Research and Development themes and projects
for Drug Discovery and Medical Technology

The Drug Discovery and Medical Technology platforms aim to deliver innovative drugs and medical technologies to patients with unmet medical needs and/or possessing rare disease currently, we are conducting research and development with the highest priority given to the order of the themes and projects shown in the table below.

- The stages are divided into three components, S (seed) stage, L (lead) stage, and P (clinical) stage, where each stage is further subdivided into S0 to S3, L1 to– L3, and P0 to P3.
- Project (L3 to P3): Advance candidate compounds, antibodies, or technology to non-clinical and clinical development under the direction of a project leader.
- Theme (S0 to L2): Promote selection of drug candidates or antibodies, and develop or improve technology in cooperation with theme leaders and portfolio managers.
- The abbreviations for modality are:
  AB: Antibody; BT: Basic Technology; CT/RM: Cell Therapy or Regenerative Medicine; GT: Gene therapy; MD: Medical Device; SM: Small Molecule.

Oncology area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Artificial adjuvant vector cells Ⅰ (WT1)	FUJII Shin-ichiro	CT/RM	Project
Cancer treatment by iPS NKT Cell	KOSEKI Haruhiko	CT/RM	Project
Development of tankyrase inhibitors	SEIMIYA Hiroyuki	SM	Project
Artificial adjuvant vector cells II (HPV)	FUJII Shin-ichiro	CT/RM	Project
Anti-cancer drugs targeting SIRT2	ITO Akihiro	SM	Theme
Unfolded protein response for the development of new anti-cancer drugs	MORI Kazutoshi	SM	Theme
Development of anti-cancer drug targeting histone acetyltransferase	YUSA Kosuke HARADA Hironori	SM	Theme

Infectious disease area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Artificial adjuvant vector cells III (SARS-CoV-2)	FUJII Shin-ichiro	CT/RM	Project
Antifungal drug	YOSHIDA Minoru	SM	Theme
Antibody drug development to prevent SARS-CoV-2 infection	SAITO Takashi	AB	Theme
Development of multiple antigenic peptides inducing pan-coronavirus IgM against the conserved region of coronavirus spike proteins	MASUDA Ken-ichi	Peptide	Theme

Ophthalmology area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Gene therapy for retinitis pigmentosa	ONISHI Akishi	GT	Theme
Regenerative medicine for retinal degenerative disease	MANDAI Michiko	CT/RM	Theme

Psychiatric / neurological disease area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Development of novel therapeutic agents for mood disorders targeting mitochondrial permeability transition pore (mPTP)	KUBOTA-SAKASHITA Mie	SM	Theme
Development of drug for Alzheimer's disease targeting a new mechanism	ASO Teijiro	SM	Theme
Development of integrated stress response inhibitors	ITO Takuhiro	SM	Theme

Congenital disease area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Development of G9a inhibitors for treatment of hemoglobinopathy (SCD)	ITO Akihiro	SM	Project
Development of a drug for Fabry disease targeting a suppression of globotriaosylceramide (Gb3) accumulation	KOBAYASHI Hiroki	SM	Theme
Drug for congenital aplastic anemia	HIROYAMA Takashi	SM	Theme
Drug for Diamond-Blackfan anemia	HIROYAMA Takashi	SM	Theme
Development of drugs for improving mitochondrial respiratory function	KOBAYASHI Hiroki	SM	Theme
Discovery of FBS2 inhibitors as novel therapeutics for NGLY1 deficiency	SUZUKI Tadashi	SM	Theme
Development of anti-cancer drugs using iPS cells derived from VHL patients	HAYASHI Yohei	SM	Theme

Gastrointestinal disease area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Antibody drug for hepatitis B	CHAYAMA Kazuaki	AB	Theme
Drug development for hepatitis B	OGAWA Kenji	SM	Theme

Immune / allergic disease area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Drug for atopic dermatitis	MIYAI Tomohiro	SM	Theme

Other area

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
Establishment of a heart-on-a-chip microdevice based on human iPS Cells	MASUMOTO Hidetoshi	BT	Theme