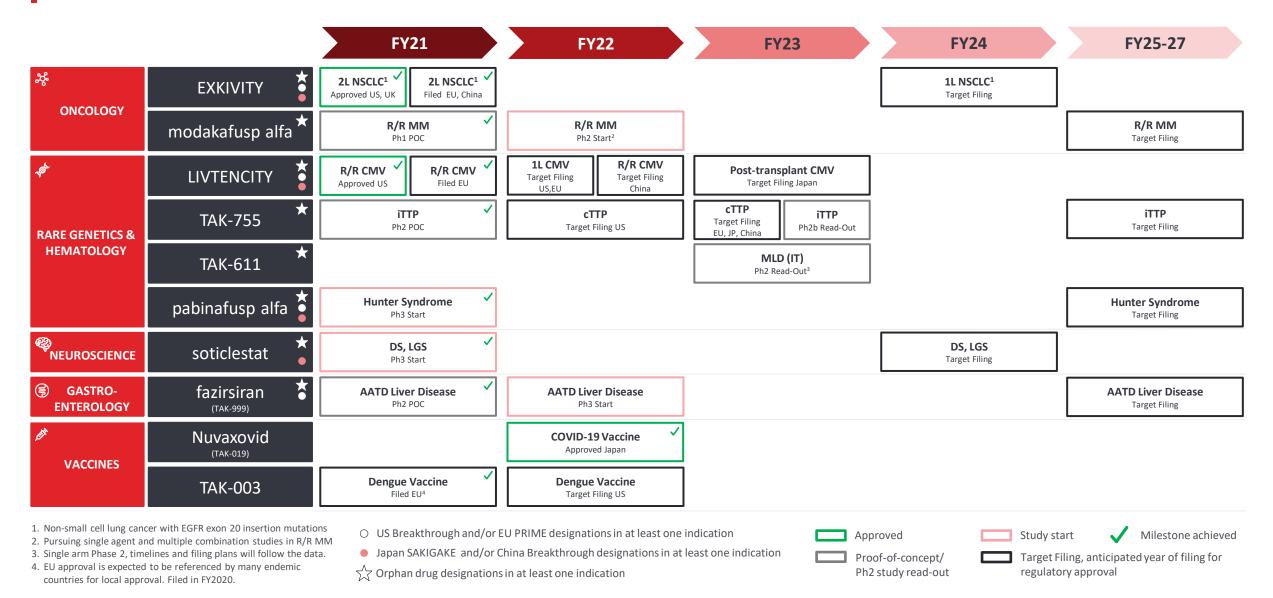
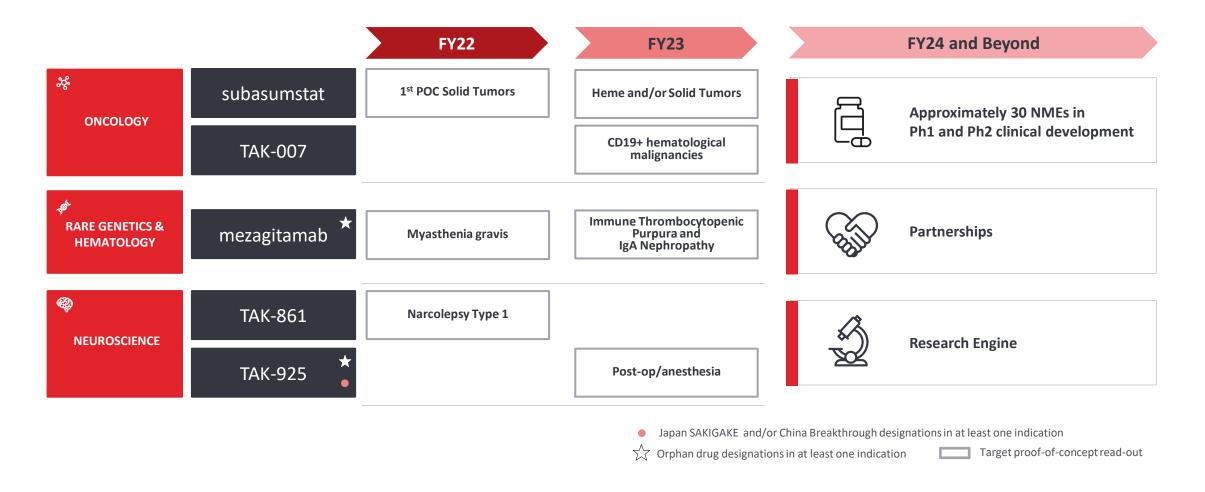
10 LATE-STAGE DEVELOPMENT PROGRAMS WITH UPCOMING NME FILING AND EXPANSION OPPORTUNITIES





