

Funding of Research Fund for International Young Scientist in 2012

Serial number	Project Title	Applicant	Host Institution
1	Study of Persistent Current in High Temperature Superconducting Coils	Fei Yen	Southwest Jiaotong University
2	High-pressure study of inorganic scintillators	Venkata Krishnan Kanchana	Jilin University
3	Galaxy Formation	Zemp Marcel	Peking University
4	Type Ia Supernovae spectral analysis using the Nearby Supernova Factory data sample	Chotard Nicolas	National Astronomical Observatories, CAS
5	Emission spectroscopy in Fast Ionization Wave Discharge	Takashima Keisuke	Tsinghua University
6	Binary evolution: explaining transients, improving techniques and developing applications	Justham Stephen	National Astronomical Observatories, CAS
7	Multi-scale Modeling and Simulations of Quantum Plasmon Enhanced Intermediate Band Solar Cells	Jin-Ho Choi	University of Science and Technology of China
8	The formation of stars and planets	Herczeg Joseph Gregory	Peking University
9	Nature of the low-lying scalar mesons and its implication for QCD phase transition	Mukherjee Tamal Kumar	Institute of High Energy Physics, CAS
10	Development of Non-Equilibrium Ionization Spectral Emission Code for X-ray Astronomy	Foster Robert Adam	Purple Mountain Observatory, CAS
11	Next Generation Graphene Supercapacitors: Flexible and Printable	Edward Banks Craig	Central South University
12	Catalytic Conversion of Biomass-derived Carbohydrates to High-quality Liquid Bio-fuels in Bifunctional Catalytic System	Zakai Uzma	Guangzhou Institute of Energy Conversion, CAS (GIEC)
13	Investigation of self-assembled organic structures with atomic force microscopy	Voitchovsky Kislom	Central South University
14	Seasonal variation and Oxidative activity of PM2.5 components	Dutta Anindita	Peking University
15	Development of Sensitivity-Enhanced NMR	Bajaj Singh Vikram	Wuhan Institute of Physics and Mathematics, CAS
16	Community structures and ecological functions of microbes in typical deep-sea environments	Dastager Gulam Syed	Institute of Microbiology, CAS
17	The influence of indigenous N-fixing trees on soil nutrition, soil communities and crop productivity	Mortimer Edward Peter	Kunming Institute of Botany, CAS
18	Role of GPCRs in Alzheimer's disease: underlying mechanisms and discovering new therapeutic targets.	Marcucci Josefina Hebe	Shanghai Institutes for Biological Sciences, CAS

19	Alkaline Phosphatase Fusion Probe	Koksharov Mikhail	Hangzhou Normal University
20	Integrative large-scale analysis of human brain metabolism	Kasia Bozek	Shanghai Institutes for Biological Sciences, CAS
21	MD simulations on GPCRs for improvement of GPCR protein crystallization	Steffen Wolf	Shanghai Institutes for Biological Sciences, CAS
22	Age-specific regulation of alternative splicing by small non-coding RNAs in human brain	Khrameeva Ekaterina	Shanghai Institutes for Biological Sciences, CAS
23	Proof of principle for using metabolic fingerprinting to diagnose dietary macronutrient intake	Valencak Giovanna Teresa	Institute of Genetics and Developmental Biology, CAS
24	Influence of the stratospheric sudden warming on the tropical convection and gravity wave activity	Nath Debashis	Institute of Atmospheric Physics, CAS
25	Experiment and simulation on long-term mechanical behavior and durability of high-grade recycled concrete	Tam Wing Yan Vivian	Tongji University
26	Risk of Vehicle Rollover and Slippage Based on Simulation of Vehicle Dynamics	Ardakani Kamali Mostafa	Southeast University
27	New Concepts for Simultaneous Solar Water Purification and Renewable Electricity Generation	Marta Vivar	Tianjin University
28	Research on Asphalt Mixture Testing and Computer Simulation	Adhikari Sanjeev	Chang'an University
29	Iron Oxide-Gold multimodality theranostics against hepatic fibrosis	Yousaf Muhammad Zubair	Peking University
30	Deformation mechanisms and theoretical study of Zirconium alloy at high temperature	Chapius Adrien	Chongqing University
31	Novel Methods for Controlling Microstructure in 3D Laser Rapid Prototyping of Superalloys	Wellburn Daniel	Northeast University
32	X-ray tube based on field-emission cathode	Doknnia Kumar Anand	Southeast University
33	Structural interpretation of unconstrained online handwritten notes	Delaye Adrien	Institute of Automation, CAS
34	The Triangular Emission Trade among China, Africa and OECD Countries	Guan Dabo	Institute of Applied Ecology, CAS
35	The effect of nanoencapsulation on topical delivery of adapalene	Khengar Rajeshree	Tianjin University
36	To investigate the roles of Toll/interleukin-1 receptor (TIR) signaling pathway and their interactions with NLRs/TLRs in host innate immune responses during bacterial pathogenesis and parasitic infection of human importance	Mohammad Sohail	Institute of Microbiology, CAS
37	Meiotic recombination function of Trip13 in breast cancer	Jeong Ji-Hak	Central South University
38	Novel synthetic opioids as potential therapeutics for the treatment of gastrointestinal disorders and inflammatory conditions	Fichna Jakub	Tongji University

39	Investigation of brain structure and function in major depressive disorder (MDD) using multimodal imaging analyses	Martin Walter	Institute of Automation, CAS
40	Synthesis and antimicrobial activity of coumarin imidazoles as a new type of antibacterial and antifungal agents	Guri Lakishmi Vasantha Damu	Southwest University

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Funding of FY 2012 NSFC-NIH Joint Program on Biomedical Research

