

## **IMMUNOTHERAPIES**

CLEC12A: Novel CLEC12A scFv Targeting CAR-T cells for Acute Myeloid Leukemia mmunotherapy	21MB064N
CD40: CD40 Agonists for Improved ex vivo TIL Manufacturing	21MA018N
cell: T cells expressing anti-CD3 antibodies autoactivate and decrease expression of T cell eceptors to treat GVHD, or make T cells suitable for off-the-shelf treatment of allogeneic subjects	21MA013N
<b>FAM</b> : Human ITAM Mutated Variants For Better Intracellular Signaling Domains For Gamma-Delta CAR T-Cell Activation	21MA008N
SR1: Cancer Vaccine Using Novel ESR1 Derived Peptides For Neoantigen Therapy	20MB062N
IOTCH: Single-domain antibodies (nanobodies) targeting the notch ligand DLL4 to Disrupt the nteraction of DLL4 and Notch1 for GVHD	20MB053N
CD33 CD123 NKG2DL: Bispecific Gamma Delta CAR-T Cells that Recognize CD33, CD123 and IKG2D Ligands for the Treatment of Acute Myeloid Leukemia	20MB050N
<b>DR2H1 or OR5V1:</b> Olfactory Receptor Targeting Chimeric Antigen Receptor Expressing T cell CAR-T) for Solid Tumors	20MA027
CD33 CD123: Novel Bispecific CD33 CD123 scFv CAR-T Cells for Acute Myeloid Leukemia mmunotherapy	20MA024
IER-2: Combination Therapy of a HER2-DC1 Dendritic Cell Cancer Vaccine and a Probiotic	20MA016N
<b>ILs:</b> 12 Chemokine Gene Expression Signature to Increase the Efficacy of Manufacturing Tumor infiltrating Lymphocytes	20MA013N
PERK, IRE1: Method of Enhancing Immunotherapy Using ER Stress Pathway Inhibitors	20MA005
PGC-1α: CAR T Cells Engineered to Express PGC-1 alpha Demonstrate Enhanced Metabolic itness	19MB066
<b>PGC-1α</b> : N-Terminal Mutant PGC-1α Overexpression Enhances Metabolic Fitness Reducing CAR- Exhaustion while Maintaining Proliferative Capacity	19MB066T2
<b>ILs:</b> Fucose increases tumor cell HLA-DRB1 expression increasing CD4+ T-cell activation with ynergistic tumor killing activity with anti-PD1 checkpoint inhibitors	19MB049N
	19MB048N

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IMMUNOTHERAPIES	
Antibodies: Fully Human Anti-TSPAN7 Antibodies	19MB047N
<b>T-Bet:</b> T-Bet Transcription Factor Armed CAR-T Cells Maintain Memory Phenotypes and Rescue CD4 Cells Leading to Increased Persistence	19MA035N
<b>PSCA</b> : Gamma Delta CAR-T Cell Constructs (Chimeric Antigen Receptors) that Recognize PSCA for CAR by Killing Bone Metastatic Prostate Cancer Cells	18MA037
<b>TILs:</b> Method of Using a Demethylating Agent to Enhance STING Expression and TIL Anti-Tumor Activity in Melanoma	18MA034N
TILs: TILs Modified with CAR Constructs Result in CAR-TILs for Cancer Therapy	18MA033
<b>NKG2D ligands:</b> NKG2D Chimeric Antigen Receptor CAR-T Cells for Acute Myeloid Leukemia Immunotherapy	18MA023
<b>aAPC:</b> Artificial Antigen-Presenting Cells with Heparin-Binding Domain and Protein L for Producing CAR-T Cells	18MA019N
TILs: Method to Increase TILs by Administering Fucose to a Patient	17MB048
CD99: Novel CD99 scFv Targeting CAR-T cells for Acute Myeloid Leukemia Immunotherapy	17MA042
CD99 CLEC12A: Novel Bispecific CD99 CLEC12A scFv CAR-T Cells for Acute Myeloid Leukemia Immunotherapy	17MA042T2N
