

S/N	Project Title	Lead PI	Host Institution
CRP33			
1	Development of a Novel Scleral Treatment for High (HM) and Pathologic Myopia (PM)	Hoang Quan Van Manh	NUS
2	Decoding Cellular Adaptive Immunity through AI-driven Modeling and Design of TCR-pMHC Interactions	Yang Zhang	NUS
3	Self-sustaining Embedded Electronics in Knitted Fabric	Low Hong Yee	SUTD
4	NICHES: Niche-Driven Immuno-evasion and Metastasis in High-risk Cancer Subtypes for Effective Stratification	Jayantha Gunaratne	A*STAR Research Entities (ARES)
5	Quantum Data Storage and Transduction for Scalable Quantum Technologies	Lam Ping Koy	A*STAR Research Entities (ARES)
6	Resolving In Vivo Challenges of Regenerative Cell Therapy for Spinal Cord Injury (ReVivoCells)	Chew Sing Yian	NTU
7	High-Performance Memristors with Confined-Filament Switching Mechanism	Mario Lanza Martinez	NUS
CRP32			
8	Mechanistic understanding of a programmable RNA-sensing ribozyme to develop a platform for cell context-specific release of non-coding RNA therapeutics	Sherry Aw	A*STAR Research Entities (ARES)
9	Broad-spectrum antibody therapeutics and vaccine development via precision targeting of hypervirulent and multi-drug resistant <i>Klebsiella pneumoniae</i>	Gan Yunn Hwen	NUS
10	Foundational Building Blocks for Next-Generation Magnetic Memories	Anjan Soumyanarayanan	NUS
11	Development of the next-generation live attenuated tetravalent dengue vaccine using a novel orthoflavivirus genome recoding approach	Justin Jang Hann Chu	NUS
12	Exploiting Tumor-specific RNA-editing for Antigen-based Cancer Therapy (ExTRACT)	Wu Wei	A*STAR Research Entities (ARES)
CRP31			
13	Optotwistronics: Enabling Ultrahigh-efficiency Nanoscale Nonlinear Light Sources	Liu Hong	A*STAR Research Entities (ARES)
14	Identifying novel microglia-based targets for neurodegeneration using immuno-competent organoids	Ng Shi Yan	A*STAR Research Entities (ARES)
15	DEBUT: Discovering Novel Biomarkers and Unveiling Therapeutic Vulnerabilities in Drug-tolerant Persister (DTP) cells	Tee Wee Wei	A*STAR Research Entities (ARES)
16	Electro-Biocatalytic Conversion of CO ₂ into Valuable Aromatics	Zhou Kang	SIT
17	Novel Chemoenzymatic Strategies for Rare Sugar Synthesis	Liang Zhaoxun	NTU
18	Extreme UV nanophotonics: quantum control and meta-optical design of extreme ultraviolet light sources	Wong Liang Jie	NTU
19	Hot-electron Integrated Nano-devices: A Versatile Electromagnetic Synthesizing Technology from THz to EUV (Hot INVEST)	Mohammad Samizadeh Nikoo	NTU
20	Alginate to Oil (A2O): Non-photosynthetic Diatoms and Sustainable Approaches to Produce Carbon-Neutral Foods and Fuel	Gregory Jedd	TLL
CRP30			
21	Long-life Solid-State Batteries by Intelligent Composites with Active Interfaces	Stefan Adams	NUS
22	Achieving Coherence in Opto-Mechatronic Levitation Systems for Precision Quantum Sensing	Lam Ping Koy	A*STAR Research Entities (ARES)
23	Miniaturizing Higher Dimensional Structured Light For Information Security	Joel Yang	SUTD
24	Phase-Separating Peptides as a General Platform for Intracellular Delivery of Antibody Therapeutics	Ali Miserez	NTU
CRP29			
25	Transformative Nanotechnologies for Molecular Profiling of Extracellular Vesicles	Huilin Shao	NUS
26	Directed Energy Materials (DEM) for Advanced Manufacturing	Terry Steele	NTU
27	Harnessing Randomness and Chaos in Complex Disordered Photonic Systems	Wang Qijie	NTU
28	Next-generation Geminal-atoms Catalysis as a Disruptive Technology for the Sustainable Fine Chemical Manufacturing	Lu Jiong	NUS
