

## 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; MD: Medical Device; NA: Nucleic Acid; 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
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
Diagnostic and therapeutic molecules on the basis of acrolein as cancer biomarker	TANAKA Katsunori	SM	Theme
Cell recognition platform by glycan patterns	TANAKA Katsunori	BT	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
Antibody drug development to prevent SARS-CoV-2 infection	SAITO Takashi	AB	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 Tejiro	SM	Theme
Development of integrated stress response inhibitors	ITO Takuhiro	SM	Theme
Pathophysiological investigations and development of molecularly targeted drugs for cerebral aneurysms based on genetic mutations	NAKATOMI Hirofumi	SM	Theme
Development of drug for repeat diseases	INOUE Haruhisa	NA	Theme
Development of diagnostic agents for repeat disease	TANAKA Motomasa	AB	Theme
Development of antibody therapy for Alzheimer's disease	TANAKA Motomasa	AB	Theme
Development of drugs for Alzheimer's disease	TANAKA Motomasa	SM	Theme
Development of GPCR-targeted therapeutics for neurodegenerative diseases	KAMIGUCHI Hiroyuki	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
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

### **Gastrointestinal disease area**

Theme/Project	Theme/Project Leader	Modality	Project (L3 to P3)/ Theme (S0 to L2)
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
Mitochondrial translation-monitoring drug screening platform for mitochondrial diseases	IWASAKI Shintaro	SM	Theme