CLEC12A: Novel CLEC12A scFv Targeting CAR-T cells for Acute Myeloid Leukemia Immunotherapy	17MA041
<b>Inflammasome:</b> Stapled Peptides NLRP3 Inflammasome Inhibitors to Neutralize Pyroptotic Cell Death Contributing to MDS Pathogenesis	17MB037
CD123: Novel CD123 scFv Targeting CAR-T cells for Acute Myeloid Leukemia Immunotherapy	17MA031
CD33, CD123: Bispecific CAR-T Cell Constructs that Recognize CD33 and CD123 for the Treatment of Acute Myeloid Leukemia	17MA030T2
CD33: Novel CD33 scFv Targeting CAR-T cells for Acute Myeloid Leukemia Immunotherapy	17MA030
<b>TILs:</b> Simple and Rapid Method for Culture of TILs from Melanoma Tumor Fragments or Core Needle Biopsies of Solid Tumors	17MA012

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IMMUNOTHERAPIES	
CD3-CD28: Bispecific Antibody for the Generation of CAR-T cells for Cancer Immunotherapy	17MA007
IL-13Rα2: CAR-T Cell Constructs (Chimeric Antigen Receptors) that Recognize IL-13Rα2	16MB069
aAPC: Artificial Antigen-Presenting Cells for Expanding TILs/MILs in Cancer Immunotherapy	16MB050
<b>aAPC:</b> Artificial Antigen-Presenting Cells Expressing CD3, CD28 and a Heparin-Binding Domain for Producing CAR-Ts	16MB049
<b>TLS:</b> Method of Using Chitosan Hydrogels with Chemokine-Releasing Microparticles or Stromal Cells to Bioengineer Tertiary Lymphoid Structures to Enhance the Immune System for Cancer Therapy	16MA028N
TLR9: CAR-T Cell Constructs (Chimeric Antigen Receptors) that Recognize TLR9	16MA025
NLRP3 Inflammasome: Small Molecule Oral Signaling Inhibitor Icaritin Analog to Improve Hematopoiesis by Inhibiting NLRP3 Inflammasome Activation in MDS	16MA007N
<b>TIM3 Ligand Trap:</b> TIM-3-IgG4 Fusion Protein for the Treatment of Anemia in Low- or Intermediate (Int)-risk MDS Patients	16MA001
<b>Bromodomain:</b> Ex vivo Activation and Expansion of Antigen Specific T cells in the Presence of a Bromodomain Inhibitor	14MB100N
Cancer Vaccine: Full-Length Variant Survivin Vaccine Potentiates Autologous Hematopoietic Stem Cell Transplantation in Multiple Myeloma	14MB098
<b>HDAC6:</b> Method of Using Histone Deacetylase 6 Inhibition for Enhancing T cell Function During Anti-Tumor Response and Tumor-Peptide Vaccination	14MA037N
HDAC: Combination Therapy of Melanoma with an HDAC Inhibitor and a Checkpoint Inhibitor	14MA027N
S100A9: CD33/IgG1 Chimera Antibody Trap to Neutralize S100A9 to Treat MDS	13MB041
Vaccine: Vaccines Using Synthetic Peptide-Poly IC Complexes that Elicit T-cell Responses Comparable to Live Vaccination	11MA013
Antibodies: MARCO Antibodies for Enhanced Dendritic Cell Vaccine Efficacy	07MB004

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## PHARMACEUTICALS & BIOLOGICS

PHARMACEUTICALS & BIOLOGICS	
<u>β</u> -Catenin/BCL9: 1-Benzoyl 4-Phenoxypiperidines Small-Molecule Inhibitors of the β-Catenin/BCL9 Protein-Protein Interaction	21MA023
<b>p53</b> : Combination Therapy of Hypothermia and Chemotherapy to Treat Temperature Sensitive p53 Mutant Tumors	21MA021N
BRD4 JAK2: Sultam (cyclic sulfonamide) BRD4 JAK2 Inhibitors to treat myelofibrosis	21MA020N
JAK2: Novel JAK2 Inhibitor Piperadine Aniline Derivatives of Ruxolitinib to treat myelofibrosis	21MA004