KEY PROOF-OF-CONCEPT READOUTS IN FY22/23 EXPECTED TO ADD TO LATE-STAGE PIPELINE AND GLOBAL FILINGS IN MID/LATE 2020'S

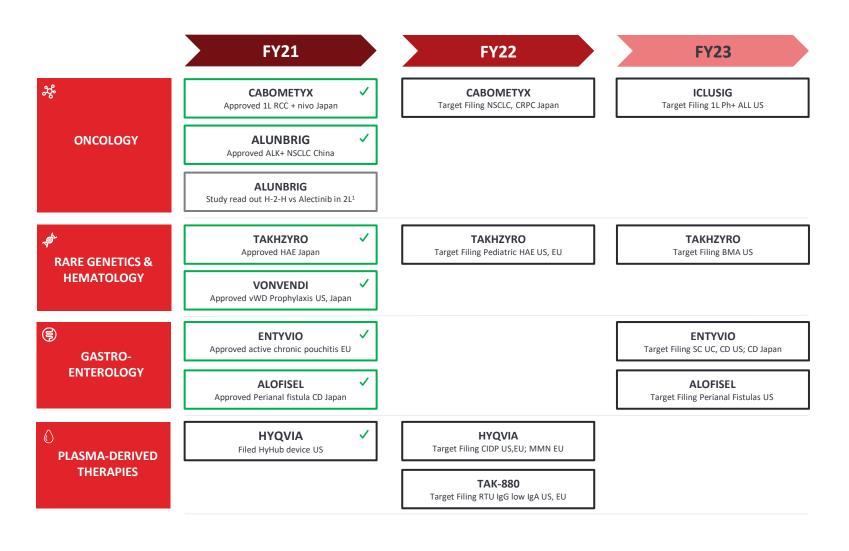




Proof-of-concept (POC): Achieving proof-of-concept means obtaining clinical data sufficient to initiate pivotal trials.

LCM MILESTONES FOR OUR GROWTH & LAUNCH AND OTHER KEY PRODUCTS





Trial met the pre-specified futility criteria and is being stopped.
 The data will be shared at a later point in time.



Study read-out





Milestone achieved

GLOSSARY OF ABBREVIATIONS



Regional Abbreviations:

CN: China; EU: Europe; JP: Japan; US: United States of America

| AATD | α1-antitrypsin deficiency |
|-------|---|
| ADC | antibody drug conjugate |
| ADHD | attention deficit hyperactivity disorder |
| AHA | acquired hemophilia A |
| ALK | anaplastic lymphoma kinase |
| ALCL | anaplastic large-cell lymphoma |
| ALL | acute lymphocytic leukemia |
| AML | acute myeloid leukemia |
| ASCT | autologous stem cell transplant |
| ARD | acid-related diseases |
| AVA | Advanced Vial Access |
| BBB | blood brain barrier |
| BLA | biologics license application |
| вма | bradykinin mediated angioedema |
| BTD | breakthrough therapy designation |
| CAR-T | chimeric antigen receptor-T |
| CD | Crohn's disease |
| CHMP | Committee for Medicinal Products for Human Use |
| CIDP | chronic inflammatory demyelinating polyradiculoneuropathy |
| CLL | chronic lymphocytic leukemia |
| CML | chronic myeloid leukemia |
| CMV | cytomegalovirus |
| CNS | central nervous system |
| CPF | complex perianal fistulas |
| CRL | complete response letter |
| CRPC | Castrate-resistant prostate cancer |
| CTCL | cutaneous T-cell lymphoma |
| сТТР | congenital thrombotic thrombocytopenic purpura |
| | |