Serial No.	Project Title	Chinese PI	Home Institution	U.S. PI	Home Institution
1	Improved methods for radiomics of lung screening CT scans	Tian, Jie	Institute of Automation, Chinese Academy of Sciences	GILLIES, Robert	Moffit Cancer Center
2	Integration of RDGN with androgen receptor function in prostate cancer	Wu, Kongming	Tongji Hospital, Huazhong University of Science and Technology	PESTELL, Richard	Thomas Jefferson University
3	Enhancing CIK (NK-T) cell homing to tumors	Zhang, Yi	Zhengzhou University	KALINSKI, Pawel	University of Pittsburgh
4	Mechanism and role of alternative splicing of mdm2 in regulation of UVB-induced and oxidative-stress-mediated apoptosis	Tang, Liling	Chongqing University	WU, Shiyong	Ohio University
5	Allelic Expression Imbalance of Breast Cancer Genetic Loci	Ren, Zhefang	Sun Yat-Sen University	ZHENG, Wei	Vanderbilt University Medical Center
6	Role of BRCA1 in DNA double-strand break repair and breast cancer treatment	Jiang, Wei	Cancer Institute/Hospital of the Chinese Academy of Medical Sciences	WU, Xiaohua	Scripps Research Institute
7	Monoallelic expression in SR-protein-driven tumorigenesis	Wu, Qiang	Shanghai Jiaotong University	HANNON, Gregory	Cold Spring Harbor Laboratory
8	Reversibly cross-linked targeted nanotherapeutics for metastatic cancers	Liu, Gang	Tsinghua University, Department of Pharmacology and Pharmaceutical Sciences	LAM, Kit	University of California, Davis
9	Roles of Smurfs in Hedgehog signaling and medulloblastoma	Cheng Yan	Nanjing Medical University	ZHANG, Ying	National Cancer Institute of National Institutes of Health

10	Viral Mediated Type I Interferon Induction	Liu, Ying-Fang	Institute of Biophysics, Chinese Academy of Sciences	Cheng, Genhong	UCLA Department of Microbiology, Immunology and Molecular Genetics
11	Signal transduction regulating T-cell development	Liu, Xiaolong	Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences	Sun, Shao-Cong	University of Texas MD Anderson Cancer Center
12	The immune-modulating role of selenoprotein K in foam cell formation and atherosclerosis	Huang, Zhi	Jinan University	Hoffmann, Peter R.	University of Hawaii
13	Bacterial Agents for therapy of hepatitis B virus infection	Wu, Jianguo	Wuhan University	Lu, Sangwei	University of California at Berkeley
14	T-cell Immune Responses to Schistosome Infection in the elderly	Wu, Zhongdao	Zhongshan School of Medicine, Sun Yat-sen University	Su, Dong-Ming	University of North Texas Health Science Center
15	Joint Project Title: U.S.-China Program to Identify Novel Antimicrobials	Zhang, Lixin	Institute of Microbiology, Chinese Academy of Sciences (IMCAS)	Gilmore, Michael	Massachusetts Eye and Ear Infirmary, Harvard Medical School
16	Cell-Mediated Immune Responses to Bioconjugate Vaccines for the Prevention of Staphylococcal Infection	Zou, Quanming	Third Military Medical University	Lee, Jean	Brigham and Women's Hospital and Harvard Medical School
17	Manipulating the biosynthesis of capuramycin-type antibiotics for new anti-TB drugs	Yang, Zhaoyong	Peking Union Medical College	Van Lanen, Steven	University of Kentucky
18	The Nlrp3 Inflammasome in Gut Homeostasis; Study for the function of inflammasome in the development of inflammatory bowel disease and the related mechanism	Meng, Guangxun	Key Laboratory of Molecular Virology & Immunology, Institute Pasteur of Shanghai, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences	Strober, Warren	NIAID, Mucosal Immunity Section, Laboratory of Host Defenses (LHD)
19	Countermeasures Against Severe Fever with Thrombocytopenia Syndrome Virus	Liang, Mifang	National Institute for Viral Diseases Control and Prevention, China CDC	Feldmann, Heinrich	NIAID, Laboratory of Virology
20	Antibody therapy directed against a novel surface protein crucial for MRSA colonization and infection	Li, Min	Fudan University, Shanghai Medical College Huashan Hospital, Department of Laboratory Medicine	Otto, Michael	NIAID, Laboratory of Human Bacterial Pathogenesis

21	Multimodal Imaging of Thalamic Dysfunction in Schizophrenia	Zhang Minming	Zhejiang University	Freedman, Robert	University of Colorado, Denver
22	Pediatric Template of Brain Perfusion and Connectivity	Fan, Yong	Institute of Automation, Chinese Academy of Sciences	WANG, Danny	University of California Los Angeles
23	System-wide Immunohistochemical and Proteomic Analyses of Sp4 Mouse Brain	Wan Chunling	Shanghai Jiaotong University	ZHOU, XIANJIN	University of California San Diego
24	Arc Regulation of Shank3 Expression and Ubiquitination	Tu Jiancheng	Wuhan University	Worley, Paul	Johns Hopkins School of Medicine
25	Characterizing the Genetic Systems of Autism through Multi-Disease Analysis	Xing Qing-he	Fudan University	Wall, Dennis	Harvard Medical School
26	Biomarkers in First Episode Schizophrenia	Wang Jijiong	Shanghai Mental Health Center	GOFF, DONALD	New York University School of Medicine
27	Study of Biomarkers of Homeostatic Dysregulation in Bipolar Disorder	Li Tao	West China Hospital, Sichuan University	MERIKAN GAS, Kathleen	NIMH IRG
28	Development of Sensitive Radiotracers for Imaging Efflux Transporters at the Blood-brain Barrier with Positron Emission Tomography	Peng Yiyuan	Jiangxi Normal University	PIKE, Victor	NIMH Intramural Res. Pro. (IRG)
29	Identification of the Expression Signature and Susceptibility SNPs of miRNAs for Schizophrenia	Li Keshen	Guangdong Medical College	LI, Zheng	NIMH IRG
30	CryoEM Analysis of HIV/SIV Particle Stability and Native Trimer-Complexes	Zhu, Ping	National Laboratory of Biomacromolecules	Binley, James	Torrey Pines Institute for Molecular Studies
31	Cytomegalovirus gene function in virulence and replication	Xiao, Gengfu	Wuhan Institute of Virology, Chinese Academy of Sciences	Liu, Fenyong	University of California, Berkeley
32	Protection from HIV by GPI-anchored antibody derivatives	Zhou, Paul	Institute Pasteur of Shanghai	Butel, Janet S.	Baylor College of Medicine
33	Susceptibility and resistance of recombinant Chinese HIV strains to the antivirals targeted to capsid	Ma, Liying	NCAIDS, China CDC	Debnath, Asim Kumar	New York Blood Center
34	Role of CycK complexes in HIV replication	Li, Qintong	Sichuan University	Peterlin, Boris Matija	University of California, San Francisco