<b>TROLLS:</b> Inhibition Of TAp63 Regulated Oncogenic Long Noncoding RNAs (TROLLs) for the Treatment Of Cancer	20MB056N
<b>β-Catenin/BCL-9</b> : Acyl sulfonamide-containing Small Molecules that Inhibit the β-catenin/BCL9 Protein-Protein Interaction	20MB051N
HPV E1: Novel Use for Aminocoumarins as HPV Helicase E1 Inhibitors to Treat Cancer	20MB046
CMG Helicase: Novel Replicative CMG Helicase Inhibitors (CMGi) to Treat Solid Tumors	20MB046T2
TAF1: Novel TAF1 Inhibitors for the Treatment of Cancer	20MB037N
ACK1: Small molecule ACK1 inhibitors for the Treatment of Castrate Resistant Prostate Cancer	20MA015N
CDK12/CDK13: Novel Small Molecule Dual Inhibitors for CDK12/CDK13 for the Treatment of Triple Negative Breast Cancer	19MB064N
<b>β-catenin/BCL9:</b> Novel Small Molecules that Inhibit the β-catenin/BCL9 Interaction in breast cancer	19MB055
$\beta$ -Catenin/TCF: Small Molecule Peptidomimetic Inhibitors of the Interaction of β-Catenin and T-Cell Factor	18MB076
BRD4 JAK2: Novel Second Generation BRD4/JAK2 Dual Inhibitors as Cancer Therapeutics	18MB053
<b>β-Catenin/TCF:</b> Small Molecule Inhibitors of the Interaction of β-Catenin and T-cell Factor	18MA018N
<b>Ubiquitin Bispecific Antibody:</b> Antibodies that Bring the E3 Ubiquitin Ligase into Close Proximity to Receptors to Induce the Receptor's Degradation	17MB056N
XBP-1: Method of XBP-1 Inhibition for the Treatment of Acute GVHD and Solid Organ Rejection	17MB051
<b>β-Catenin/BCL-9:</b> Small Molecule Inhibitors of the Interaction of β-Catenin and BCL-9	17MA014
<b>HDAC, BTK:</b> Method of Using HDAC Inhibitors, Alone or in Combination with BTK Inhibitors, for Treating Chronic Lymphocytic Leukemia (CLL)	16MA023N

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PHARMACEUTICALS & BIOLOGICS	
Aurora/JAK2: Dual JAK2 and Aurora A Kinase Inhibitor for GVHD Prophylaxis	16MA005N
Ras/Raf: Stapled Peptides Designed to Inhibit the K-Ras/Raf Interaction	15MA012
Ras: Inhibitors of the Binding of GTP to Oncogenic Mutant K-Ras	15MA011
<b>WEE1:</b> Small Molecule WEE1 Inhibitor to Treat Cancer that Inhibits WEE1 Phosphorylation of H2B but not Cdc2	14MB092
YAP1/OCT4: Small Molecule Inhibitors of the Protein-protein Interaction of YAP1 and OCT4 to Treat Cancer	14MB075N
<b>HDAC, BTK:</b> Method of Using HDAC Inhibitors, Alone or in Combination with BTK Inhibitors, for Treating Non-Hodgkin's Lymphoma (NHL)	14MB086N
BRD4 JAK2: Novel BRD4/JAK2 Dual Inhibitors as Cancer Therapeutics	14MB069
MDSC: Small Molecule Oral Signaling Inhibitors Icariin and Icaritin Targeting CD33+ MDSC in MDS	14MA005N
Anti-Infectives: Symmetrical Synthetic Marinopyrroles as Anti-MRSA Therapeutics	12MB110
STAT3: STAT3 Dimerization Inhibitors	12MB098
IRE-1: Novel Small Molecule Inhibitors of IRE-1 for Treatment of B-Cell Cancer	12MB089
McI-1/BcI-xL: Cyclic, Symmetrical and Asymmetrical Marinopyrroles as Anti-Cancer Agents	12MA035N
HDAC6:Small Molecule Histone Deacetylase 6 Inhibitor with a Substituted Aryl Urea Cap Group	12MA030
<b>Proteasome:</b> Non-Covalent and Reversible Proteasome Inhibitors with an Oxadiazole-Isopropylamide Core	10MB083
