



SCUT Newsletter 华工新闻快讯

第22届中国国际工业博览会CIIF大奖获奖名单

序号	奖项名称	参展企业	展品名称
1	CIIF特别大奖	中科院微小卫星创新研究院	北斗三号中科院导航卫星
2	CIIF大奖	武汉中科极化医疗科技有限公司	人体肺部气体磁共振成像系统
3	CIIF大奖	上海振华重工（集团）股份有限公司	自动化码头装卸系统
4	CIIF大奖	中国科学院沈阳自动化研究所	海斗一号
5	CIIF大奖	上海节卡机器人科技有限公司	节卡共融系列协作机器人
6	CIIF大奖	上海三爱富新材料科技有限公司	新型显示用含氟高分子材料(PT853)
7	CIIF大奖	凯盛君恒有限公司、中建材蚌埠玻璃工业设计研究院有限公司、凯盛科技集团有限公司	中性硼硅药用玻璃管
8	CIIF大奖	上海汽车集团股份有限公司	上汽5G智能重卡
9	CIIF大奖	华南理工大学、广东星联科技有限公司	超高分子量聚乙烯制品短流程高效制造技术
10	CIIF大奖	长春希达电子技术有限公司	超高清超高分辨率大尺寸 LED显示器



1. SCUT Wins Award at 22nd CIIF

华南理工大学科技成果荣获第22届中国国际工业博览会CIIF大奖

On October 8, the Opening and Awarding Ceremony of the 22nd China International Industry Fair (CIIF) themed on "Intelligence & Interconnection Empowering New Industrial Development" was held at the National Exhibition and Convention Center (Shanghai).

10月8日，以“智能、互联——赋能产业新发展”为主题的第22届中国国际工业博览会开幕式暨颁奖仪式在国家会展中心（上海）举行。

South China University of Technology (SCUT) presented various S&T achievements at this edition of

the CIIF, among which "Short-process and High-efficiency Manufacturing Technology for UHMWPE Products" and "Beidou-3 Navigation Satellite System" and other entries won this edition of the CIIF Award, and "Multifunctional Digital-waveform-controlled Arc Welding Inverter" won the Excellent Exhibit Award.

华南理工大学多项科技成果亮相工博会，其中，“超高分子量聚乙烯制品短流程高效制造技术”与“北斗三号卫星导航系统”等项目一道荣获本届工博会大奖（CIIF大奖），“多功能数字波控弧焊逆变电源”获优秀展品奖。

The award-winning S&T achievements demonstrate major progress in key aspects of the industry, breakthroughs in core technologies, and internationally leading technology and process levels. They represent the top-level of industrial technologies in China. As one of the most prestigious honors in China's industrial sector, the CIIF Award also marks the highest level of "Made in China" manufacturing.

据悉，获CIIF大奖的成果均为在工业领域关键环节取得了重大进展，突破了核心关键技术，技术和工艺水平平均达到行业内国际领先水平，代表了中国工业技术的最先进水平，CIIF大奖也代表着“中国制造”最顶尖的高度，是中国工业领域最具含金量的奖项之一。

Us News Ranking of World Universities in 2021(Chinese Mainland)

Us News 2021世界大学排行榜（中国大陆）

Number 序号	University 学校名称	World University Rankings in 2021 2021世界排名	World University Rankings in 2020 2020世界排名	Score 得分
13	Tongji University 同济大学	251	279	60.1
14	Hunan University 湖南大学	252	338	60
15	South China University of Technology 华南理工大学	290	336	58.2
16	Southeast University 东南大学	292	311	58.1
17	Central South University 中南大学	295	388	58
18	Xiamen University 厦门大学	297	332	57.9

Discipline 学科	World University Rankings 世界排名
Agricultural Sciences 农业科学	3
Chemical Engineering 化学工程	6
Energy and Fuels 能源和燃料	10
Nanoscience and Nanotechnology 纳米科学与技术	19
Electrical and Electronic Engineering 电子与电气工程	32
Materials Science 材料科学	38
Chemistry 化学	43
Engineering 工程学	46
Mechanical Engineering 机械工程	57
Civil Engineering 土木工程	60
Biotechnology and Applied Microbiology 生物技术与应用生物学	87
Computer Science 计算机科学	217
Biology and Biochemistry 生物和生物化学	341

2. SCUT First Ranks among Top 300 in US News Best Global Universities Rankings

华南理工首次进入US News世界最好大学排名300强

On October 20, *US News & World Report* unveiled the 2021 Best Global Universities Rankings, in which South China University of Technology (SCUT) ranked 290th in the world, up by 46 places from last year, and secured the 15th place among universities in mainland China.