35	Cardiac steatosis in HIV-infected Persons in China	Wang, Ning	NCAIDS, China CDC	Lai, Shenghan	Johns Hopkins University
36	Novel Flavopiridol Analogues as Potent Anti-HIV Agents	Xiao, Zhiyan	Institute of Materia Medica, CAMS, PUMC	Lee, Kuo-Hsiung	University of North Carolina (UNC)
37	Phylogenetic analysis of HIV transmission clusters among MSM in Beijing	Xing, Hui & Shao, Yiming	NCAIDS, China CDC	Vermund, Sten	Vanderbilt University Medical Center
38	Screening for anti-HIV-1 bNAb (broadly neutralizing antibody) in huCD4/CCR5 transgenic mice immunized with multivalent vaccine	Yang, Dongliang	Union Hospital, Tongji Medical College, Huazhong University of Science and Technology	Gao, Yong	Case Western Reserve University
39	NK cell mediated immune pressure in HIV-1 infection	Shao, Yiming	China CDC	Altfeld, Marcus	Ragon Institute of MGH, MIT, & Harvard
40	Efficacy of SAMTs and SFT as Topical Microbicides; Development of Combination Therapies Containing HIV Nucleocapsid NCp7 Inhibitors and gp41 Fusion Inhibitors as the Rectal Microbicide Candidate	Zhang, Xiaoyan	Fudan University, Shanghai Public Health Clinical Center	Appella, Ettore	National Cancer Institute, NIH
41	Multispecific HIV-1 entry inhibitors targeting both gp120 and gp41	Jiang, Shibo	Fudan University, Shanghai Medical College and Institute of Medical Microbiology	Dimitrov, Dimiter	National Cancer Institute, NIH
42	Counteraction of Cell Restriction Factor Tetherin by HIV-1 Vpu	Yu, Xianghui	Jilin University	Freed, Eric	National Cancer Institute, NIH

Nine Projects Jointly Funded by NSFC and MRC in 2012

National Natural Science Foundation of China (NSFC) and the Medical Research Council of the United Kingdom (MRC) jointly support research programs in the field of stem cell. After evaluation and consultation between NSFC and MRC, 9 out of 10 proposals are approved. The funding period is from October 1, 2012 to September 30, 2013:

Serial number	Project Name	Chinese PI	British PI
1	Investigation of therapeutic strategies to promote endogenous retinal regeneration by Müller stem cells	Sun Xinghuai Fudan University	Gloria Astrid Limb UCL Institute of Ophthalmology
2	Polycomb repressive complex 2 regulation of neurogenesis	Shen Xiaohua Tsinghua University	Francis Szele Department of Physiology, Anatomy and Genetics, Univ. of Oxford
3	Developing stem cell-related therapies for the treatment of inherited and acquired liver disease	MA Esteban Guangzhou Institute of Biomedicine And Health, CAS	Jon Frampton Univ. of Birmingham
4	Characterisation of the motoneurons obtained from induced pluripotent stem cells (iPS) and their use in the study of the pathogenic mechanisms occurring in Amyotrophic Lateral Sclerosis (ALS)	Xu Jun Tongji University	Ke Ning Sheffield Institute of Translational Neuroscience (SITraN), Univ. of Sheffield
5	Functional Study of Mitotic Checkpoint in Human Embryonic Stem Cells	Na Jie Tsinghua University	Peter Andrews Univ. of Sheffield
6	Epigenetic control of stem cell activity during epithelial tissue regeneration	Xu Guoliang Shanghai Institutes for Biological Sciences, CAS	Botchkarev Vladimir Centre for Skin Sciences, School of Life Sciences, Univ. of Bradford, UK
7	Development of in vitro Model for HBV and HCV using Human Embryonic Stem Cell	Zhou Xiaoling Shantou University	David Hay MRC Centre for Regenerative Medicine, Univ. of Edinburgh
8	Steroid receptor as targets for myelin regeneration by endogenous neural stem cell	He Cheng The Second Military Medical University	Robin Franklin Cambridge Stem Cell Institute
9	The role of pro-inflammatory mesenchymal stem cells in rheumatoid arthritis	Sun Lingyun Nanjing University	Ilaria Bellantuono Mellanby Centre for Bone Research (MCBR), Univ. of Sheffield, UK