FT/GGT: Farnesyltransferase/ Geranylgeranyltransferase Dual Inhibitor	10MB048
LPAAT: Lysophosphatidic Acid Acyltransferase-Beta Inhibitors to Treat Pancreatic Cancer	10MA019N
McI-1: Asymmetrical Marinopyrroles as Anti-Cancer Agents	10MA018N
pH: Method of Inhibiting Metastasis with Systemic Non-Volatile Buffers to Reduce Intratumoral pH	09MB048
Aurora: Aurora A Kinase Inhibitors	09MA037
Rho Kinase: Pyridylthiazole-Based Ureas As Inhibitors of Rho Associated Protein Kinase (ROCK)	09MA015
Topoisomerase II: Method of Enhancing Topoisomerase II Inhibition by Inhibiting the Nuclear Export	08MB014
of Topoisomerase II Alpha	10MB078
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CL	INICAL DECISION SU	PPORT TOOLS	
Machine Learning: A Rapid and Nor Learning Radiomics	n-invasive Diagnostic to Pre	dict PD-L1 Status Using Deep	19MB053
Math Model: A Radiomics Based Dia	agnostic to Predict Treatmen	t Outcomes in Lung Cancer	19MB040N
Math Model: A Diagnostic that Predi	cts Treatment Outcome and	Personalize CAR-T Therapies	19MA038N
<b>Math Model:</b> A Diagnostic that Predi Patients	cts Efficacy and Progression	rree Survival in CAR-T Treated	19MA037N
Math Model: A Diagnostic for Lesion	Heterogeneity Classification	n for Informed Treatment Decision	19MA034N
<b>Software:</b> Deep Neural Network to L Tumors More Effectively	ocate and Label Brain Tumo	ors Enables Surgeons to Remove	19MA019
<b>Math Model:</b> Predict Patient-Specific in an Adaptive Bayesian Approach	Radiotherapy Responses U	Ising a Proliferation Saturation Index	18MB083N
Math Model: Methods for the Treatm	nent of Prostate Cancer Usin	g Intermittent Adaptive Therapy	18MB055N
Software: A Pathologist Tool for Alig	nment of Serial Whole Slide	Histology Images	18MA012N
<b>Software:</b> A Quantitative Framework Synergize with Immunotherapy (Absorption 1)	•	s for Cancer Treatment that	14MA022
Software: Decision Support Tool for	Oncology Treatment Using I	Mathematical Simulations	13MB073
Software: Improved Detection of Lur	ng Function and Managemer	nt of Lung Cancer Radio Therapy	10MA037N
	DIAGNOSTIC	CS	
Diagnostic: Kits and Methods for Pe	erforming an ELISPOT to Det	tect Coronavirus	21MA019N
Protein Diagnostic: Diagnostic to de	etect Leptomeningeal Diseas	se	20MB040N
<b>Molecular Imaging Agent</b> : A Novel Assessment in Breast Cancer	Fluorescence Molecular Ima	ging Agent for Intraoperative Margin	20MA008N
Cell Imaging: Diagnostic for Predicti	ng Response to Therapies i	n Multiple Myeloma	19MB057 13MB048
Methylation Status Diagnostic: Dia	gnostic to Predict Response	to Immunotherapy	19MB052
Companion Diagnostic: Companion the Methylation Status	n Diagnostic to Predict Resp	onse to Immunotherapy Based on	19MB052T2
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DIAGNOSTICS	
Genetic Signature: Distinguishing Urothelial Carcinoma from Squamous Cell Carcinoma (Primary Lung Carcinoma and Metastatic Head & Neck Carcinoma)	17MB044
Genetic Biomarker: PTEN Loss of Expression as a Biomarker Response to GGTI-2418 Treatment	17MA025