10月20日，《美国新闻与世界报道》（US News & World Report）发布2021世界最好大学排名，华南理工大学位列世界第290名，比去年提升46位，在中国大陆高校中位列15位。

US News also released the 2021 World University Rankings by Subject. SCUT saw a total of 15 subjects on the list, an increase of 5 over the previous year. Among them, 11 subjects ranked among the global top 100, while 3 subjects, namely Agricultural Science, Chemical Engineering, Energy and Fuel, ranked among the world's top 10.

US News同时发布了2021世界大学学科排名，华南理工大学共有15个学科进入榜单，比上一年增加5个，其中11个学科进入世界百强，农业科学、化学工程、能源和燃料3个学科位列世界前10名。



3. SCUT Co-organizes 1st Conference of BFA ISTIF

华南理工大学成功协办博鳌亚洲论坛国际科技与创新论坛首届大会

On the morning of November 10, the Opening Ceremony of the 1st Conference of the Boao Forum for Asia (BFA) International Science, Technology and Innovation Forum (ISTIF) was held in Macao.

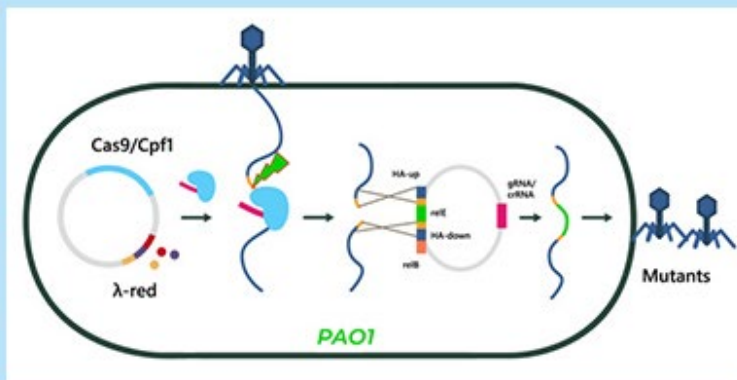
11月10日上午，博鳌亚洲论坛国际科技与创新论坛首届大会开幕式在澳门举行。

In October, a press conference was held for the 1st Conference in Guangzhou. South China University of Technology (SCUT) co-organized the event as a BFA partner and the only university co-organizer. Themed on "Innovation Empowers Sustainable Development" and focusing on impetus for innovation, innovation and everyday life, and cooperation on innovation, the 1st Conference offered both online and offline events and activities, including the plenary conference and 12 sub-forums. Participants had in-depth discussions covering hot topics in S&T and innovation such as 5G, aerospace science and technology, gene therapy, biomedicine, molecular materials and AI. A series of important consensus were reached, making ISTIF an essential platform for international exchange and cooperation in S&T and innovation.

博鳌亚洲论坛国际科技与创新论坛首届大会新闻发布会于10月在广州召开。华南理工大学作为博鳌亚洲论坛合作伙伴以及唯一协办高校参与协办。大会以“创新赋能可持续发展”为主题，围绕“创新动力”“创新生活”“创新合作”三个关键词，举办了全体大会和12场分论坛等线上线下相结合的交流互动。与会代表围绕5G、航天科技、基因治疗、生物医药、分子材料、人工智能等科技创新领域的热点前沿话题深入探讨，达成一系列重要共识，成为科技创新领域国际交流与合作的一个重要平台。

The event brought together approximately 1,000 representatives from 25 countries and regions, including 5 former and current political dignitaries, Chief Executives of Hong Kong and Macao SARs, over 10 ministers, 2 heads of international organizations, nearly 100 high-profile guest speakers, 9 diplomatic envoys or representatives and more than 10 business leaders from multinationals. The Conference was also covered by almost 100 journalists of over 40 media outlets from Chinese mainland and the Guangdong-Hong Kong-Macao Greater Bay Area (GBA).