Funding of Key Program Projects in 2012

Serial number	Project Title	Applicant
1.	Differentiable dynamical systems	Wen Lan
2.	Noncommutative geometry and its applications	Chen Xiaoman
3.	The geometry of algebraic varieties	Tan Shengli
4.	Algebraic methods in combinatorics	Chen Yongchuan
5.	Reserch on some stochastic analysis problems in mathematical finance	Chen Zengjing
6.	Hydrodynamics equations in multi-physics coupling processes	Wang Weike
7.	Control theory of distributed parameter systems and applications	Zhang Xu
8.	Cayley graphs,symmetric graphs, and maps on surfaces	Li Caiheng
9.	Complex dynamics and its applications	Wang Yuefei
10.	Statistical inference for complex longitudinal data	Sun Liuquan
11.	Damage identification and damage evolution for fiber reinforced composite materials	Su Xianyue
12.	Wing-kinematics measurement and studies on aerodynamics and flight dynamics in forward flying insects	Sun Mao
13.	Multilevel modeling and computational method for mechanical analysis of fluid-saturated porous media	Zhang Hongwu
14.	Key theories and technologies of customer-driven vehicle crashworthiness design	Han Xu
15.	On neurodynamics research and experimental analysis of perceptual cognition and decision making	Wang Rubin
16.	Measurements and analysis on the turbulent structures and flow features of windblown sand movements/dust storms	Zheng Xiaojing
17.	The fracture of piezoelectric material under dynamic loads	Gao Cunfa
18.	Researches on the methods and techniques of experimental mechanics and their applications to the failure behaviors of TBCs	Xie Huimin
19.	Theoretical and experimental investigations on nonlinear dynamics in vibration-based energy harvesting	Chen Liqun
20.	Mechanobiological mechanisms of vascular remodeling in cardiocerebrovascular diseases	Jiang Zonglai
21.	Noise sources and large eddy simulation of turbulence generated noise	He Guowei
22.	Coupled loading and dynamics of offshore wind turbine under extreme environment	Zhou Jifu
23.	Mechanisms of accommodation and lesion for human lens	Song Fan

24.	Failure mechanism and analysis theory of huge cavern group affected by staggered zones	Feng Xiating
25.	Investigation of controlling the quantum tunneling and photoelectric effects in multiple structured micro- and nano-heterojunctions by macroscopic stresses and strains	Wang Biao
26.	Multiwavelength study of supernova remnants and the processes of their shock interaction	Chen Yang
27.	SMBH's activities and evolution	Wang Junxian
28.	Interaction between black hole activity and host galaxies	Wang Jianmin
29.	The chemodynamical evolution of the galaxy: an observational and theoretical study	Zhao Gang
30.	Galaxy formation and evolution in dark matter halos: seek clues for a few open questions	Yang Xiaohu
31.	Investigations on the accretion disks and jets in active galactic nuclei	Cao Xinwu
32.	The Milky Way scroll painting- - CO line survey	Jiang Zhibo
33.	Observational and theoretical studies on high-energy physical processes of the sun	Gan Weiqun
34.	Investigation of bending strain effects on the electronic structure, optical/electronic properties of low-dimensional (nanowires and graphene) nanomaterials	Yu Dapeng
35.	Characteristics and principle of the underwater sound at very low frequency long range propagation in irregular ocean environment	Piao Shengchun
36.	Quantum interferometry based on quantum manipulation of atomic ensembles	Zhang Weiping
37.	Molecular orbital imaging with high spatiotemporal resolution by two-color quantum control	Lu Peixiang
38.	Novel physics and multiferroic order coupling in type-II multiferroic compounds	Liu Junming
39.	A novel tunable continuous-wave solid state terahertz source	Wang Huabing
40.	Geometrically enhanced magnetoresistance of semiconductors	Zhang Xiaozhong
41.	Experimental investigation of synthetic gauge potential for ultracold Fermion gas	Zhang Jing
42.	High frequency quantum transport in confined quantum coherent conductors	Gao Jie
43.	Quantum-like phenomena in engineered photonic structures	Chen Hong
44.	In-situ study on the size effect of mechanical properties of condensed matter system under external field within atomic and sub-angstrom scale	Zhang Ze
45.	Study on phonon-glass-electron-crystal thermoelectric compounds	Zhang Wenqing
46.	Investigations of physical problems in next generation lithium ion battery materials	Chen Liquan
47.	Laser MBE growth and in-situ ARPES study of unconventional superconducting thin films	Ding Hong
48.	Structures of weakly-bound nuclei studied through their decays	Xu Furong

49.	Development of a high-resolution detector system and a new mass measurement technique for nuclei relevant for the rapid-neutron capture process	Tanihata Isao
50.	Quantum gravity and modified gravity and their cosmological applications	Ma Yongge
51.	Pre-study of key technologies for gravitational wave detection in space	Zhou Zebing
52.	Study of some important topics of the heavy flavor physics at the LHC era	Xiao Zhenjun
53.	Experimental studies of low energy electron anti- neutrinos	Chen Shaomin
54.	Research on key technologies of X-ray grating-based multicontrast imaging in medical application	Chen Zhiqiang
55.	Mechanism research of neutron induced displacement damage on electronic devices affecting by source zone ionizing radiation	Chen Wei
56.	Development of GeFi simulation scheme and its application to tokamak fusion plasmas	Chen Liu
57.	On some related issues in string/M-theory and black hole physics	Lu Jianxin
58.	Experimental study of the charmonium and charmoniumlike states	Yuan Changzheng
59.	Studies of key physics and technological problems on high-intensity proton beam bombardment on target	Tang Jingyu
60.	Research of the design and performance of the readout ASIC of silicon pixel detector	Wang Zheng
61.	Synthesis of multifunctional negative thermal expansion compounds and its mechanism	Xing Xianran
62.	Structure design and catalytic properties of environmental- friendly polyoxometalates	Hu Changwen
63.	Study on the structure and function of bio-mimic nitrogen fixation system	Qu Jingping
64.	Fundamental studies of upconversion luminescent materials for bioimaging	Li Fuyou
65.	Study on multi-electron-reaction Mn-based electrode materials of new Li batteries	Chen Jun
66.	Designed syntheses and SHG properties of New Inorganic Crystalline Materials with Polar Structures	Mao Jianggao
67.	Constructing cyclodextrin functionalized inorganic nano-materials to mediate multi-target tumor therapy	Mao Zongwan
68.	Mechanistic study of important organic reactions	Yu Zhixiang
69.	Synthetic studies on some biologically important oligosaccharides and glycoconjugates	Ye Xinshan
70.	Visible light photocatalytic controlled reactions of radicals and their applications in organic synthesis	Xiao Wenjing
71.	Highly efficient synthesis of complex heterocyclic compounds	Tu Shujiang
72.	Studies on organic molecules for the selective recognition and regulatory of biomacromolecules	Yu Xiaoqi
73.	Development of transition metal-catalyzed new methodologies based on unsaturated bonds	Ma Shengming
74.	Bioactive molecule-oriented stereoselective construction of chiral nitrogenous heterocycles	Gong Liuzhu

