patients with relapsed or refractory CD19+ B lymphoid malignancies
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>19(T2)28z1xx CAR T cells Cohorts of 3-6 patients will be infused with escalating doses of 19(T2)28z1xx CAR T cells to establish the RP2D. There are 4 planned flat-dose levels: 25x10<sup>6</sup>, 50 x 10<sup>6</sup>, 100 x 10<sup>6</sup>, and 200 x 10<sup>6</sup> CAR T cells and one de-escalation dose: 12.5 x 10<sup>6</sup> CAR T cells. A standard 3+3 dose escalation design will be implemented starting from dose 1.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>Primary: Safety and Recommended Phase 2 dose (RP2D)                  Secondary: Efficacy and CK</p>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: August 2020</li> </ul>

# TAK-186: T-CELL ENGAGER

<b>Study</b>	<b><u>NCT04844073</u></b>
<b>Indication</b>	Solid tumors
<b>Phase</b>	Phase I/II
<b># of Patients</b>	N = 68
<b>Target Patients</b>	Patients with unresectable, locally advanced or metastatic cancer
<b>Arms/Intervention</b>	<p>Single-arm, open label, MVC-101 - An EGFR x CD3 Conditional Bispecific Redirected Activation (COBRA™) Protein</p> <p>This Phase 1/2, open-label study will characterize safety, dose-limiting toxicities (DLTs), and maximum tolerated/ recommended phase 2 dose (MTD/RP2D) of MVC-101.</p> <p>Dose escalation will occur in a 1+3 and then 3+3 design in patients with advanced solid tumors. Once the MTD/RP2D is determined, a Cohort Expansion Phase will be enrolled to further characterize safety and initial antitumor activity in patients with HNSCC, CRC or NSCLC.</p>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>Primary Endpoint: Safety based upon incidence of treatment-emergent adverse events.</p> <p>Secondary Endpoints: Pharmacokinetics, Pharmacodynamics, Immunogenicity measured by plasma anti-drug antibodies, and Radiographic anti-tumor activity</p>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: March 17, 2021</li> </ul>

# OVERVIEW OF CLINICAL TRIAL SUMMARY



# ADYNOVATE (TAK-660): RECOMBINANT, PEGYLATED ANTIHEMOPHILIC FACTOR

<b>Study</b>	<b><u>NCT02615691</u></b>
<b>Indication</b>	Hemophilia A
<b>Phase</b>	<b>Phase III</b>
<b># of Patients</b>	N = 120
<b>Target Patients</b>	Previously untreated patients (PUPs) < 6 years with severe hemophilia A (FVIII < 1%)
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Single group assignment</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>The primary objective is to determine safety including immunogenicity of Adynovate (TAK-660/BAX 855) based on the incidence of inhibitor development to FVIII (<math>\geq 0.6</math> Bethesda unit (BU)/mL using the Nijmegen modification of the Bethesda assay).</p> <p>Safety</p> <ol style="list-style-type: none"> <li>1. To determine the immunogenicity of Adynovate in terms of binding IgG and IGM antibodies to FVIII, PEG-FVIII and PEG</li> <li>2. To determine the safety of Adynovate based on adverse events (AEs) and serious adverse events (SAEs)</li> </ol> <p>Hemostatic Efficacy</p> <ol style="list-style-type: none"> <li>3. To assess the efficacy of prophylactic treatment with Adynovate</li> <li>4. To characterize the efficacy of Adynovate in the control of bleeding episodes</li> </ol> <p>Pharmacokinetics</p> <ol style="list-style-type: none"> <li>6. To determine the incremental recovery (IR) of Adynovate at baseline and over time</li> <li>7. To determine half-life of Adynovate at baseline (optional)</li> </ol>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: November 2015</li> <li>• Final report expected Q1 2025</li> </ul>

# VONVENDI (TAK-577): RECOMBINANT VON WILLEBRAND FACTOR

Study	<a href="#">NCT02973087</a>	<a href="#">NCT02932618</a>
Indication	Adult Prophylaxis	Pediatric On-demand and Elective Surgery
Phase	Phase III	Phase III
# of Patients	N = 22	N = 27 (On-demand) N = 12 (Elective Surgery)
Target Patients	Severe von Willebrand Disease	Severe von Willebrand Disease
Arms/Intervention	<ul style="list-style-type: none"> <li>• Arm A: Transitioning from on-demand</li> <li>• Arm B: Switching from prophylactic treatment with pdVWF</li> </ul>	<ul style="list-style-type: none"> <li>• Arm A: On-demand</li> <li>• Arm B: Elective and emergency surgery</li> </ul>
Primary endpoint and key secondary endpoint(s)	<ul style="list-style-type: none"> <li>• Annualized Bleed Rate (ABR) - comparing subject's historical and on-study ABR for spontaneous bleeding episodes</li> <li>• Key secondary endpoint: Safety and additional efficacy measures of prophylactic treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Hemostatic efficacy and safety of rVWF, with or without ADVATE, in the treatment and control of nonsurgical bleeding events</li> <li>• Key secondary endpoint: Hemostatic efficacy assessed after the last perioperative rVWF infusion</li> </ul>
Status	<ul style="list-style-type: none"> <li>• Filed May 2021 potential approval by March 2022</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: October 2016</li> <li>• Estimated primary completion date: FY23</li> </ul>

# TAKHZYRO (LANADELUMAB): PLASMA KALLIKREIN (PKAL) INHIBITOR

Study	<a href="#">NCT04070326</a>	<a href="#">NCT04206605</a>
Indication	Hereditary angioedema (HAE) pediatric	Non-histaminergic angioedema with normal C1-Inhibitor
Phase	Phase III SPRING	Phase III CASPIAN
# of Patients	N = 20	N = 75
Target Patients	Type I and Type II hereditary angioedema, ages 2 to <12 yo	Non-histaminergic bradykinin-mediated angioedema (BMA) with normal C1-inhibitor
Arms/Intervention	<ul style="list-style-type: none"> <li>Lanadelumab 150mg; q4wks ages 2 to &lt; 6, q2wks ages 6 to &lt;12 yo</li> </ul>	<ul style="list-style-type: none"> <li>Lanadelumab 300mg q2wks</li> </ul>
Primary endpoint and key secondary endpoint(s)	<ul style="list-style-type: none"> <li>Primary: Safety and pharmacokinetics</li> <li>Key secondary: Clinical outcomes, pharmacodynamics</li> </ul>	<ul style="list-style-type: none"> <li>Primary: Number of investigator-confirmed angioedema attacks during the treatment period of Day 0 through Day 182</li> <li>Key secondary: Number of participants achieving attack-free status during the treatment period of Day 0 through Day 182</li> </ul>
Status	<ul style="list-style-type: none"> <li>Study start date: August 2019</li> <li>Estimated primary completion date: FY22</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: August 2020</li> <li>Estimated primary completion date: FY23</li> </ul>

# OBIZUR (TAK-672): RECOMBINANT PORCINE FACTOR VIII

<b>Study</b>	<b><u>NCT04580407</u></b>
<b>Indication</b>	Acquired Hemophilia A
<b>Phase</b>	<b>Phase II/III</b>
<b># of Patients</b>	N = 5
<b>Target Patients</b>	Japanese subjects ≥18 years of age with AHA
<b>Arms/Intervention</b>	<ul style="list-style-type: none"><li>• Single group assignment</li></ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	The primary objective is to evaluate the efficacy and safety of TAK-672 for the treatment of serious bleeding events in Japanese subjects with AHA.
<b>Status</b>	<ul style="list-style-type: none"><li>• Estimated study start date: November 2021</li></ul>