据悉，本次大会汇聚了来自25个国家和地区的近1000名代表，包括5位政要和前政要、香港与澳门特区的行政长官、10余位部长、2位国际组织负责人、近百位重量级演讲嘉宾，以及9位驻华使节或代表和10多位跨国企业负责人参加。大会还吸引了来自中国大陆和粤港澳大湾区40多家媒体近百名记者竞相报道。



4. SCUT Wins iGEM Gold Award

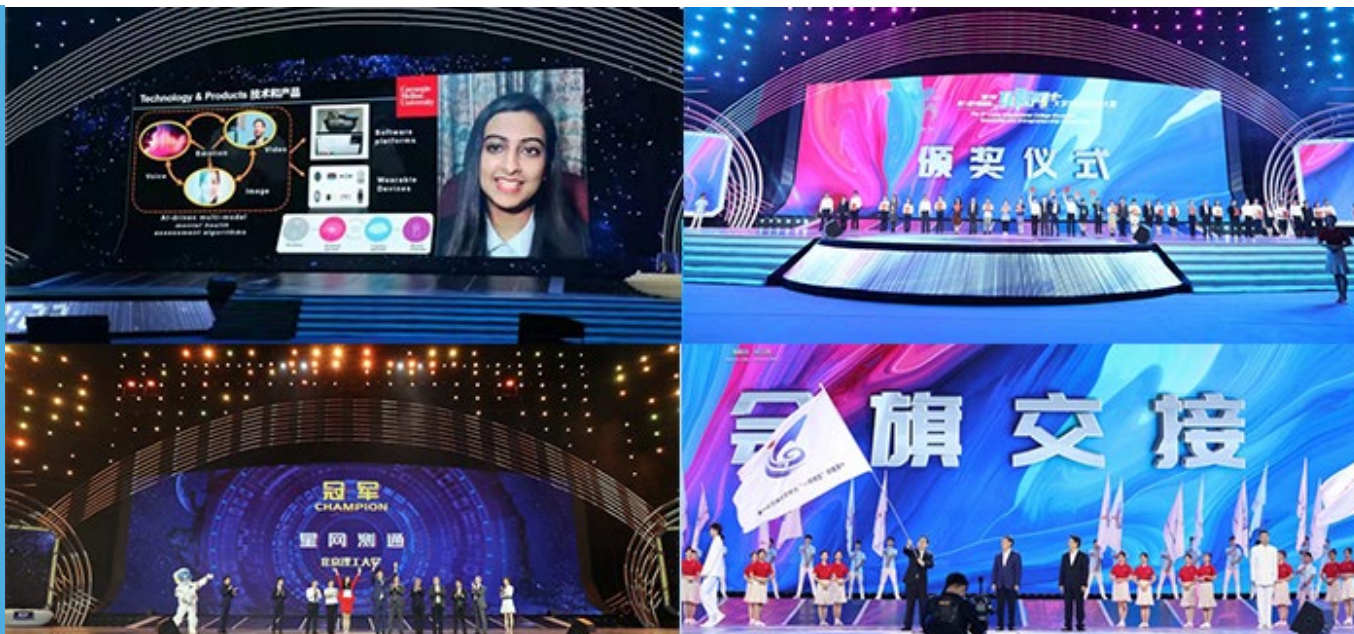
华南理工大学团队获国际遗传基因工程机器大赛金奖

International Genetically Engineered Machine Competition (iGEM), hosted by Massachusetts Institute of Technology (MIT) and the iGEM Committee, is a top international academic and S&T competition in interdisciplinary synthetic biology. In response to COVID-19, the 2020 iGEM global finals were held online from November 16 to 22. 239 teams from around the world participated in the finals and 2020 SCUT_China, the iGEM team of SCUT, won the Gold Award.

国际遗传基因工程机器大赛 (International Genetically Engineered Machine Competition, iGEM) 由美国麻省理工学院和iGEM委员会举办，是跨学科的合成生物学领域的顶级国际学术科技竞赛。2020年iGEM全球决赛受疫情影响，于11月16-22日在线上举办。来自全球的239支队伍参加比赛，华南理工大学iGEM团队2020 SCUT_China荣获金奖。

2020 SCUT_China comprised of 15 students from the School of Biological Science and Engineering, School of Mathematics, School of Computer Science and Engineering, and School of Design. The competition entry submitted by the team was "Toxin-based Recombinant PAE Phage". With the drug-resistant *Pseudomonas aeruginosa* (DR-PAE) phage as an example, the team quickly captured two toxin-carrying recombinant PAE phages through editing and purification, using a CRISPR editing system developed by them. The said recombinant phage can kill PAE with lower drug resistance, thus offering a reference for more effective modification of phages.