75.	Study on highly efficient catalytic systems tuned by functionalized microenvironments	Fan Qinghua
76.	Studies on the privileged chiral ligands and catalysts	Ding Kuiling
77.	Surface enhanced Raman scattering on flat substrates and its applications	Zhang Jin
78.	Dynamic mechanism of chemical modification on nucleic acid by enzymes	Zhao Xinsheng
79.	Physical chemistry experimental study on the interaction between stem cells and fluorescent carbon nanomaterials	Fan Louzhen
80.	Fundamental studies of rechargeable Li batteries with high energy density	Yang Yong
81.	Core-shell interace and ptical Properties Monodispersity of Quantum Dots	Peng Xiaogang
82.	Theoretical design and synthesis of multi-component polyheterocyclic eutectic hydrogen carriers and hydrogenation/dehydrogenation catalysts and reaction mechanism studies	Cheng Hansong
83.	Development and applications of linear scaling first-principles electronic structure methods	Yang Jinlong
84.	Studies on catalytic oxidation of polyols to organic acids	Xu Jie
85.	Structure modification and property study of cluster-based compounds	Wu Xintao
86.	Formation, transition and regulation of surface chiral assembly by non-chiral molecules	Wan Lijun
87.	Novel fluorescence sensor based on the supramolecular system	Yang Guoqiang
88.	Controlling dynamic transport and collection of liquid drop on bioinspired multi-level micro-/nanostructured gradient interfaces	Zheng Yongmei
89.	Hierarchical self-assembly of polypeptide-based copolymers and its biological functions	Lin Jiaping
90.	Characterization of polyelectrolytes	Zhang Guangzhao
91.	Construction of high efficient biomimetic enzyme systems by combining molecular imprinting and self-assembly	Liu Junqiu
92.	Synthesis of well-defined functional cyclic polymers and its properties	Zhu Xiulin
93.	Novel efficient transition metal catalysts and controlled polymerization of olefins	Li Yuesheng
94.	Dynamics and stability of complex polymer liquid films	Shi Tongfei
95.	Developments of new approaches for the selective separation and preconcentration of proteins	Wang Jianhua
96.	Studies on the new methods for analysis of key mediators in cell apoptosis	Yao Shouzhuo
97.	Electroanalysis of protein-protein interaction	Li Genxi
98.	Bio-functional graphene interface and its biosensor and bioanalysis	Li Jinghong
99.	Theoretical study of high sensitive ESI source and application in the analysis of low abundance proteins	Zhang Yukui
100.	New technology and methods for highly efficient proteome analysis of post-translational modification of proteins	Zou Hanfa
101.	SPR imaging-based label-free high throughput recognition and/or screening analytical method	Chen Yi

102.	Construction of a safe reaction process for clean production of isocyanate and research on its key basic problems	Wang Yanji
103.	Design and product engineering foundation of highly selective metallic ions capture agents with detection and separation function	Qian Xuhong
104.	Chemical engineering foundation for fabrication of novel nanocomposites via confined reactions	Li Chunzhong
105.	Fundamental research of the magnetic driven ilmenite mechanical activation - dilute acid leaching coupling reaction technology	Liang Bin
106.	Studies and applications of interfacial molecular phenomena in protein chromatography	Sun Yan
107.	Separation systems and zeolite membranes with low cost and high performance	Wang Zhengbao
108.	Hydrodynamics of electrostatic fluidized bed and process intensification	Yang Yongrong
109.	Design, synthesis and performance of novel heterogeneous Fenton-like catalysts based on multidimensional structured materials and catalytic membrane	Zhang Guoliang
110.	Molecular composition analysis of heavy petroleum by fourier transform cyclotron resonance mass spectrometry	Xu Chunming
111.	Mechanisms for environmental processes and biological effects of coexisting brominated flame retardants and heavy metals in soil	Ji Rong
112.	Effects of engineered nanomaterials on interfacial processes of organic contaminants in aquatic environments	Chen Wei
113.	Study on the key technologies and scientific problems for synchronical photocatalytic oxidation of Hg and NO in cleaning sweep gas of power plants based on adsorption-assisted photocatalysis and electrophotocatalysis	Li Hexing
114.	Biokinetics and toxicity of heavy metals in estuarine organisms from southern China	Wang Wenxiong
115.	Investigation on mechanism of synergistic toxicity between organic pesticides and copper/zinc-containing inorganic pesticides	Zhu Benzhan
116.	The study of ecology and heredity mechanism for sexuality evolution of typical genera and species in hyphomycetes	Zhang Xiuguo
117.	Mechanism underlying the degradation of nicotine, an environmental toxicant, by pseudomonas	Xu Ping
118.	Chemotaxis and biodegradation of towards aromatic pollutants by comamonas sp. strain CNB-1 and others: mechanism and application	Liu Shuangjiang
119.	Gene regulatory network coupling between carbon and nitrogen metabolism in associative nitrogen-fixing Pseudomonas stutzeri	Lin Min
120.	Molecular mechanism of pathogenesis caused by HBV infection	Wu Jianguo
121.	Regulatory mechanism of phototropic response by IAA methylation in Arabidopsis	Qu Lijia
122.	Probing plant immune signaling pathways with bacterial effector	Zhou Jianmin
123.	New active jasmonates study	Xie Daoxin
124.	Molecular basis of auxin-mediated somatic cell dedifferentiation in plants	Hu Yuxin
125.	Molecular mechanism of environmental changes affecting sex ratio of the Chinese alligator population	Fang Shengguo