# MARIBAVIR (TAK-620): ORAL VIRAL PROTEIN KINASE INHIBITOR

Study	<a href="#">NCT02931539</a>	<a href="#">NCT02927067</a>
Indication	Treatment of Resistant/Refractory Post-Transplant Cytomegalovirus (CMV) Infection	Treatment of CMV infection in Hematopoietic Stem Cell Transplant Recipients
Phase	Phase III	Phase III
# of Patients	N = 351	N = 550
Target Patients	Treatment of CMV infection refractory or resistant to ganciclovir, valganciclovir, cidofovir or foscarnet in solid organ transplant (SOT) and stem cell transplant patients	Treatment of asymptomatic CMV infection in stem cell transplant patients
Arms/Intervention	Arm A: Maribavir Arm B: Investigator-assigned treatment	Arm A: Maribavir Arm B: Valganciclovir
Primary endpoint and key secondary endpoint(s)	<ul style="list-style-type: none"> <li>• <b>Primary:</b> Confirmed clearance of plasma CMV DNA (CMV viremia clearance) at the end of Study Week 8</li> <li>• <b>Secondary:</b> Achievement of CMV viremia clearance and resolution or improvement of tissue invasive CMV disease or CMV syndrome for subjects symptomatic at baseline or achievement of clearance of viremia and no symptoms of tissue invasive CMV disease or CMV syndrome for subjects asymptomatic at baseline at the end of Study Week 8, followed by maintenance of this treatment effect for an additional 8 weeks off treatment</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Primary:</b> Confirmed clearance of plasma CMV DNA (CMV viremia clearance) at the end of Study Week 8</li> <li>• <b>Secondary:</b> Maintenance of confirmed CMV viremia clearance achieved at the end of Study Week 8 through Week 16 having received exclusively a study-assigned treatment.</li> </ul>
Status	<ul style="list-style-type: none"> <li>• Study start date: December 2016</li> <li>• Actual primary completion date: Q3FY20</li> <li>• Study met its primary and secondary endpoint.</li> <li>• Phase 2: Papanicolaou GA, et al. Clin Infect Dis. 2019 Apr 8;68(8):1255-1264.</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: April 2017</li> <li>• Estimated primary completion date: FY21</li> <li>• Phase 2: Maertens J, et al. N. Engl J Med 2019;381:1136-47.</li> </ul>



# TAK-755: REPLACEMENT OF THE DEFICIENT ADAMTS13 ENZYME

Study	<a href="#">NCT03393975</a>	<a href="#">NCT03922308</a>	<a href="#">NCT03997760</a>
Indication	Congenital Thrombotic Thrombocytopenic Purpura (cTTP)	Immune Thrombotic Thrombocytopenic Purpura (iTTP)	Sickle Cell Disease
Phase	Phase III	Phase II	Phase I
# of Patients	N = up to 68	N = 30	N = 20
Target Patients	Patients diagnosed with severe cTTP in prophylactic and on-demand treatment	Adult patients diagnosed with iTTP	Adult patients with sickle cell disease at baseline health
Arms/Intervention	<p>Prophylaxis Treatment Cohort: 6 + 6 months cross over of TAK-755 vs SoC followed by 6 months TAK-755 extension</p> <ul style="list-style-type: none"> <li>• <b>Arm 1:</b> TAK-755 followed by SOC</li> <li>• <b>Arm 2:</b> SOC followed by TAK-755 (Patients are also eligible to enter the prophylaxis study upon completion of acute treatment)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Arm 1:</b> TAK-755 High dose + SOC</li> <li>• <b>Arm 2:</b> TAK-755 Low dose + SOC</li> <li>• <b>Arm 3:</b> Placebo + SOC</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Part A:</b> TAK-755 (three dose levels) or placebo administered at baseline health</li> </ul>
Primary endpoint and key secondary endpoint(s)	Incidence of acute TTP episodes in subjects receiving prophylactic treatment with either TAK-755 or SoC	ADAMTS-13 activity, ADAMTS-13 binding and inhibitory antibodies, Platelet count, and LDH levels	Safety, PK, and incidence of binding and inhibitory antibodies to ADAMTS-13
Status	<ul style="list-style-type: none"> <li>• Study start date: October 2017</li> <li>• Estimated primary completion date: FY22</li> </ul>	<ul style="list-style-type: none"> <li>• Study enrollment complete: August 2021</li> <li>• Estimated primary completion date: FY21</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: October 2019</li> <li>• Estimated primary completion date: FY22</li> </ul>

# TAK-611: RHASA<sup>1</sup> ENZYME REPLACEMENT THERAPY FOR MLD, INTRATHECAL (IT)

Study	<a href="#">NCT01887938</a>	<a href="#">NCT03771898</a>
<b>Indication</b>	Treatment of patients with motor symptoms in Metachromatic Leukodystrophy (MLD)	Treatment of patients with motor symptoms in Metachromatic Leukodystrophy (MLD)
<b>Phase</b>	Phase I/II Extension Trial (of HGT-MLD-070)	Registration Enabling Phase IIb
<b># of Patients</b>	N = 23	N = 42
<b>Target Patients</b>	Children with Metachromatic Leukodystrophy (MLD)	Late Infantile Metachromatic Leukodystrophy (MLD)
<b>Arms/Intervention</b>	<p>Open Label with 4 Cohorts:</p> <ul style="list-style-type: none"> <li>• Cohort 1 – 10 mg dose level</li> <li>• Cohort 2 – 30 mg dose level</li> <li>• Cohort 3 – 100 mg dose level</li> <li>• Cohort 4 – 100 mg dose level (Process B)</li> </ul>	<p>Open Label with 6 Groups:</p> <ul style="list-style-type: none"> <li>• Group A - GMFC-MLD level of 1 or 2</li> <li>• Group B - GMFC-MLD level of 3</li> <li>• Group C - GMFC-MLD level of 4</li> <li>• Group D - younger siblings of enrolled subjects, and have the same ASA allelic constitution</li> <li>• Group E - GMFC-MLD level of 1 or 2 ( ≥12 to &lt;18 mons of age)</li> <li>• Group F - GMFC-MLD level of 5 or 6</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>Primary - Safety will be measured by the following endpoints:</p> <ul style="list-style-type: none"> <li>• Reporting of treatment-emergent adverse events (TEAEs)</li> <li>• Change from baseline in clinical laboratory testing (serum chemistry including liver function tests, hematology, and urinalysis)</li> <li>• Change from baseline in vital signs, physical examinations, and CSF chemistry (including cell counts, glucose, albumin, and protein)</li> <li>• Determination of the presence of anti-HGT-1110 antibodies in CSF and/or serum</li> </ul>	<p>Primary - The primary efficacy endpoint is response in Group A, defined as maintenance of gross motor function at 2 years (Week 106), evaluated as no greater than 2 levels decline from baseline in GMFC-MLD. If suitable controls cannot be matched despite the sponsor's best efforts, change from baseline results of GMFC-MLD at Week 106 may be compared with a prespecified objective threshold to evaluate primary efficacy for this study.</p>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: May 2013</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: May 2019</li> <li>• Estimated primary completion date: FY23</li> </ul>

# TAK-609: CNS REPLACEMENT OF THE DEFICIENT-IDS<sup>1</sup> ENZYME, INTRATHECAL (IT)

Study	<a href="#">NCT01506141</a>	<a href="#">NCT02412787</a>
Indication	Hunter Syndrome with Cognitive Impairment	Hunter Syndrome with Cognitive Impairment
Phase	Phase I/II (extension of HGT-HIT-045) HGT-HIT-046	Phase II/III (extension of HGT-HIT-094) SHP609-302
# of Patients	N = 14	N = 56 (including sub-study)
Target Patients	Pediatric participants that completed HGT-HIT-045 with Hunter syndrome and cognitive Impairment	Pediatric participants that completed study HGT-HIT-094 to continue receiving Elaprase treatment in conjunction with IdS IT or to continue receiving Elaprase treatment and begin concurrent IT treatment for those that did not receive IdS IT treatment in study HGT-HIT-094.
Arms/Intervention	All participants will receive Idursulfase-IT once monthly at the dose used in study HGT-HIT-045 via intrathecal drug delivery device (IDDD).	All 56 participants will receive 10 mg of IdS IT once every 28 days. Participants who are younger than 3 years of age will receive an adjusted dose of 7.5 mg (>8 months to 30 months of age) and 10 mg (>30 months to 3 years of age).
Primary endpoint and key secondary endpoint(s)	Extension study of HGT-HIT-045 evaluating long-term safety and clinical outcomes of intrathecal idursulfase in conjunction with intravenous Elaprase	An open label extension of study HGT-HIT-094 evaluating long term safety and clinical outcomes of intrathecal idursulfase administered in conjunction with Elaprase
Status	<ul style="list-style-type: none"> <li>Study start date: August 2010, recruitment completed</li> <li>Publication:                             <ul style="list-style-type: none"> <li>Muenzer J, et al. <i>Genet. Med.</i> 2016 Jan; 18(1):73-81.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Study start date: October 2015, recruitment completed</li> </ul>