29	Spatial Multiome Cartography in Human Thymus to Guide NextGen Cell-based Therapies (SPECTRA)	Yuin Han Loh	A*STAR Research Entities (ARES)
CRP28			
30	Development of Individualized Cancer Vaccines	Xiaoyuan Chen	NUS
31	Targeting Novel Genes to Overcome Drug Resistance in EGFR-mutant Non-small Cell Lung Cancer (NSCLC)	Wanjin Hong	A*STAR Research Entities (ARES)
32	Integrating Wideband Tuneable Acoustic Filters on Silicon for High-speed Wireless Communication	Huajun Liu	A*STAR Research Entities (ARES)
CRP27			
33	Identifying Functional RNA Tertiary Structures in Dengue Virus	Yue Wan	A*STAR Research Entities (ARES)

34	Traversing Geodesics in Discovery-Development Space - from Novel Electrophotocatalysis to Sustainable and Scalable Manufacturing Processes	Shunsuke Chiba	NTU
35	Targeting Energy of Life for the Development of Drug Combination to Eradicate Antibiotic-tolerant Mycobacterium Abscessus, a Clinical Nightmare	Gerhard Grüber	NTU
36	Developing RNA Vaccines for Dengue Virus	Lok Shee Mei	Duke-NUS
37	Abiotic-Biotic Composites for Bioelectrosynthesis	Liu Bin	NUS
CRP26			
38	Identification of structural and functional roles of RNA in TNFR signaling: key for designing next generation drugs for cancers and immune disorders.	Vinay Tergaonkar	A*STAR Research Entities (ARES)
39	Activatable Metabolic Glycoengineering in Cancer Cells for Bioorthogonal Targeted Cancer Therapy	Zhao Yanli	NTU
40	Targeting the developmental origins of liver disease and its progression to hepatocellular carcinoma (HCC)	Torsten Wuestefeld	A*STAR Research Entities (ARES)
41	Advanced Infrared Optoelectronics and Applications with Emerging Quantum Materials	Teng Jinghua	A*STAR Research Entities (ARES)
42	A green, high-throughput and universal solution for spent lithium-ion battery materials recycling	Wang Qing	NUS
43	Engineered bacteriophages for hospital-acquired antibiotic-resistant Klebsiella pneumoniae and Staphylococcus aureus infections	Juan Pablo BIFANI	NUS NTU
44	Advanced Porous Materials and Membranes for Liquid-Phase Hydrocarbon Separations	Zhao Dan	NUS
45	Reinvigorating Natural Killer cells in the immunosuppressive tumor microenvironment (RINK-TME)	Lam Kong Peng	A*STAR Research Entities (ARES)
CRP25			
46	REDUCING DIABETIC MACROVASCULAR COMPLICATIONS DUE TO PERIPHERAL ARTERIAL DISEASE - REDUCE-PAD	Derek Hausenloy	Duke-NUS
47	On-Demand Synthesis of Pharmaceuticals in an End-to-End Fully Automated Fashion and Its Application to Accelerate Drug Discovery Process	Wu Jie	NUS
48	Development and Applications of Next-generation Transcriptome Imaging Technology	Chen Kok Hao	A*STAR Research Entities (ARES)
49	Memristive Halide Perovskites for Next Generation Embedded Neuromorphic Computing	Nripan Mathews	NTU
50	An experimental medicine decipher of a minimum correlate of cellular immunity	Ooi Eng Eong	Duke-NUS
51	Perovskite Quantum Emitters (PQE)	Sum Tze Chien	NTU
CRP24			
52	Discovering new target space for the development of drugs against malaria parasites.	Peter Preiser	NTU
53	Enhancement of Regenerative Stem Cell Therapy with Extracellular Matrix Proteins and Novel Small Molecules	William Hwang	NCCS
54	Organic thin-film energy sources for highly distributed nanopower generation	Peter Ho	NUS
55	In-memory Computing based on Multi-terminal Memtransistors for Cognitive Internet-of-Things (C-IoT)	Ang Kah Wee	NUS
56	Non-traditional computing enabled through the Ising model	Danner Aaron James	NUS
57	Developing hyperspectral OCT as a clinical test to detect neural dysfunction in degenerative diseases of the optic nerve and retina	Leopold Schmetterer	SERI