<b>Molecular Imaging:</b> Predicting Response to Adjuvant Ipilimumab Treatment in Melanoma Using a Novel Algorithm to Analyze Nitric Oxide Levels in Peripheral Blood Immune Cells	17MA002N
miRNA Diagnostic: miRNA Signature for Non-invasive Early Detection of Malignancy in IPMN	17MA001
miRNA Diagnostic: Signature to Predict Progression of Barrett's Esophagus to Esophageal Dysplasia or Adenocarcinoma	16MB066
Molecular Imaging Probe: Novel IDO1-Targeting Cancer Diagnostic PET Imaging Agent	16MB044
<b>Protein Biomarker:</b> Predicting Restoration of Sensitivity to Erythropoietin in MDS Patients by Lenalidomide	16MB042
<b>Protein Biomarker:</b> Measuring MRE11 in Muscle-Invasive Bladder Cancer to Predict whether Cystectomy (Bladder Removal) would have a Better Outcome than Bladder-Sparing Therapy with Chemoradiation	16MB041
Genetic Signature: Distinguishing Primary Lung Carcinoma from Metastatic Head & Neck Carcinoma	16MB040
Protein Biomarker: Diagnostic for Progression of MDS to AML Using PD-1 or PD-L1 Expression	15MB065
<b>Molecular Imaging Probe</b> : In vivo Positron Emission Tomography-Based Perfusion/Blood Pool Imaging Using Labeled Erythrocytes	15MB042N
Diagnostic: S100A9 Serum Concentration Levels Predict Lenalidomide Response Duration	15MA031N
Diagnostic: Intracellular S100A9 Alone or NLRP3 Inflammasome Activation as MDS Biomarkers	15MA021N
<b>Molecular Imaging</b> : Monoacylated TLR2 Ligand Fluorescent Probe for Detection and Tumor Removal in Pancreatic Cancer Patients	15MA015
<b>Genetic Signature:</b> Microarray-Based Gene Expression Profiling to Predict Tumor Sensitivity to Radiotherapy	14MA052N
Protein Biomarker: Expression of WEE1 and PAXIP1 to Predict Respond to WEE1 Inhibitors	14MA001
miRNA Diagnostic: Blood Based microRNA Assay to Detect Malignant Intraductal Papillary Mucinous Neoplasms (IPMNs)	13MB078
Molecular Imaging: PET Probes of Radiofluorinated Carboximidamides for IDO-Targeted Imaging	13MB056N
Molecular Imaging: Novel Imaging Software Diagnostic to Determine Survival in Glioblastoma	13MB055

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DIAGNOSTICS	
Molecular Imaging: Texture Features Low-Dose CT Images for Pulmonary Nodule Diagnosis	13MB054
Imaging: Decision Support Tool for Oncology Treatment that Analyzes Radiological Images	13MB047
Genetic Signature: Predicting Recurrence and Benefit From Adjuvant Chemo in Colorectal Cancer	13MA036
<b>Multiplex Diagnostic</b> : RNA Sequencing and Mass Spectrometric Method for Detecting Minimal Residual Disease in Multiple Myeloma	13MA009
Protein Diagnostic: Phosphorylated STAT3 Protein as a Biomarker of GVHD	13MA002
Molecular Imaging Probe: A Novel <sup>18</sup> F Scaffold for Preparing Targeted PET Imaging Probes	12MB104
Genetic Signature: E2F/Rb Pathway Signature to Predict Benefit from Adjuvant Chemo in NSCLC	12MA069
Protein Diagnostic: Quantum Dots Conjugated with Antibodies for Early Cancer Detection	12MA011N
Protein Diagnostic: Mass Spectrometry Diagnostic for BRAF and Heat Shock Proteins	11MB087N
Genetic Signature: Predicting Response to Cancer Immunotherapy	11MB069