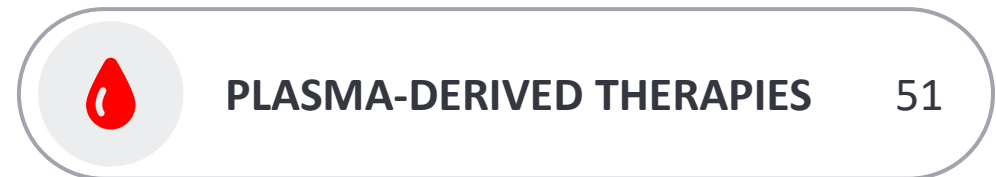
# MEZAGITAMAB (TAK-079): ANTI-CD38 ANTIBODY

Study	<a href="#">NCT04278924</a>	<a href="#">NCT04159805</a>
Indication	Persistent/Chronic Primary Immune Thrombocytopenia (ITP)	Myasthenia Gravis
Phase	Phase II	Phase II
# of Patients	N = 54	N = 36
Target Patients	Patients ≥18 years of age with persistent/chronic primary ITP	Patients ≥18 years of age with generalized Myasthenia Gravis
Arms/Intervention	<ul style="list-style-type: none"> <li>Part A: 2 dose groups and placebo added to stable background therapy               <ul style="list-style-type: none"> <li>Arm A1: Matching placebo (n = 12 patients)</li> <li>Arm A2: TAK-079 100 mg (n = 12 patients)</li> <li>Arm A3: TAK-079 300 mg (n = 12 patients)</li> </ul> </li> <li>Part B: Following interim analysis. 1 dose group and placebo (600 mg) added to stable, standard background therapy.               <ul style="list-style-type: none"> <li>Arm B1: Matching placebo (n = 6 patients)</li> <li>Arm B2: TAK-079 600 mg (n = 12 patients)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>2 dose groups and placebo added to stable background therapy               <ul style="list-style-type: none"> <li>TAK-079 300 mg (n = 12 patients)</li> <li>TAK-079 600 mg (n = 12 patients)</li> <li>Matching placebo (n = 12 patients)</li> </ul> </li> </ul>
Primary endpoint and key secondary endpoint(s)	The primary endpoint is the percentage of patients with TEAEs including Grade 3 or higher events, SAEs, and AEs leading to TAK-079 discontinuation.	The primary endpoint is the percentage of patients with TEAEs including Grade 3 or higher events, SAEs, and AEs leading to TAK-079 discontinuation.
Status	<ul style="list-style-type: none"> <li>Estimated study start date: November 2020</li> </ul>	Study start date: January 2020

# MECASERMIN RINFABATE (TAK-607): *REPLENISHES* *INSULIN LIKE GROWTH FACTOR-1, IV*

<b>Study</b>	<b><u>NCT03253263</u></b>
<b>Indication</b>	Preventing Chronic Lung Disease in Extremely Premature Infants
<b>Phase</b>	Phase IIb
<b># of Patients</b>	N = 477
<b>Target Patients</b>	Extremely premature infants (birth>23 weeks to < 28 weeks of gestational age)
<b>Arms/Intervention</b>	3 Arms 1:1:1 Ratio <ul style="list-style-type: none"><li>• ~159 subjects randomized to continuous IV infusion of SHP607 250 µg/kg/24 hours</li><li>• ~159 subjects randomized to continuous IV infusion of SHP607 400 µg/kg/24 hours</li><li>• ~159 subjects randomized to standard neonatal care</li></ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Time to final weaning off respiratory technology support (RTS) from Day 1 (i.e., randomization) through 12 months corrected age (CA), Incidence of Bronchopulmonary Dysplasia (BPD) or Death through Postmenstrual age (PMA) 36 Weeks
<b>Status</b>	<ul style="list-style-type: none"><li>• Study start date: May 2019</li></ul>

# OVERVIEW OF CLINICAL TRIAL SUMMARY



# TAK-994: OREXIN 2R AGONIST, ORAL

Study	<u><a href="#">NCT04096560</a></u>	<u><a href="#">NCT04551079</a></u>
Indication	Narcolepsy with or without cataplexy (NT1 or NT2)	Acute sleep phase delay paradigm in healthy male participants
Phase	Phase II SPARKLE-1501	Phase I
# of Patients	N = up to 202	N = 18
Target Patients	Patients with Narcolepsy Type 1 (with cataplexy, NT1) or Narcolepsy Type 2 (without cataplexy, NT2)	Healthy male participants
Arms/Intervention	<ul style="list-style-type: none"> <li><b>Part A:</b> Patients with NT1 treated for 28 days (TAK-994 dose 1 or placebo in 2:1 ratio). Second cohort with dose 2 TBD.</li> <li><b>Part B:</b> Dose ranging study in NT1 for 56 days (TAK-994 dose 1-3 or placebo in 1:1:1:1 ratio)</li> <li><b>Part C:</b> China specific cohort in NT1 for 56 days (TAK-994 or placebo in 2:1 ratio)</li> <li><b>Part D:</b> Patients with NT2 treated for 28 days (TAK-994 or placebo in 2:1 ratio). Second cohort with dose 2 TBD.</li> </ul>	Randomization to 1 of 3 treatment sequences with a washout period of at least 7 days in between each treatment period: <ul style="list-style-type: none"> <li>TAK-994 Dose A, Placebo, and TAK-994 Dose B</li> <li>TAK-994 Dose B, TAK-994 Dose A, and Placebo</li> <li>Placebo, TAK-994 Dose B, and TAK-994 Dose A</li> </ul>
Primary endpoint and key secondary endpoint(s)	<ul style="list-style-type: none"> <li>Maintenance of Wakefulness Test (MWT)</li> <li>Epworth Sleepiness Scale (ESS)</li> <li>Weekly Cataplexy Rate (WCR)</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of Wakefulness Test (MWT)</li> <li>Safety, PK/PD</li> </ul>
Status	<ul style="list-style-type: none"> <li>Study start date: July 2020</li> <li>Part A completed, as reported at April 2021 Takeda WAVE 1 pipeline investor call</li> <li>Study stopped, as reported in October 5<sup>th</sup> press release</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: September 2020</li> <li>Recruitment completed</li> <li>Actual Primary Completion Date: December 2020</li> </ul>

# TAK-861: OREXIN 2R AGONIST, ORAL

<b>Study</b>	<b><u>JRCT2071210007</u></b>
<b>Indication</b>	Sleep disorders
<b>Phase</b>	Phase I
<b># of Patients</b>	N = 196
<b>Target Patients</b>	Healthy volunteers
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• <b>Part A:</b> SRD in Japanese Healthy Adults</li> <li>• <b>Part B:</b> MRD in Japanese Healthy Adults</li> <li>• <b>Part C:</b> Multiple Dose in Japanese Healthy Elderly Participants</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Number of Participants Reporting one or More Treatment-emergent Adverse Events (TEAEs)</li> <li>• Number of Participants With at Least one Markedly Abnormal Value (MAV) for Laboratory Assessments Post-dose</li> <li>• Number of Participants With at Least one MAV for Vital Signs Post-dose</li> <li>• Number of Participants With at Least one MAV for Electrocardiograms (ECGs) Post-dose</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Pharmacokinetic parameters of TAK-861</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: February 2021</li> </ul>