2020 SCUT_China由生物科学与工程学院、数学学院、计算机科学与工程学院和设计学院共15名学生组成。团队参赛项目为“基于毒素的重组铜绿假单胞菌噬菌体”，项目以耐药菌铜绿假单胞菌的噬菌体为实例，利用课题组构建的CRISPR编辑体系，通过编辑和纯化，快速获得了两株携带毒素的铜绿假单胞菌重组噬菌体，得到的重组噬菌体不仅可以杀死铜绿假单胞菌，而且不易产生抗性，为更多的噬菌体高效改造提供参考。



5. The 6th China International College Students' "Internet+" Innovation and Entrepreneurship Competition Successfully Held

第六届中国国际“互联网+”大学生创新创业大赛成功举办

From November 17 to 20, the "CCB Cup" 6th China International College Students' "Internet+" Innovation and Entrepreneurship Competition was successfully held at South China University of Technology (SCUT). Hosted by SCUT, gold medals were presented at the Awarding Ceremony to over 100 teams selected from 1.47 million teams from all over the world. SCUT stood out with 10 teams winning gold medals, ranking first in the nation for its total number of gold medals.

11月17-20日，“建行杯”第六届中国国际“互联网+”大学生创新创业大赛总决赛在华南理工大学举办。大赛由华南理工大学具体承办，来自全球“百国千校”的147万个团队中脱颖而出的百余支团队揽金而归，其中，华南理工大学表现出色，共有10个团队项目获得金奖，金奖总数位居全国第一。

With the theme of "Dare to differ, Dare to win", the Competition attracted 1.47 million entries and 6.31 million participants from 4,186 universities and colleges in 117 countries and regions including China. In response to the COVID-19 pandemic, it was determined that the Competition would be held in a hybrid format that combined both offline and online presentations, with aims to step further ahead in international presence, education, coverage, innovation, and Chinese characteristics.

本届大赛以“我敢闯、我会创”为主题，共吸引了国内外117个国家和地区、4186所学校的147.3万个项目、631万人报名参赛。大赛克服疫情影响，采用线上线下结合方式举行，实现了“更国际、更教育、更全面、更创新、更中国”的办赛目标。

2020 Global Highly Cited Researchers(HCRs) Entries Number from Universities in Chinese Mainland 2020年全球高被引科学家（中国内地单位入选人次）

University 单位名称	Number of Entries 入选数
University of Electronic Science and technology 电子科技大学	17
Southeast University 东南大学	16
Fudan University 复旦大学	16
South China University of Technology 华南理工大学	16
Shanghai Jiaotong University 上海交通大学	16

6. SCUT Researchers Achieve 16 Entries on the 2020 Global Highly Cited Researchers (HCRs) list

华南理工16人次入选2020年全球高被引科学家

On November 18, Clarivate Analytics released its list of Highly Cited Researchers (HCRs) 2020, identifying 6,167 researchers in various sectors from over 60 countries and regions around the world. Researchers from Chinese mainland accounted for 770 entries on the list, including 16 entries (13 researchers) from South China University of Technology (SCUT) which tied for the 8th place among universities from Chinese mainland in number of list entries, up by one place from 2019.