126.	Effects of key environmental changes on population dynamics and genetic variations of giant pandas	Wei Fuwen
127.	Herbivory-mediated relationships between multiple trophic diversity and ecological functioning in grassland	Wang Deli
128.	The relationship between function stability and species diversity in forest ecosystems	Yu Shixiao
129.	Study on the formation mechanisms and functions of alpine cushion plant community	An Lizhe
130.	Study on sustainable control mechanism of insect natural enemies to <i>Monochamus alternatus</i>	Yang Zhongqi
131.	Structural and functional studies of important protein complexes by single-particle cryo-electron microscopy	Sui Senfang
132.	Structural and functional studies of important protein complexes involved in endocytosis	Ding Jianping
133.	The structure determination of biomolecular machines at near atomic resolution based on cryoEM technology	Zhu Ping
134.	The regulatory function and signal transduction pathway of orphan receptor TR3/Nur77 in cell autophagy	Wu Qiao
135.	Molecular mechanism and functional regulation of dietary cholesterol absorption	Song Baoliang
136.	The mechanism of checkpoint maintaining DNA replication forks and genomic stability	Kong Daochun
137.	The structure and mechanism study of molecular target-based anti-tumor glycan	Ding Kan
138.	Molecular mechanisms underlying anti-DNA viral innate immunity	Jiang Zhengfan
139.	Novel mechanism of NLRP3 inflammasome activation and regulation	Sun Bing
140.	Function of $\gamma\delta$ T cells in liver innate immune response	Yin Zhinan
141.	Role of heat shock protein gp96 as a new vaccine adjuvant in promoting cellular and humoral immunity	Meng Songdong
142.	Adhesion dynamics of hepatic cells under blood flow and their impacts on functional sinusoidal tissue	Long Mian
143.	Regulation of synaptic transmission and plasticity by acid-sensing ion channels	Xu Tianle
144.	Plasticity of human visual information processing	Fang Fang
145.	The cognitive and brain mechanisms underlying perceptual learning	Yu Cong
146.	The cognitive and neural mechanism of spatial ability	Liu Jia
147.	The neural mechanism of visual cognitive function decline process in aging	Zhou Yifeng
148.	The neurobiology of retrieval and extinction of pathological emotional memory	Lu Lin
149.	Studies on membrane protein-related mechanisms underlying sperm function regulation: ion channels and transporters	Zeng Xuhui
150.	Polypeptides of CGRP superfamily counteract HHcy-induced ERS and insulin resistance in adipose tissue	Wang Xian
151.	The role of the ER stress pathway in adaptive and homeostatic control of metabolism	Liu Yong
152.	The mechanism underlying that SENP3 responds to cellular oxidative stress and regulates the modifications of transcription factors: its role in gastritis-related gastric cancer	Yi Jing

153.	Molecular mechanism of omologous Recombination Induced by DNA Double-Strand-Break	Cheng Zhukuan
154.	Regulation of DNA oxidative modification in mammalian cells	Xu Guoliang
155.	Molecular mechanism for the establishment of telomeric heterochromatin	Zhou Jinqiu
156.	Molecular basis for recognition and regulation of small non-coding RNAs in plant	Ma Jinbiao
157.	Deciphering the transcriptional regulation and biological function of miRNAs involved in Wnt/beta-catenin signaling pathway	Qu Lianghu
158.	Dissecting mechanisms underlying apoptotic cell clearance	Yang Chonglin
159.	Mechanisms for beta-catenin nuclear translocation and epigenetic regulation of its transactivation activity	Li Lin
160.	Study on type III sodium-dependent phosphate transporter 2 (PiT2) function and molecular mechanism of idiopathic basal ganglia calcification	Liu Jingyu
161.	Lysosomal trafficking in modulating EGF signaling	Li Wei
162.	The study of gene expression profile and control of human ovarian follicles growth and development in vitro and in vivo	Qiao Jie
163.	Molecular mechanisms regulate the self-renewal and differentiation of human spermatogonial stem cells into spermatids	He Zuping
164.	The mechanism of circadian clock and its regulation	Xu Ying
165.	Mechanisms underlying developmental plasticity of root system architecture mediated by auxin under salt stress in soybean	Li Xia
166.	Molecular mechanism of OsMADS34 and OsMADS6 in controlling rice inflorescence and flower development	Zhang Dabing
167.	Molecular genetic basis of wild-abortive cytoplasmic male sterility and restoration in rice	Liu Yaoguang
168.	The molecular mechanisms of the formation of wheat processing quality in southwest of China	Zheng Youliang
169.	Dissection of the molecular and genetic basis of heterosis for kernel number per ear in maize	Ni Zhongfu
170.	Molecular mechanism of leaf angle forming in maize (<i>Zea May L.</i>)	Chen Yanhui
171.	Mechanism of calcium and reactive oxygen species signaling in regulating cotton fiber elongation and quality formation	Zhang Xianlong
172.	Structural modification and functional regulation of food carbohydrates	Jin Zhengyu
173.	Anti-stress molecular mechanism on survival and multiplication of <i>Salmonella Enteritidis</i> in chicken eggs during storage	Shi Xianming
174.	Mechanisms and utilization of diverse tale genes that manipulate rice resistance and susceptibility to <i>xanthomonas oryzae</i> infection	Chen Gongyou
175.	Molecular mechanism for durable control of brown planthopper via resistance gene diversity in rice	He Guangcun
176.	Effect and mechanism of agricultural landscape diversity in regulating and suppressing the population of diamondback moth	You Minsheng