# TAK-925: OREXIN 2R AGONIST, IV

Study	<a href="#">NCT03332784</a>	<a href="#">NCT03748979</a>
Indication	Narcolepsy type 1	Narcolepsy type 1 and Narcolepsy type 2
Phase	Phase I	Phase I
# of Patients	N = 58	N = 57
Target Patients	Patients with narcolepsy type 1 and healthy volunteers	Patients with narcolepsy type 1, patients with narcolepsy type 2 and healthy volunteers
Arms/Intervention	<ul style="list-style-type: none"> <li>• <b>Part 1:</b> Healthy participants and healthy elderly participants</li> <li>• <b>Part 2:</b> Patients with narcolepsy type 1: TAK-925 5 mg, 11.2 mg, 44.8mg or placebo with cross-over</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Part A:</b> Healthy participants</li> <li>• <b>Part B:</b> TAK-925 (Dose Levels 11mg, 44mg ) vs. placebo in NT1 patients</li> <li>• <b>Part C:</b> TAK-925 (Dose Levels 44mg, 112mg ) vs. placebo in NT2 patients</li> <li>• <b>Part A':</b> TAK-925 (Dose Levels 112mg) in healthy participants.</li> </ul>
Primary endpoint and key secondary endpoint(s)	Sleep Latency in Maintenance of Wakefulness Test (MWT) Karolinska Sleepiness Scale (KSS)	Sleep Latency in Maintenance of Wakefulness Test (MWT) Epworth Sleepiness Scale (ESS)
Status	<ul style="list-style-type: none"> <li>• Study start date: November 2017</li> <li>• Study primary completion date: September 2018</li> </ul> Publication: <a href="https://www.professionalabstracts.com/ws2019/iPlanner/#/presentation/1832">https://www.professionalabstracts.com/ws2019/iPlanner/#/presentation/1832</a>	<ul style="list-style-type: none"> <li>• Study start date: November 2018</li> <li>• Study primary completion date: October 2019</li> </ul> Publication: <a href="https://onlinelibrary.wiley.com/toc/13652869/2020/29/S1">https://onlinelibrary.wiley.com/toc/13652869/2020/29/S1</a>

# TAK-925: OREXIN 2R AGONIST, IV

Study	<u><a href="#">NCT04091425</a></u>	<u><a href="#">NCT04091438</a></u>
<b>Indication</b>	Excessive Daytime sleepiness in subjects with Obstructive Sleep Apnea	Idiopathic Hypersomnia
<b>Phase</b>	<b>Phase 1</b>	<b>Phase 1</b>
<b># of Patients</b>	N = 25	N = 40
<b>Target Patients</b>	Patients with obstructive sleep apnea who are experiencing excessive daytime sleepiness despite adequate use of CPAP	Patients with Idiopathic Hypersomnia (IH)
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>3 period, 3 treatment crossover: TAK-925 High Dose, Low dose and placebo</li> </ul>	<ul style="list-style-type: none"> <li>2 period, 2 treatment crossover: TAK-925 and placebo</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<ul style="list-style-type: none"> <li>Maintenance of Wakefulness Test (MWT)</li> <li>Karolinska Sleepiness Scale (KSS)</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of Wakefulness Test (MWT)</li> <li>Karolinska Sleepiness Scale (KSS)</li> <li>Safety, PK/PD</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: November 2019</li> <li>Study primary completion date: April 2020</li> <li>Results in-house awaiting publication at a future conference</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: January 2020</li> <li>Actual Primary Completion Date: November 2020</li> </ul>

# TAK-925: OREXIN 2R AGONIST, IV

<b>Study</b>	<b><u>NCT05025397</u></b>
<b>Indication</b>	Post-operative
<b>Phase</b>	Phase I
<b># of Patients</b>	N = 28
<b>Target Patients</b>	Healthy volunteers
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Cohort A1: TAK-925 Low Dose</li> <li>• Cohort A2: TAK-925 Middle Dose</li> <li>• Cohort A3: TAK-925 High Dose</li> <li>• Cohort P: TAK-925 TBD</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p><b>Primary:</b></p> <ul style="list-style-type: none"> <li>• Number of Participants With at Least one Treatment-emergent Adverse Event (TEAE)</li> </ul> <p><b>Secondary:</b></p> <ul style="list-style-type: none"> <li>• Observed Plasma Concentration at the end of Infusion for Danavorexton</li> <li>• Area Under the Plasma Concentration-time Curve From Time 0 to the Time of the Last Quantifiable Concentration for Danavorexton</li> <li>• Area Under the Plasma Concentration-time Curve From Time 0 to Infinity for Danavorexton</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: September 2021</li> <li>• Estimated primary completion date: Q4 FY21</li> </ul>

# SOTICLESTAT (TAK-935): CH24H INHIBITOR, ORAL

Study	<a href="#">NCT04940624</a>	<a href="#">NCT04938427</a>
Indication	Dravet Syndrome (DS)	Lennox–Gastaut Syndrome (LGS)
Phase	Phase III	Phase III
# of Patients	N = 142	N = 234
Target Patients	Dravet Syndrome patients 2-21 years of age with $\geq 4$ convulsive seizures per 28 days during the 4-6 week prospective Baseline Period	Lennox-Gastaut Syndrome patients 2-35 years of age with $\geq 8$ Major Motor Drop (MMD) seizures per 28 days during the 4-6 week prospective Baseline Period
Arms/Intervention	<ul style="list-style-type: none"> <li>142 DS subjects (1:1 soticlestat:placebo randomization ratio)</li> </ul>	<ul style="list-style-type: none"> <li>234 LGS subjects (1:1 soticlestat:placebo randomization ratio)</li> </ul>
Primary endpoint and key secondary endpoint(s)	<p>Primary Endpoint: Percent change from baseline in convulsive seizure frequency per 28 days in subjects receiving soticlestat compared with placebo during the full treatment period (Maintenance period for EMA registration).</p> <ul style="list-style-type: none"> <li>Proportion of responders defined as those with <math>\geq 50\%</math> reduction from baseline in convulsive seizures</li> <li>Percent change from baseline in frequency of all seizures</li> <li>CGI-I (clinician).</li> <li>Care GI-I (caregiver).</li> <li>CGI-I Seizure Intensity and Duration.</li> <li>CGI-I Non-seizure Symptoms.</li> <li>Change in QI-Disability score.</li> </ul>	<p>Primary Endpoint: Percent change from baseline in MMD seizure frequency per 28 days in subjects receiving soticlestat compared with placebo during the full treatment period (Maintenance period for EMA registration).</p> <ul style="list-style-type: none"> <li>Proportion of responders defined as those with <math>\geq 50\%</math> reduction from baseline in MMD seizures</li> <li>Percent change from baseline in frequency of all seizures</li> <li>CGI-I (clinician).</li> <li>Care GI-I (caregiver).</li> <li>CGI-I Seizure Intensity and Duration.</li> <li>CGI-I Non-seizure Symptoms.</li> <li>Change in QI-Disability score.</li> </ul>
Status	<ul style="list-style-type: none"> <li>Study start date: September 2021</li> <li>Estimated primary completion date: March 2024</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: October 2021</li> <li>Estimated primary completion date: March 2024</li> </ul>

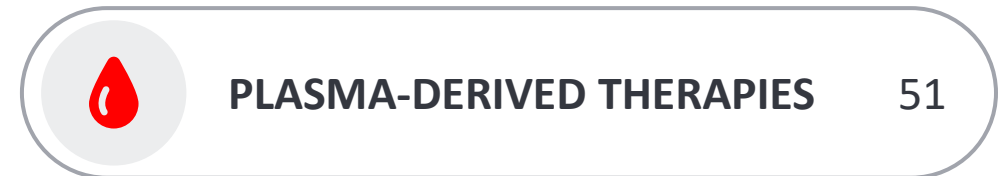
# TAK-341<sup>1</sup>: ALPHA-SYNUCLEIN ANTIBODY, IV