<b>Molecular Imaging Probe:</b> Intraoperative Detection of Pancreatic Cancer Using Targeted Fluorescent Probes	11MB064
Molecular Imaging Probe: Surrogate Markers for Colon Adenoma and Adenocarcinoma	11MA026N
Imaging: Digital Pathology Tool to Grade Breast Cancer Histological Images	11MA022
Protein Diagnostic: Protein-Protein Interaction (PPI) Biomarkers	11MA014
<b>Molecular Imaging Probe:</b> Fluorescent and MRI Targeted Probes for the Melanocortin Receptor 1 on Melanomas, and Micelle Complexes for Drug Delivery	10MB069N
Molecular Imaging Probe: Non-Invasive Detection of Breast Cancer in Lymph Nodes	10MA024
Genetic Signature: Lymph Node Formation for Prognosis of Colorectal Cancer	09MA014
Antibody Diagnostic: Monitoring Multiple Myeloma Progression and Recurrence	08MA005
DEVICES, TOOLS & SOFTWARE	
<b>Software:</b> Cancer BERT Network (caBERTnet): A Question-and-Answer System to Extract Data from Free-Text Pathology Reports	21MA031
<b>Life Science Tool</b> : Diazirine reagents as Single and Double Nitrogen Transfer Reagents for Decarboxylative Amination	19MA030N
Med Device: Snowflake Shaped Drug Infusion Device for Brain Cancer	19MA010
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DEVICES TOOLS & SOFTWARE	
DEVICES, TOOLS & SOFTWARE	
<b>Med Device:</b> Biopsy Needle with Internal Ridges that Lead to a Higher Tissue Specimen Retrieval Rate	18MB047
<b>Copyright:</b> Energize mBC: Web-Based Program to Treat Fatigue in Metastatic Breast Cancer Patients	17MC003
Med Device: Novel Endotracheal Tube Intubating Stylet	16MA021
<b>Med Device:</b> IV Catheter Clamp to Eliminate Blood Leaks that Lead to Exposure to Blood-borne Pathogens in the Operating Room	15MB067
Med Device: Improved Pigtail Drainage Catheter for Percutaneous Fluid Aspiration	15MA034
Software: Negative Information Storage Model for Genomic Data	15MA033
Med Device: Expandable Intervertebral Cage for Spinal Fusion	14MB067N
<b>Software</b> : Real-Time Visualization Software Enables Surgeons to "See-Through" the Patient and Remove Tumors More Effectively	14MA004N
<b>Software:</b> BMT Research Analysis Information Network (BRAIN) Automates Submission of AGNIS/CIBMTR Forms	13MB053
Med Device: Improved Orogastric Tube Guide	13MA030
Software: Automated Technique for Generating BIRADS Scores from Mammograms	13MA025
Med Device: Improved Enteral Feeding Tube and Retention Disc to Reduce Dislodgement & Infection	13MA001
Software: Method for Improving the Accuracy of Charged Particle Beam Radiotherapy	12MB072
Med Device: Arterial Line Catheter Modification	12MA067
Med Device: Improved Endotracheal Tube to Diagnose Airway Edema (Swelling)	11MA052
Med Device: Bidirectional Expandable Intervertebral Cages for Spinal Fusion	11MA021T2
Med Device: Minimally Invasive Spinal Fusion Using a Transdiscal Screw System	11MA021
Med Device: Pump-Assisted High Flow Rate Isolated Limb Infusion for Regional Cancer Treatment	11MA017N
Med Device: Muscle Stapler	10MB065N
Med Device: Handheld Radioisotope Identification Device (RIID)	10MB054
Research Tool: Novel Electroporation Buffer Formulation for Enhanced Efficiency and Viability	05B141