177.	Neural and molecular mechanisms of <i>Helicoverpa armigera</i> olfactory behavior regulated by plant volatiles	Wang Guirong
178.	Molecular mechanism(s) of sugars & organic acids formation and related key genes identification of pear fruit	Zhang Shaoling
179.	Exploration and regulatory mechanism of key genes in fruit development of tomato	Ye Zhibiao
180.	Co-evolution of pollinating insects and entomophilous plants during late Mesozoic	Ren Dong
181.	Molecular mechanism for the regulation of diapause by insulin in <i>Helicoverpa armigera</i>	Xu Weihua
182.	The plasma membrane receptor and the membrane signaling pathway of the 20-hydroxyecdysone	Zhao Xiaofan
183.	Phylogeny and evolution of parasitic habits in Hymenoptera	Chen Xuexin
184.	Identification of critical genes and causal mutations affecting intramuscular fat content in pigs	Huang Lusheng
185.	Molecular mechanisms on the pathogenicity and immunity of SPI-2 T3SS effectors in <i>Salmonella enterica</i> serovar Pullorum	Jiao Xin-an
186.	Function of the proteins of porcine reproductive and respiratory syndrome virus in regulating the host immune responses and viral evasion strategies	Jiang Ping
187.	Molecular mechanism of interaction between porcine circovirus 2 and cytoskeletal proteins	Zhou Jiyong
188.	Transcriptomic and proteomic studies of interaction between <i>Toxoplasma gondii</i> and its host	Zhu Xingquan
189.	Structural and functional and regulation mechanism studies of cytotoxic T lymphocyte in jawed fish	Xia Chun
190.	Transcriptional and functional studies of spliced IFN-gamma and their receptors in mandarin fish <i>Siniperca chuatsi</i>	Nie Pin
191.	Molecular mechanisms of muscle differentiation and growth in Chinese mandarin fish	Zhang Jianshe
192.	Substantial change of subtropical evergreen broadleaved forest at LGM and the migration pathway of the key species during the postglacial in China	Zheng Zhuo
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195.	The microfossil study of agriculture origin and their relationship with environmental change in Yellow River drainage area	
196.	Metamorphism and tectonics of the eastern Himalayan orogen	Zhang Zeming
197.	Natural rheology study of continental lithosphere in typical areas (Xingcheng, Western Liaoning)	Liu Yongjiang
198.	Component, deformation and timing of the high grade metamorphic terrane, ophiolite and accretionary complex of Beishan Orogenic Belt	Xiao Wenjiao
199.	Active tectonic reconstruction of paleopositions of the south China block from the Nanhua system to early Paleozoic	Yang Zhenyu

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204.	Comparative study on the Meso-Cenozoic uplifting of Zoige Plateau, Longmen Shan thrust belt and Western Sichuan foreland basin across the eastern Tibetan Plateau margin	Liu Shugen
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243.	Spatial scale effect of land use impact on runoff in the Loess Plateau under climate change	Wang Yanhui
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468.	Pathogenesis and hearing restoration of deafness in Chinese population	Dai Pu
469.	The study of the mechanism of sirt1 on degeneration of auditory system and the intervention strategies	Kong Weijia
470.	A genome-wide association study for non-syndromic cleft lip with or without cleft palate in the Han Chinese population	Wang Lin
471.	Dynamic brain functional networks and its characteristics of pain matrix during the development of chronic neuropathic pain	Wan You
472.	Epigenetic mechanisms of neonatal reprogramming in chronic visceral pain	Xu Guangyin
473.	Neurobiological mechanisms of co-morbidity of pain-depression: Focus on maladaptation of dopaminergic neurons in mesolimbic reward pathway	Cao Junli
474.	The role of Fas/FasL-mediated crosstalk of microglia and T cells in ischemic brain immune and inflammation	Xu Yun
475.	Role and mechanism of NSCs in the demyelination and remyelination of experimental autoimmune encephalomyelitis	Guan Yangtai
476.	Reciprocal interactions between natural killer cell and neural stem cell in CNS inflammation	Shi Fudong
477.	Study on new cationic poly(β -amino esters)/RNA self-assembly nanoparticles for targeting treatment of tumor	Li Yaping
478.	Study on key technologies for fabricating high specific PET/MRI dual functional probe for tumor early detection	Liu Shiyuan
479.	Quantum dots labeled probes for molecular imaging study of breast cancer invasion	Li Yan
480.	Early diagnosis and pathophysiological mechanism of hepatic encephalopathy with molecular and functional imaging	Zhang Longjiang
481.	Study of the key point in developing radionuclide Cerenkov multimodality fusion imaging	Wang Jing