Study	<a href="#">NCT03272165</a>	<a href="#">NCT04449484</a>
Indication	Parkinson's Disease	Parkinson's Disease
Phase	Phase I	Phase I
# of Patients	N = 48	N = 36
Target Patients	Healthy volunteers	Patients with Parkinson's Disease
Arms/Intervention	<ul style="list-style-type: none"> <li>TAK-341 (MEDI1341) IV at a single ascending dose</li> <li>Placebo IV</li> </ul>	<p>Three cohorts of 12 patients treated over 8 weeks with three 60 minute IV infusions</p> <ul style="list-style-type: none"> <li>Dose A of TAK-341/MEDI1341 over 8 weeks, with 4 weeks intervals</li> <li>Dose A of TAK-341/MEDI1341 over 8 weeks, with 4 weeks intervals</li> <li>Matched placebo over 8 weeks, with 4 weeks intervals</li> </ul>
Primary endpoint and key secondary endpoint(s)	<ul style="list-style-type: none"> <li>Safety and tolerability</li> <li>Secondary endpoint: PK and PD (alpha-synuclein concentrations in plasma and CSF)</li> </ul>	<ul style="list-style-type: none"> <li>Safety and tolerability</li> </ul>
Status	<ul style="list-style-type: none"> <li>Study start date: October 2017</li> <li>Recruitment Completed</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: August 2020</li> </ul>

# TAK-071: M1 PAM, ORAL

<b>Study</b>	<b><u>NCT04334317</u></b>
<b>Indication</b>	Parkinson's Disease
<b>Phase</b>	<b>Phase II</b>
<b># of Patients</b>	N = 64
<b>Target Patients</b>	Parkinson's Disease patients with cognitive impairment and an elevated risk of falls
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>Participants aged 40 to less than or equal to (<math>\leq</math>) 65 years will be randomly assigned to one of the two treatment sequences in a crossover design:             <ul style="list-style-type: none"> <li>TAK-071 7.5 mg + Placebo</li> <li>Placebo + TAK-071 7.5 mg</li> </ul> </li> <li>A sentinel cohort in healthy volunteers (n=10) will provide PK and safety data, to extend the enrollment to patients in older age groups.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<ul style="list-style-type: none"> <li>Primary: Change from Baseline in Gait Variability during a 2-minute Dual-Task Walking Test</li> <li>Key Secondary:             <ul style="list-style-type: none"> <li>Change from Baseline in Global Cognition Profile</li> <li>PK</li> </ul> </li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: October 2020</li> </ul>

# OVERVIEW OF CLINICAL TRIAL SUMMARY



# ENTYVIO (VEDOLIZUMAB): *GUT-SELECTIVE ANTI- $\alpha4\beta7$ INTEGRIN MAB*

Study	<a href="#">NCT03657160</a>	<a href="#">NCT02620046</a>
Indication	Graft-versus-Host Disease (GvHD) prophylaxis IV	Ulcerative Colitis (UC) or Crohn's disease (CD) subcutaneous (SC)
Phase	Phase III	Phase III
# of Patients	N = 558	N = 692
Target Patients	Patients undergoing allogeneic hematopoietic stem cell transplantation (Allo-HSCT) in the prophylaxis of intestinal acute GvHD (aGvHD)	Patients with UC or CD who received vedolizumab SC in a prior vedolizumab SC study – long-term open-label extension
Arms/Intervention	<ul style="list-style-type: none"> <li><b>Arm 1:</b> Vedolizumab 300 mg at Days -1 (baseline), +13, +41, +69, +97, +125, and +153</li> <li><b>Arm 2:</b> Placebo at Days -1 (baseline), +13, +41, +69, +97, +125, and +153</li> </ul>	<ul style="list-style-type: none"> <li><b>Group A:</b> Vedolizumab SC 108 mg Q2W - patients from studies VISIBLE 1 (NCT02611830) and VISIBLE 2 (NCT02611817) who completed the Maintenance Period (Week 52) or were not randomized into Maintenance Period and achieved response at Week 14 after having received a third vedolizumab IV infusion at Week 6</li> <li><b>Group B:</b> Vedolizumab SC 108 mg QW - patients from studies VISIBLE 1 and VISIBLE 2 who withdrew early from the Maintenance Period due to treatment failure or patients from current study who enrolled on Q2W dosing but experienced treatment failure while on study and were dose escalated to QW dosing.</li> </ul>
Primary endpoint and key secondary endpoint(s)	Intestinal aGvHD-free survival by Day +180 after Allo-HSCT	Percentage of participants with study drug related treatment emergent adverse events (AEs) and serious AEs Key secondary endpoints: long term clinical response and remission rates for UC and CD
Status	<ul style="list-style-type: none"> <li>Study start date: February 2019</li> <li>Estimated primary completion date: FY22</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: April 2016</li> </ul>



# ENTYVIO (VEDOLIZUMAB): *GUT-SELECTIVE ANTI- $\alpha4\beta7$ INTEGRIN MAB*

Study	<a href="#">NCT03196427</a>	<a href="#">NCT02790138</a>
Indication	Ulcerative Colitis or Crohn's disease in pediatric patients IV	Antibiotic-refractory Pouchitis
Phase	Phase II (Long-term safety study)	Phase IV
# of Patients	N = 90	N = 102
Target Patients	Pediatric patients with Ulcerative Colitis or Crohn's disease between 2 to 17 years old at the time of randomization for Study NCT03138655.	Adult patients with Pouchitis who have undergone proctocolectomy and ileal pouch-anal anastomosis (IPAA) for Ulcerative Colitis and had an inadequate response with, lost response to, or are intolerant to antibiotic therapy
Arms/ Intervention	<ul style="list-style-type: none"> <li>• Arm 1 ( <math>\geq 30</math> kg weight cohort): Vedolizumab 300 mg or 200 mg (Q8W)</li> <li>• Arm 2 ( <math>&lt; 30</math> kg weight cohort): Vedolizumab 150 mg or 100 mg (Q8W)</li> </ul>	<ul style="list-style-type: none"> <li>• vedolizumab IV (300 mg)</li> <li>• placebo IV</li> </ul>
Primary endpoint and key secondary endpoint(s)	Percentage of participants with Treatment-Emergent Adverse Events (TEAEs)	Primary endpoint: Clinically relevant remission (mPDAI) at week 14  Secondary endpoints: Clinical remission (mPDAI) week 34 Clinical remission (PDAI) week 14 and week 34 Clinical remission (PDAI) week 34 Clinical response (mPDAI) week 14 and week 34
Status	<ul style="list-style-type: none"> <li>• Phase 2 start date: July 2018</li> <li>• Study completion date: May 2020</li> <li>• Pediatric Phase 3 to start 2021</li> </ul>	<ul style="list-style-type: none"> <li>• Study start date: October 2016</li> <li>• Study completion date: February 2021</li> </ul>

# ALOFISEL/CX601 (DARVADSTROCEL): ALLOGENEIC EXPANDED ADIPOSE-DERIVED STEM CELLS (ASC)

<b>Study</b>	<b><u>NCT03279081</u></b>
<b>Indication</b>	Complex perianal fistula(s) in patients with Crohn's disease
<b>Phase</b>	Phase III ADMIRE-CD II
<b># of Patients</b>	N = 554
<b>Target Patients</b>	Patients with Crohn's disease who have complex perianal fistula(s), previously treated and have shown an inadequate response to immunosuppressants, anti TNF, ustekinumab
<b>Arms/Intervention</b>	<ul style="list-style-type: none"><li>• Arm 1: Cx601, adult allogeneic expanded adipose-derived stem cells (eASC 120 million cells (5 million cells per milliliter)) administered once by intralesional injection</li><li>• Arm 2: Placebo-matching eASCs cells administered once by intralesional administration</li></ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<b>Primary: Combined Remission, defined as:</b> <ul style="list-style-type: none"><li>• The clinical assessment of closure of all treated external openings at week 24, and</li><li>• Absence of collections &gt;2 cm (in at least 2 dimensions) confirmed by blinded central MRI assessment at Week 24.</li></ul> <b>Key Secondary:</b> <ul style="list-style-type: none"><li>• Clinical Remission at weeks 24 and 52</li><li>• Time to Clinical Remission at weeks 24 and 52</li></ul>
<b>Status</b>	<ul style="list-style-type: none"><li>• Study start date: September 2017</li><li>• Estimated primary completion date: FY22</li></ul>