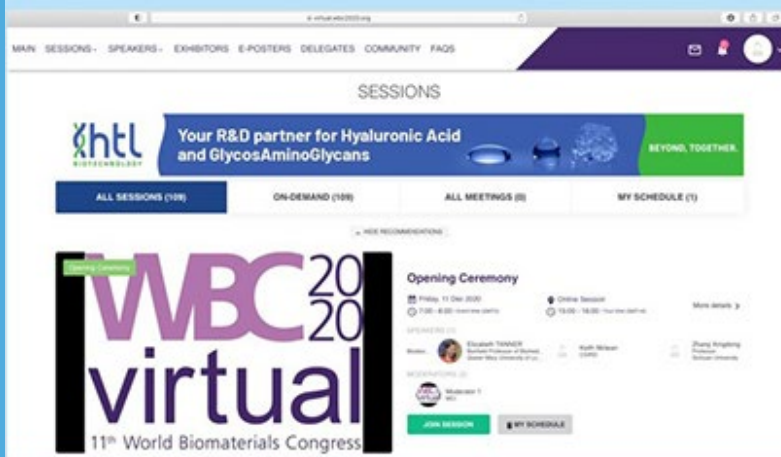
11月18日，科睿唯安发布了2020年“高被引科学家”名单，全球60多个国家和地区的6167位来自各领域的高被引科学家上榜，中国内地共计770人次上榜。其中，华南理工大学13名学者16人次入选，入选人次在内地高校并列第8位，比2019年前进1位。

SCUT's HCRs are mainly from six fields, namely material science (4 entries), cross-disciplinary fields (4 entries), chemistry (3 entries), agricultural science (2 entries), computer science (2 entries) and engineering (1 entry). Among them, Cao Yong, Chen Junlong and Huang Fei are named in two ESI categories, while Zhu Min and Ma Yuguang appear in the list for the first time.

华南理工大学高被引科学家主要分布在材料科学（4人次）、跨学科领域（4人次）、化学（3人次）、农业科学（2人次）、计算机科学（2人次）和工程学（1人次）等6个学科领域，其中曹镛、陈俊龙、黄飞同时入选两个学科领域，朱敏、马於光首次入选。

Based on Web of Science, Clarivate Analytics analyzed citation data over past 11 years and selected scientists with the most highly cited papers in different sectors.

据悉，科睿唯安基于Web of Science数据，通过对过去11年间引文数据的分析，筛选出发表各领域中高被引论文数量最多的科学家。



7. Academician Tang Benzhong and Prof. Wang Jun Elected 2020 Fellow, Biomaterials Science and Engineering

唐本忠院士、王均教授当选2020年国际生物材料科学与工程Fellow

On December 11, the 11th World Biomaterials Congress (WBC) opened online, where Academician Tang Benzhong and Prof. Wang Jun from South China University of Technology (SCUT) were elected 2020 Fellow, Biomaterials Science and Engineering (FBSE).

12月11日，第十一次世界生物材料大会于线上正式开幕。华南理工大学唐本忠院士、王均教授当选2020年国际生物材料科学与工程Fellow。

WBC not only provides S&T workers in biomaterials with opportunities for joint exploration towards cutting-edge research and platforms of interactive communication, but also plays an important role in promoting development of the global biomaterials science and industry. Known as the "Olympics" of the biomaterials industry, WBC was inaugurated in 1980 and is held every four years. Although the COVID-19 pandemic has brought many challenges to the opening of the Congress, over 2,500 attendees still registered their participation, including nearly 150 from China.

世界生物材料大会不仅为从事生物材料领域的科技工作者提供了共同探讨前沿研究的机会和互动交流的平台，而且对促进全球生物材料科学与产业的发展具有重要作用。该会议始于1980年，每四年举行一次，被称为生物材料界的“奥运会”。尽管新冠疫情给本次会议的举办带来了很大挑战，但仍有2500余人注册参会，其中中国注册参会人员近150人。

The election of Academician Tang Benzhong and Prof. Wang Jun as Fellow, Biomaterials Science and Engineering, soon after SCUT Academician Wang Yingjun and Prof. Chen Xiaofeng were elected Fellow in the same field, marks the improved international influence of the discipline.

此次唐本忠院士和王均教授的入选，也是继王迎军院士和陈晓峰教授之后，学校再次有研究者入选国际生物材料科学与工程Fellow，标志着该学科的国际影响力进一步提升。



8. "Unwaveringly Committed to Opening up in Education" -- The 2nd SCUT International Week Closes Successfully

“始终坚持教育对外开放不动摇” 第二届华园国际交流周顺利举行

Launched on November 26, the 2nd SCUT International Week lasted 16 days and closed successfully on December 11.