| DLBCL diffuse large B-cell lymphoma DOAC direct oral anti-coagulation DS Dravet syndrome DU duodenal ulcer Dx Diagnosis EE H erosive esophagitis healing EE M erosive esophagitis maintenance EGFR epidermal growth factor receptor EMA European Medicines Agency FDA the U.S. Food & Drug Administration FL front line FSI first subject in FY fiscal year GERD gastroesophageal reflux disease GI gastric ulcer GVHD graft versus host disease HAE hereditary angioedema HaE hemA hemophilia A HL Hodgkin lymphoma HSCT hematopoietic stem cell transplant Inflammatory bowel disease IH idiopathic hypersomnia IND investigational new drug INTP Immune thrombocytopenic purpura INTP Immune thrombocytopenic purpura INTP immune thrombotic thrombocytopenic purpura | | |
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| DOAC direct oral anti-coagulation DS Dravet syndrome DU duodenal ulcer Dx Diagnosis EE H erosive esophagitis healing EE M erosive esophagitis maintenance EGFR epidermal growth factor receptor EMA European Medicines Agency FDA the U.S. Food & Drug Administration FL front line FSI first subject in FY fiscal year GERD gastroesophageal reflux disease GI gastrointestinal GU gastric ulcer GVHD graft versus host disease HAE hereditary angioedema H2H head-to-head HemA hemophilia A HL Hodgkin lymphoma HSCT hematopoietic stem cell transplant inflammatory bowel disease IH idiopathic hypersomnia investigational new drug iNHL indolent non-Hodgkin's lymphoma ITP Immune thrombocytopenic purpura iTTP immune thrombotic thrombocytopenic purpura iTTP immune thrombotic thrombocytopenic purpura iTTP immune thrombotic thrombocytopenic purpura intravenous | DEE | developmental and epileptic encephalopathies |
| DI Dravet syndrome DU duodenal ulcer Dx Diagnosis EE H erosive esophagitis healing EE M erosive esophagitis maintenance EEGFR epidermal growth factor receptor EMA European Medicines Agency FDA the U.S. Food & Drug Administration FL front line FSI first subject in FY fiscal year GERD gastroesophageal reflux disease GI gastriculcer GVHD graft versus host disease HAE hereditary angioedema H2H head-to-head HemA hemophilia A HL Hodgkin lymphoma HSCT hematopoietic stem cell transplant IBD inflammatory bowel disease IH idiopathic hypersomnia IND investigational new drug INHL inmune thrombocytopenic purpura ITTP Immune thrombocytopenic purpura ITTP immune thrombotic thrombocytopenic purpura INI intravenous | DLBCL | diffuse large B-cell lymphoma |
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| ITP Immune thrombocytopenic purpura iTTP immune thrombotic thrombocytopenic purpura IV intravenous | IND | investigational new drug |
| iTTP immune thrombotic thrombocytopenic purpura IV intravenous | iNHL | indolent non-Hodgkin's lymphoma |
| iTTP immune thrombotic thrombocytopenic purpura IV intravenous | ITP | Immune thrombocytopenic purpura |
| | iTTP | |
| iPSC induced pluripotent stem cells | IV | intravenous |
| | iPSC | induced pluripotent stem cells |

| L-ASA | low dose aspirin |
|-------------|---|
| LSD | lysosomal storage disorder |
| LCM | lifecycle management |
| LGS | Lennox-Gastaut syndrome |
| mAb | monoclonal antibody |
| МАОВ | monoamine oxidase B |
| MDD | major depressive disorder |
| MG | myasthenia gravis |
| MLD | metachromatic leukodystrophy |
| мм | multiple myeloma |
| MMN | multifocal motor neuropathy |
| NBE | New Biological Entity |
| NCE | New Chemical Entity |
| ND | newly diagnosed |
| NDA | new drug application |
| Neg | Negative |
| NERD | non-erosive reflux disease |
| NHL | non-Hodgkin lymphoma |
| NK | natural killer |
| NME | new molecular entity |
| NMPA | National Medical Products Administration |
| NSCLC | non-small cell lung cancer |
| NSCT | non stem cell transplant |
| NT1 or 2 | narcolepsy Type 1 or 2 |
| ORR | overall response rate |
| OSA | obstructive sleep apnea |
| PARP | poly (ADP-ribose) polymerase |
| | |
| PAS | prior approval supplement |
| PAS PCAB | prior approval supplement potassium competitive acid blocker |

| PEX | plasma exchange |
|---------|--|
| Ph+ ALL | Philadelphia chromosome-positive acute lymphoblastic leukemia |
| PID | primary immunodeficiency |
| PK | pharmacokinetics |
| PMDA | Japan's Pharmaceuticals and Medical Devices Agency |
| POC | proof of concept |
| POGD | post-operative gastrointestinal dysfunction |
| PONV | postoperative nausea and vomiting |
| PRIME | Priority medicines scheme by EMA |
| PTCL | peripheral T-cell lymphoma |
| PTH | parathyroid hormone |
| R/R | relapsed/refractory or refractory/resistant |
| RCC | renal cell cancer |
| RTK | receptor tyrosine kinase |
| sALCL | systemic anaplastic large cell lymphoma |
| SBS | short bowel syndrome |
| sc | subcutaneous formulation |
| SCD | sickle cell disease |
| SCT | stem cell transplant |
| SID | secondary immunodeficiency |
| SLE | systemic lupus erythematosus |
| sq | squamous |
| STING | stimulator of interferon genes |
| SUMO | small ubiquitin-related modifier |
| TESD | treatment emergent sexual dysfunction |
| TKI | tyrosine kinase inhibitor |
| UC | ulcerative colitis |
| vWD | von Willebrand disease |
| VWF | von Willebrand factor |
| | |