# VONOPRAZAN: *POTASSIUM-COMPETITIVE ACID BLOCKER, ORAL*

<b>Study</b>	<b><u>NCT04198363</u></b>
<b>Indication</b>	Acid related disease (adjunct to Helicobacter pylori eradication)
<b>Phase</b>	Phase III China
<b># of Patients</b>	N = 510
<b>Target Patients</b>	Helicobacter pylori (HP)-positive participants who require HP eradication
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Experimental: Vonoprazan 20 mg in combination with bismuth containing quadruple therapy</li> <li>• Active Comparator: Esomeprazole 20 mg in combination with bismuth containing quadruple therapy</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Percentage of Helicobacter pylori positive (HP+) participants with successful HP eradication at week 4 post-treatment
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: April 2020</li> <li>• Estimated primary completion date (LPO): FY21</li> </ul>

# TAK-721: *GLUCOCORTICOSTEROID, ORAL*

<b>Study</b>	<b><u>NCT03245840</u></b>
<b>Indication</b>	Eosinophilic Esophagitis (EoE)
<b>Phase</b>	Phase III
<b># of Patients</b>	N = 133
<b>Target Patients</b>	Subjects with EoE who have completed participation in both the SHP621-301 and SHP621-302 studies – extension study
<b>Arms/Intervention</b>	Open Label Study: <ul style="list-style-type: none"> <li>Budesonide oral suspension (BOS) (0.2 milligrams/mL) 2mg twice daily</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	To evaluate the long-term safety and tolerability of budesonide oral suspension <ul style="list-style-type: none"> <li># of participants with treatment-emergent adverse events (TEAEs)</li> <li># of participants with clinically relevant changes in physical examinations, vital signs and clinical laboratory assessments</li> <li>Change from baseline in bone mineral density (BMD) for adolescents assessed by dual-energy x-ray absorptiometry (DXA) scan</li> <li>Change from baseline in adrenocorticotrophic hormone (ACTH) stimulation level</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: October 2017</li> <li>Estimated Study Completion Date: October 2023</li> </ul>

# TAK-951: PEPTIDE AGONIST, SC

Study	<a href="#">NCT04486950</a>	<a href="#">NCT04557189</a>
Indication	Nausea & Vomiting	Nausea & Vomiting
Phase	Phase I	Phase IIa
# of Patients	N = 40	N = 100
Target Patients	Healthy participants	Surgical patients under general anesthesia with 3 or more Apfel risk factors
Arms/Intervention	<ul style="list-style-type: none"> <li>Cohort 1: TAK-951 20 mcg or matching placebo infusion (intravenous (IV)) over 60 minutes</li> <li>Cohort 2: TAK-951 (dose TBD) or matching placebo infusion (IV) over 60 minutes</li> <li>Cohort 3: TAK-951 (dose TBD) or matching placebo infusion (IV) &lt; 60 minutes</li> </ul>	<ul style="list-style-type: none"> <li><b>Group A:</b> Ondansetron placebo-matching intravenous (IV) injection, once immediately before induction of anesthesia and prophylaxis followed by TAK-951 4 mg subcutaneous (SC) injection once 30 to 45 mins before the end of surgery;</li> <li><b>Group B:</b> Ondansetron IV 4 mg once immediately before induction of anesthesia followed by TAK-951 placebo-matching injection SC administered 30 to 45 minutes before the end of surgery</li> </ul>
Primary endpoint and key secondary endpoint(s)	Safety and tolerability of IV administered TAK-951 in healthy participants	<p>Complete response in the immediate postoperative period (time frame: 6 hours post surgery)</p> <p>Percentage of participants with complete response, defined as no emesis (vomiting or retching) and no need for rescue therapy (indicated if vomiting/retching and/or nausea score <math>\geq 4</math> or upon participant's request), will be reported.</p> <p>The severity of nausea will be scored using a self-reported, 11-point numerical Verbal Rating Scale (VRS), where 0 represents "no nausea" and 10 represents the "worst nausea possible." Significant nausea is defined as a VRS score <math>\geq 4</math></p>
Status	<ul style="list-style-type: none"> <li>Study start date: July 2020</li> <li>Study completion date: May 2021</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: October 2020</li> <li>Estimated study completion date: Jan 2022 (latest projection)</li> </ul>

# TAK-510: PEPTIDE AGONIST, SC

<b>Study</b>	<b><u>NCT04731922</u></b>
<b>Indication</b>	Nausea & Vomiting
<b>Phase</b>	<b>Phase I</b>
<b># of Patients</b>	N = 160
<b>Target Patients</b>	Healthy participants
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Part 1 (Cohort 1-12): TAK-510 single rising dose</li> <li>• Part 2 (Cohort 13-17): TAK-510 multiple rising dose</li> <li>• Part 3 (Cohort 18-20): TAK-510 dose titration and redosing cohorts</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety and tolerability, pharmacokinetic, and immunogenicity of SC administered TAK-510 in healthy participants
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: Feb 2021</li> <li>• Estimated study completion date: Feb 2022</li> </ul>

# TAK-105: PEPTIDE AGONIST, SC

<b>Study</b>	<b><u>NCT04964258</u></b>
<b>Indication</b>	Nausea & Vomiting
<b>Phase</b>	<b>Phase I</b>
<b># of Patients</b>	N = 216
<b>Target Patients</b>	Healthy participants
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Part 1 (Cohort 1-12): TAK-105 single rising dose</li> <li>• Part 2 (Cohort 13-17): TAK-105 multiple rising dose</li> <li>• Part 3 (Cohort 18-23): TAK-105 dose titration cohorts</li> <li>• Part 4 (Cohort 24-27): TAK-105 redosing cohorts</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety and tolerability, pharmacokinetic, and immunogenicity of SC administered TAK-105 in healthy participants
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: Jul 2021</li> <li>• Estimated study completion date: Jan 2023</li> </ul>

# TAK-906: DOPAMINE D2/D3 RECEPTOR ANTAGONIST, ORAL

<b>Study</b>	<b><u>NCT03544229</u></b>
<b>Indication</b>	Gastroparesis
<b>Phase</b>	Phase II
<b># of Patients</b>	N = 205
<b>Target Patients</b>	Patients who have symptomatic idiopathic or diabetic gastroparesis.
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• TAK-906 5 mg capsule BID: approximately 25 subjects prior to discontinuation of randomization into this dose arm</li> <li>• TAK-906 25 mg capsule BID: n = 60</li> <li>• TAK-906 50 mg capsule BID: n = 60</li> <li>• Placebo capsule BID: n = 60</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	To assess the efficacy of treatment with 2 dose levels of TAK-906 in adult subjects with gastroparesis compared with placebo during 12 weeks of treatment
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: October 2018; recruitment completed: March 2021</li> <li>• Estimated Study Completion Date: September 2021</li> </ul>