11月26日至12月11日，第二届华园国际交流周系列活动历时16天顺利结束。

With the normalization of COVID-19 response measures, a total of 39 events in four categories of this year's SCUT International Week were presented mainly online with corresponding offline supports based on quality resources on and off the campus. Compared to last year, this edition of International Week featured a new program themed on "Cultivation of International Innovative Talents". The program invited UN experts and interns to lecture on and share information about the UN's talent training model, career development plans to work with international organizations, and UN internship opportunities, contributing to the country's top level strategy on preparing and pooling talents of global governance. Another new program set up in response to the COVID-19 situation, "How to Pursue Overseas Study in a Pandemic-hit World", offered four themed lectures respectively on "government-sponsored overseas education", "pre-departure safety orientation", "Open Day on Overseas Study of Undergraduates", and "importance of cross-cultural communication in the post-COVID era". These lectures attracted nearly 1,000 students and helped them prepare for overseas study in a pandemic-stricken environment by offering guidance and service on policies and formalities.

在当前常态化疫情防控状态下，此次华园国际交流周通过整合校内外优质资源，以“线上为主、线下为辅”的方式，开展4大系列39场活动。相较于去年，今年新增的“国际化创新人才培养”系列邀请联合国专家及实习生，进行联合国人才培养模式、国际组织职业发展规划、联合国实习等信息的讲解与分享，积极服务于国家培养全球治理后备人才的顶层战略。其次，应对疫情设立的“疫情之下，如何走好留学路”系列，开展国家公派留学、平安留学行前培训、本科生境外交流学习开放日、“后疫情时代跨文化交流重要性”4大主题讲座，共吸引近千人参与，为学子结合当下疫情做好留学准备提供政策指导和过程服务。



9. SCUT Wins Innovation Gold Prize at the First Guangdong - Hong Kong - Macao Financial Mathematics Modeling Competition

华园学子勇夺首届粤港澳金融数学建模竞赛创新金奖

On December 20, the defense session of the finals of the first "GBA Cup" Guangdong - Hong Kong - Macao Financial Mathematics Modeling Competition was held at Sun Yat-sen University. Hao Bowen, Li Zifeng and Lai Xiang from SCUT School of Electric Power (2018 cohort) won the Innovation Gold Prize for their outstanding performance. The defense session was held both online and offline, where 14 finalist teams competed for the Gold Prize of the Competition.

12月20日，首届“大湾区杯”粤港澳金融数学建模竞赛决赛答辩在中山大学进行，华南理工大学电力学院2018级郝博文、李子锋、赖翔同学以优异的表现勇夺竞赛创新金奖。本次决赛答辩采用线下+线上的方式，14支入围决赛的队伍角逐本届竞赛的创新金奖。

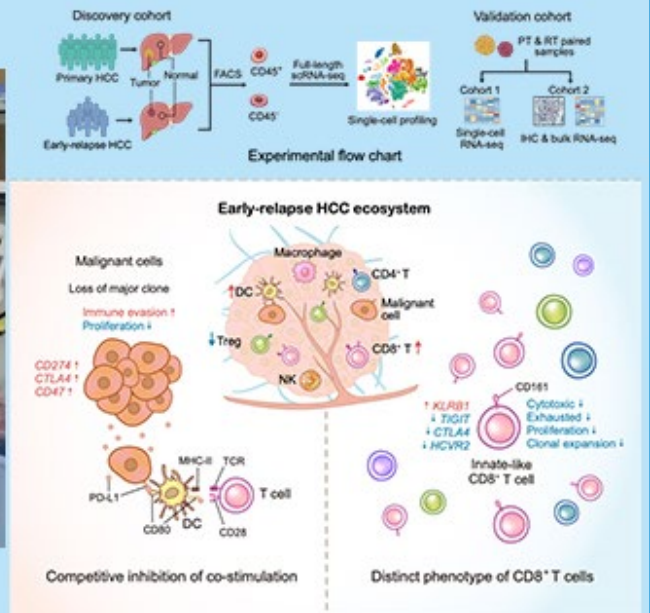
The Competition focused on hot topics in the financial sector of Guangdong, Hong Kong and Macao to facilitate financial innovation in the Greater Bay Area (GBA). Launched for the first time, the Competition attracted students from 341 universities and colleges in Guangdong, Hong Kong, Macao and other provinces in China, as well as those in foreign countries and regions. A total of nearly 10,000 participants from 3,285 teams registered for participation. The Competition intends to promote the economic development in the GBA and facilitate its efforts in developing its financial sector to reach international standards. During the Competition, a series of financial lectures were also delivered in collaboration with business partners from the financial sector.