482.	Investigation of the dynamic process in ischemic stroke penumbra by multi-modality molecular imaging	Teng Gaojun
483.	Research on key technologies of virtual endoscopy based on quantitative image analysis and feature visualization	Lu Hongbing
484.	Drug nanocarrier based on nanohybrid liposomal cerasomes for diagnosis and therapy of cancer	Dai Zhifei
485.	Study on the mechanisms of the regulation of gene expression in Kaposi's Sarcoma associated herpesvirus latent infection	Lan Ke
486.	Study on human papillomavirus integration-related latent infection and the pathogenesis of cervical carcinogenesis	Ma Ding
487.	Study on resistance mechanism of Acinetobacter baumannii against main antimicrobial agents	Yu Yunsong
488.	The role and mechanism of TSCs differentiation regulation in repairing tendon micro-injury	Tang Kanglai
489.	Study on reprogramming of MSCs into sweat-gland-like cells for sweat gland regeneration and the essential signaling and molecular mechanisms	Fu Xiaobing
490.	Research on mechanism of mechanical stretch induced skin regeneration assisted by stem cell transplantation	Li Qingfeng
491.	The effect and molecular mechanism of tumor suppressor gene NDRG2 in cancer metabolic reprogramming	Yao Libo
492.	A molecular mechanism study on CREPT as a novel anti-tumor drug target	Chang Zhijie
493.	The impact of fusion gene AARS-MAD2 on genomic instability and tumorigenesis of nasopharyngeal carcinoma	Zeng Musheng
494.	Mechanism of PRL-3-induced chromosomal instability and its role in the development of colon cancer	Shou Chengchao
495.	The role and mechanism of cell cycle protein Nlp in the maintenance of genomic stability and tumorigenesis	Zhan Qimin
496.	Decreased expression of apoptosis-inducing factor in epithelial-mesenchymal transition of cancer cells	Chen Guoqiang
497.	The novel mechanisms underlying the formation of blood microcirculation in cancer	Zhuang Shimei
498.	Study on molecular regulation mechanism of tumor vasculogenic mimicry	Sun Baocun
499.	Generation of claudin-low/triple-negative breast cancer stem cells: a mechanistic depiction of breast cancer plasticity and the implication in translational medicine	Zhang Hongquan
500.	Decoding the regulatory machine of a novel mitotic regulator, LIV1, for targeted anti-mitotic therapy	Zhou Jianfeng
501.	Roles and mechanisms of PI3K/AKT/NF-kappaB signaling pathway regulated by multimolecule and multilayer in NPC radioresistance	Xiao Zhiqiang
502.	Molecular targets for endocrine therapy resistance in breast cancer	Shi Yuenian
503.	Identification of targets and their chemical intervention for RAS-related cancer	Ren Ruibao
504.	Somatic mutations in Oncogenes KIT and KRAS as targets for nasopharyngeal carcinoma treatment	Ma Jun
505.	The mechanism research of the effect of high fat and abnormal metabolism of intestinal microflora on the risk of colorectal cancer	Qin Huanlong
506.	Effects of cilia loss on cancer metabolism and cell transformation	Xie Dong

507.	Mechanistic study of LIF receptor acetylation-mediated metabolic abnormality in breast cancer	Qin Yue
508.	LncRNAs targeting inflammatory signaling pathways regulate plasticity of breast cancer cells	Song Erwei
509.	The mechanisms by which LRP16 blunts the radiosensitivity of tumor cells and the corresponding blockage studies	Han Weidong
510.	The roles and mechanisms of glioma stem cells in the formation of vasculogenic mimicry	Bian Xiuwu
511.	Mechanisms of the impairment of learning and memory following the coexposure to low-level lead and manganese	Chen Jingyuan
512.	Epidemiological and mechanism study on combined exposure of microcystin and aflatoxin at low level	Shu Weiqun
513.	Study on combined cardiovascular toxicity induced by typical environmental pollutants and ultrafine particle mixture at low dose level and its mechanism	Sun Zhiwei
514.	The family based cohort study on the common non-communicable chronic diseases of the populations in the rural community of northern China	Hu Yonghua
515.	Causal variants determination for common malignant tumors and risk prediction in a cohort study	Shen Hongbing
516.	Role of genetic and epigenetic variation in the development and prognosis of gastric cancer and its underlying molecular mechanism	Zhang Zhengdong
517.	Role and possible mechanism of interaction among genes and life style in the development of coronary heart disease	Wu Tangchun
518.	Study on class A scavenger receptor-mediated macrophage polarization in cardiovascular disease-related micro-environments	Chen Qi
519.	The role of the complement induced perivascular immunity microenvironment in vascular injury	Gao Pingjin
520.	Systematic dissection of molecular and cellular mechanisms underlining microRNA mediated tissue damage in lupus	Shen Nan
521.	Distinct role of macrophages in different tumor microenvironments	Zheng Limin
522.	The epigenetic regulation of the differentiation, maturation and innate immune response of dendritic cells	Wang Qingqing
523.	The functional mechanisms of IL-17C-IL-17RE pathway in the pathogenesis of inflammatory diseases	Qian Youcun
524.	Novel methodologies and applications for drug design	Jiang Hualiang
525.	Structure-based PAK4 inhibitor design and mechanism studies for novel anticancer drug discovery	Cheng Maosheng
526.	Identification of novel natural products and corresponding derivatives which modulate the Nrf2-Keap1 protein-protein interaction by using chemoinformatics and bioinformatics techniques	You Qidong
527.	The basic research on safety and effectivity evaluation of TMC using CMC technique	He Langchong
528.	The mass spectral fragmentation patterns and novel methods for rapid identification of drug impurities and metabolites structure	Zeng Su

529.	Ischemia-responsive microRNAs regulating apoptotic cell death mechanisms and intervention during cardiac ischemia	Du Zhimin
530.	The study of the molecular mechanisms of interaction between TMEM16A and ClC-3 chloride channels on cerebrovascular remodeling and drug influence	Guan Yongyuan
531.	Nicotinic acetylcholine receptor $\alpha 7$ subunit: a possible target to protect against cardiovascular diseases	Su Dingfeng
532.	The basic research of nourishing spleen yin treatment for cognitive dysfunction in emotional stress induced type 2 diabetes	Zhan Libin
533.	The study of imaging genetic and gene regulation net of Gan stagnation	Lv Zhiping
534.	Study on stepwise effectiveness evaluation methods for treatment based on syndrome differentiation	Liu Baoyan
535.	Study on methods of TCM clinical effect evaluation based on measurement of change of wholistic health state	Li Candong
536.	Study on the functional plasticity of acupuncture at acupoints in the Conception Vessel and Governor Vessel in treating dysphasia after stroke	Xu Nenggui
537.	The mechanism of the antiviral activity of YinQiaoSan Based on the comparison of molecular network	Wang Shengqi
538.	Establishment and application of network pharmacology for TCM	Zhang Weidong