# TAK-954: 5-HT<sub>4</sub>-HYDROXYTRYPTAMINE RECEPTOR AGONIST, IV

<b>Study</b>	<b><u>NCT03827655</u></b>
<b>Indication</b>	Post-Operative Gastrointestinal Dysfunction (POGD)
<b>Phase</b>	Phase II
<b># of Patients</b>	N = 180
<b>Target Patients</b>	Participant is scheduled to undergo a laparoscopic-assisted or open partial small- or large-bowel resection.
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>Regimen 1: Placebo (NS 100 mL infusion over 60 minutes) pre-operation and daily post-operation until return of upper and lower GI function (ie, resolution of POGD) or for up to 10 days.</li> <li>Regimen 3: TAK-954 (0.5 mg/100 mL infusion over 60 minutes) pre-operation and daily post-operation until return of upper and lower GI function or for up to 10 days.</li> <li>Regimen 5: TAK-954 (0.5 mg/100 mL infusion over 60 minutes) pre-operation and daily placebo infusions post-operation until return of upper and lower GI function or for up to 10 days.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	To assess the efficacy and safety of intravenous (IV) TAK-954 for accelerating the recovery of GI function post-surgery in patients undergoing open or laparoscopic-assisted partial small- or large-bowel resection.
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: March 2018</li> <li>A blinded interim analysis was conducted in January of 2021 leading to the recommendation of an independent monitoring committee to drop two of the 5 arms (regimen 2 &amp; 4). The study will continue with regimens 1, 3 &amp; 5.</li> <li>Estimated study completion date (data readout): June 2022</li> </ul>

# SIBOFIMLOC (TAK-018): *FIMH* ANTAGONIST, ORAL

<b>Study</b>	<b><u>NCT03943446</u></b>
<b>Indication</b>	Prevention of the Recurrence of Postoperative Crohn's Disease (CD)
<b>Phase</b>	Phase II
<b># of Patients</b>	N = 96
<b>Target Patients</b>	Documented diagnosis of CD confirmed by endoscopic biopsy before resection or by tissue obtained at resection.
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Cohort 1: TAK-018 0.30 g Low Dose BID for up to 26 weeks</li> <li>• Cohort 2: TAK-018 1.5 g High Dose BID for up to 26 weeks</li> <li>• Placebo</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	% of participants with endoscopic recurrence of CD as assessed by Rutgeerts Grading Scale at Week 26
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: August 2020</li> <li>• Estimated study completion (Data readout): February 2023</li> </ul>

# OVERVIEW OF CLINICAL TRIAL SUMMARY



# HYQVIA (TAK-771): IMMUNE GLOBULIN INFUSION 10% (HUMAN) WITH RECOMBINANT HUMAN HYALURONIDASE

Study	<a href="#">NCT02549170</a>	<a href="#">NCT02955355</a>
<b>Indication</b>	Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)	Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)
<b>Phase</b>	Phase III	Phase III
<b># of Patients</b>	N = 138	N = 148
<b>Target Patients</b>	Adult subjects with a confirmed diagnosis of CIDP and who have remained on a stable dosing regimen of IV immunoglobulin G (IGIV) therapy for at least 12 weeks prior to screening.	Adult subjects who have completed Epoch 1 of Study NCT02549170 without CIDP worsening.
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>Epoch 1: SC Treatment Period – Double blind assignment of HYQVIA/HyQvia or 0.25% albumin placebo solution with rHuPH20 6 months or until relapse.</li> <li>Epoch 2: IV Treatment Period - Open-label phase providing IGIV for subjects who meet relapse criteria during Epoch 1.</li> </ul>	<ul style="list-style-type: none"> <li>Subjects remain on same dosing regimen they were administered in Epoch 1 of study 161403 (1 to 2 g/kg body weight every 4 weeks). The first infusion will be at the subject’s full dose; there will be no ramp-up of dose.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	To evaluate the efficacy of HYQVIA/HyQvia as a maintenance therapy for CIDP to prevent relapse of neuromuscular disability and impairment. Safety and tolerability.	To evaluate the long-term safety, tolerability, and immunogenicity of HYQVIA/HyQvia.
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: April 2016</li> <li>Estimated primary completion date (LPO): December 2021</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: December 2016</li> <li>Estimated primary completion date (LPO): September 2023</li> </ul>

# HYQVIA (TAK-771): IMMUNE GLOBULIN INFUSION 10% (HUMAN) WITH RECOMBINANT HUMAN HYALURONIDASE

Study	<a href="#">NCT03277313</a>	<a href="#">NCT03116347</a>
<b>Indication</b>	Primary Immunodeficiency Diseases (PID)	Primary Immunodeficiency Diseases (PID)
<b>Phase</b>	Phase III	Phase IV
<b># of Patients</b>	N = 44	N = 42
<b>Target Patients</b>	Pediatric subjects with primary immunodeficiency diseases in the US	Pediatric subjects with primary immunodeficiency diseases in the EU
<b>Arms/Intervention</b>	<p>Single-Group:</p> <ul style="list-style-type: none"> <li>Epoch 1: HyQvia SC dose and ramp up for all patients; up to 6 weeks duration; patients were previously treated with IVIG or other SC immunoglobulin</li> <li>Epoch 2: HYQVIA treatment (final dosing); 1-3 years                             <ul style="list-style-type: none"> <li>For IV-pre-treated subjects: every three or four weeks, depending on the subject's previous IV dosing schedule.</li> <li>For SC-pre-treated subjects: every three or four weeks, at the discretion of investigator and subject.</li> </ul> </li> <li>Epoch 3: Safety Follow-Up: up to 1 year, if needed</li> </ul>	<p>Single-Group:</p> <ul style="list-style-type: none"> <li>Epoch 1: HyQvia SC dose and ramp up for patients previously not treated with HyQvia</li> <li>Epoch 2: HyQvia dose once every three or four weeks; 1-3 years                             <ul style="list-style-type: none"> <li>For IV-pretreated subjects: every three or four weeks, depending on the subject's previous IV dosing schedule.</li> <li>For SC-pretreated subjects: every three or four weeks, at the discretion of investigator and subject</li> <li>For HyQvia pre-treated subjects: No change in frequency of administration</li> </ul> </li> <li>Epoch 3: Safety Follow-Up: up to 1 year, if needed</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>Primary: Efficacy - rate of acute serious bacterial infections per participant per year.</p> <p>Secondary: Safety, tolerability, immunogenicity, efficacy, PK, health-related Quality of Life.</p>	<p>Primary: Safety</p> <p>Secondary: Tolerability, immunogenicity, efficacy, health-related Quality of Life.</p>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: October 2017</li> <li>Estimated primary completion date (LPO): May 2023</li> <li>Interim Analysis Study Report completed 04 Jun 2021.</li> </ul>	<ul style="list-style-type: none"> <li>Study start date: June 2017</li> <li>Primary completion date (LPO): Jan 2021</li> </ul>

# CUVITRU (TAK-664): IMMUNE GLOBULIN SUBCUTANEOUS (HUMAN), 20% SOLUTION (20% SCIG) IN JAPANESE SUBJECTS WITH PID

<b>Study</b>	<a href="#">NCT04346108, JapicCTI-205162</a>
<b>Indication</b>	Primary Immunodeficiency Diseases (PID)
<b>Phase</b>	Phase III
<b># of Patients</b>	N = 17
<b>Target Patients</b>	Japanese Subjects with PID
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>Epoch 1 (13 weeks): IGIV: IGIV will be administered via IV infusions every 3 or 4 weeks, as per local product label, at the same dose as during pre-study period (equivalent to approximately 200 - 600 mg/kg BW at 3- or 4- week intervals).</li> <li>Epoch 2 (24 weeks): approximately 50 - 200 mg/kg of Immune Globulin Subcutaneous (Human), 20% Solution (IGSC, 20%), will be administered subcutaneously once a week. The dose in Epoch 2 will be adjusted so that it is an equivalent weekly dose of the dose administered in Epoch 1.</li> <li>Epoch 3 (12 weeks): approximately 100 - 400 mg/kg of Immune Globulin Subcutaneous (Human), 20% Solution (IGSC, 20%), will be administered subcutaneously once every 2 weeks in a subset of 7 subjects. The dose in Epoch 3 will be twice the dose in Epoch 2.</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	<ol style="list-style-type: none"> <li>To assess serum trough IgG concentrations following weekly administration of IGSC, 20% (Epoch 2) and serum trough IgG concentration after biweekly administration of IGSC, 20% (Epoch 3), in Japanese subjects with PID.</li> <li>To assess serum trough IgG concentrations following every 3-week or every 4-week administration of IGIV (Epoch 1) in Japanese subjects with PID.</li> <li>To characterize the pharmacokinetic (PK) profiles of IGSC, 20% in Japanese subjects with PID following weekly subcutaneous (SC) administration (Epoch 2).</li> <li>To evaluate the safety and tolerability of IGSC, 20% (Epoch 2, Epoch 3) and of intravenous immunoglobulin (IGIV) (Epoch 1) in Japanese subjects with PID.</li> <li>To evaluate the efficacy of IGSC, 20% (Epoch 2, Epoch 3) and of IGIV (Epoch 1) in Japanese subjects with PID.</li> <li>To assess quality of life aspects, treatment satisfaction, and treatment preference of Japanese subjects with PID (Epoch1, Epoch2, Epoch3).</li> </ol>
<b>Status</b>	<ul style="list-style-type: none"> <li>Study start date: August 2020</li> <li>Estimated primary completion date (LPO): January 2022</li> </ul>

# CEPROTIN (TAK-662): PROTEIN C CONCENTRATE

<b>Study</b>	<b><u>NCT04984889</u></b>
<b>Indication</b>	Congenital protein C deficiency
<b>Phase</b>	<b>Phase I/II</b>
<b># of Patients</b>	N = 3
<b>Target Patients</b>	Japanese participants with congenital protein C deficiency
<b>Arms/Intervention</b>	Open label, Single-dose of IV Ceprotrin (80 IU/kg)
<b>Primary endpoint and key secondary endpoint(s)</b>	<p>Primary: Protein C activity, Terminal Phase Elimination Half-life (<math>t_{1/2}</math>), Incremental recovery (IR), In-vivo recovery (IVR) , AUClast, <math>AUC_{\infty}</math>, <math>C_{max}</math>, <math>T_{max}</math></p> <p>Secondary: Number of Participants with Treatment-Related Adverse Experiences (AEs)</p>
<b>Status</b>	<p>Study start date: August 2021</p> <p>Estimated primary completion date: December 2021</p>

# OVERVIEW OF CLINICAL TRIAL SUMMARY





# TAK-003: LIVE ATTENUATED TETRAVALENT VACCINE FOR PREVENTION OF DENGUE DISEASE

<b>Study</b>	<b><u>NCT02747927</u></b>
<b>Indication</b>	The prevention of dengue fever of any severity caused by any dengue virus serotype in individuals 4 years to 60 years of age
<b>Phase</b>	<b>Phase III Tetraivalent Immunization against Dengue Efficacy Study (TIDES)</b>
<b># of Patients</b>	N = 20,100
<b>Target Patients</b>	Healthy children aged 4 to 16-year-old in dengue-endemic countries in Latin America and Asia
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Randomized 2:1 to receive either TAK-003 or placebo on Day 1 and Day 90</li> </ul>
<b>Primary endpoint and key secondary endpoint(s) to be met per Trial Protocol</b>	<ul style="list-style-type: none"> <li>• Efficacy: Onset of protection 30 days post 2<sup>nd</sup> dose in all (seronegative and seropositive)             <ul style="list-style-type: none"> <li>• Primary endpoint: ≥70% efficacy against all symptomatic dengue fever caused by any strain</li> <li>• Secondary endpoints:                 <ul style="list-style-type: none"> <li>• ≥70% efficacy individual strains                     <ul style="list-style-type: none"> <li>– ≥60% efficacy in seronegatives</li> </ul> </li> </ul> </li> </ul> </li> <li>• Safety:             <ul style="list-style-type: none"> <li>• Comparable to other live attenuated viral vaccines (e.g., MMR, YF, Varicella)</li> <li>• No disease enhancement in partially protected individuals</li> </ul> </li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: September 2016</li> <li>• Primary completion date: July 2018</li> <li>• Estimated completion date: FY24/25 (following booster evaluation)</li> </ul> Publication: <ul style="list-style-type: none"> <li>• Biswal S, et al. <i>N Engl J Med.</i> 2019; 381:2009-2019. Biswal S, et al. <i>Lancet.</i> 2020; 395(10234):1423-1433.</li> <li>• López-Medina E, et al. <i>The Journal of Infectious Diseases.</i> 2020.</li> <li>• Biswal S, et al. <i>Clinical Infectious Disease.</i> 2021</li> </ul>

# TAK-919: MESSENGER RIBONUCLEIC ACID (mRNA) VACCINE

Moderna vaccine mRNA-1273, now known as COVID-19 Vaccine Moderna Intramuscular Injection

<b>Study</b>	<b><u>NCT04677660</u></b>
<b>Indication</b>	Prevention of infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)
<b>Phase</b>	Phase I/II and approved (May 21, 2021)
<b># of Patients</b>	N = 200
<b>Target Patients</b>	Healthy Japanese male and female adults aged 20 years and older
<b>Arms/Intervention</b>	<ul style="list-style-type: none"><li>• Participants will be randomized to either receive two doses of the vaccine candidate (150), or placebo (50), at Day 1 and Day 29<ul style="list-style-type: none"><li>• TAK-919 0.5 mL</li><li>• Matching placebo</li></ul></li><li>• Immunogenicity will be measured at Day 1, 29, 43, 57, 209 and 394</li><li>• The study will include 12-months safety follow-up after the second dose</li></ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety and Immunogenicity of 2 doses of TAK-919 given 28 days apart
<b>Status</b>	Start date: Jan 2021 Estimated completion date: March 2022 Approved by the Japan Ministry of Health, Labour and Welfare in May 2021

# TAK-019: RECOMBINANT SPIKE PROTEIN NANOPARTICLE VACCINE

Vaccines

Novavax vaccine candidate (with Matrix-M™ adjuvant), NVX-CoV2373

<b>Study</b>	<b><u>NCT04712110</u></b>
<b>Indication</b>	Prevention of infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)
<b>Phase</b>	Phase I/II
<b># of Patients</b>	N = 200
<b>Target Patients</b>	Healthy Japanese male and female adults aged 20 years and older
<b>Arms/Intervention</b>	<ul style="list-style-type: none"><li>• Participants will be randomized to either receive two doses of the vaccine candidate (n=150), or placebo (n=50), at Day 1 and Day 21<ul style="list-style-type: none"><li>• TAK-019 0.5 mL</li><li>• Matching placebo</li></ul></li><li>• Immunogenicity will be measured at Day 1, 22, 36, 50, 202 and 387</li><li>• The study will include 12-months safety follow-up after the second dose</li></ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety and Immunogenicity of 2 doses of TAK-019 given 21 days apart
<b>Status</b>	Start date: February 24, 2021 Estimated completion date: April 4, 2022

# TAK-426: PURIFIED INACTIVATED ZIKA VIRUS VACCINE PIZV

<b>Study</b>	<b><u>NCT03343626</u></b>
<b>Indication</b>	For active immunization for prevention of disease caused by Zika virus (ZIKV)
<b>Phase</b>	Phase I
<b># of Patients</b>	N = 271
<b>Target Patients</b>	Healthy Adult Participants aged 18-49-years of age
<b>Arms/Intervention</b>	<ul style="list-style-type: none"> <li>• Placebo: TAK-426 placebo-matching injection, intramuscular, once on Days 1 and 29</li> <li>• Low Dose: PIZV 2 microgram (mcg) (PIZV 0.5 milliliter (mL), 2 mcg antigen, injection, intramuscular, once on Days 1 and 29)</li> <li>• Medium Dose: PIZV 5 mcg (PIZV 0.5 mL, 5 mcg antigen, injection, intramuscular, once on Days 1 and 29)</li> <li>• High Dose: PIZV 10 mcg (PIZV 0.5 mL, 10 mcg antigen, injection, intramuscular, once on Days 1 and 29)</li> </ul>
<b>Primary endpoint and key secondary endpoint(s)</b>	Safety, immunogenicity and dose ranging study
<b>Status</b>	<ul style="list-style-type: none"> <li>• Study start date: November 2017</li> <li>• Final study report: Expected October 2021</li> </ul> Publication: <ul style="list-style-type: none"> <li>• Han H, et al. <i>Lancet</i>. 2021.</li> </ul>



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