本届竞赛围绕粤港澳金融领域的热点问题，为大湾区金融创新服务。竞赛今年首次举办，来自粤港澳及国内其他省市自治区，以及海外国家和地区的共341所高等院校的大学生参加了竞赛，报名队伍达3285支，参赛人数接近万人。大赛将助力推动大湾区经济建设，加快大湾区金融领域走向世界的步伐。此外，竞赛期间联合金融业界企业举办的一系列金融知识培训讲座。

The "GBA Cup" Guangdong - Hong Kong - Macao Financial Mathematics Modeling Competition aims to conduct innovative research on the application of mathematical modeling methods in the financial sector, promote the integrated development of digital finance, digital currency and smart finance with the traditional financial investment sector. It encourages cross-disciplinary exchange of research and

independent innovation in mathematics and financial sectors, and develops and identifies innovative fin-tech talents with global vision and entrepreneurial spirit.

据悉，“大湾区杯”粤港澳金融数学建模竞赛的主旨是开展数学建模方法在金融领域的创新研究，促进数字金融，数字货币和智能金融与传统金融投资领域的融合发展，鼓励数学和金融领域的交叉渗透和原始创新，培养和发掘金融科技方向的具有国际视野、契合世界主流的开拓创新人才。



10. Students of SCUT-Shenzhen BGI College Innovation Class of Genome Science Publishes Major Discovery on HCC in *Cell* online

华南理工大学-深圳华大基因研究院“基因组科学”创新班学子在*Cell*期刊在线发表肝癌研究领域又一重要发现

On December 23, SCUT postgraduates Zhong Yu and Xie Jiarui, published an online research paper titled "Single-cell landscape of the ecosystem in early-relapse hepatocellular carcinoma" in *Cell*, a top international biology journal, disclosing for the first time the significant differences of immune microecosystem between hepatocellular carcinoma and early-relapse hepatocellular carcinoma.

12月23日，华南理工大学硕士研究生钟裕与谢嘉睿在国际顶级生物学期刊*Cell*在线发表题为"Single-cell landscape of the ecosystem in early-relapse hepatocellular carcinoma"的研究论文，首次揭示肝癌原发肿瘤与早期复发肿瘤的免疫微生态系统的显著差异。

Hepatocellular carcinoma (HCC) is one of the most common malignant tumors. Resection surgery is currently the first choice to treat HCC, but the postoperative metastasis and recurrence is the major factor affecting the patient's long-term survival, which has become a bottleneck hindering further improvement of effectiveness of HCC surgery. Therefore, exploring mechanisms related to metastasis and recurrence of HCC and searching for effective strategies of intervention have become the key issues to raise the general survival rate of liver cancer patients.

原发性肝癌（简称“肝癌”）是最常见的恶性肿瘤之一，手术切除是目前肝癌治疗的首选方式，但肝癌术后转移和复发是影响患者长期生存的主要原因，它已成为阻碍肝癌手术疗效进一步提高的瓶颈。因此，探索

肝癌转移与复发相关机制，探寻有效的干预策略，已成为进一步提高肝癌病人总体生存率的关键课题。

Based on single-cell sequencing technology, the study systematically describes immune microecosystems of HCC and early-relapse HCC, unveils the divergence between the two microecosystems, and explores the cause of immune inactivation in recurrent liver cancer. It shows that the immune microecosystem in carcinoma is one of the critical factors to affect the efficacy of immunotherapy, and a deep understanding of relevant mechanisms of early recurrence is expected to lay a foundation for theories and novel treatment strategies to improve the effect of immunotherapy for HCC.

据悉，该研究运用单细胞测序技术，对肝癌原发肿瘤和早期复发肿瘤的免疫微生态系统做出了系统性的刻画，揭示了原发性和早期复发肝癌之间肿瘤微环境的差异，探究了复发肝癌中免疫失活状态的形成原因。该研究提示肿瘤内的免疫微生态系统是影响免疫治疗疗效的关键因素之一，深入地理解早期复发相关的机制，将有望为进一步提升肝癌的免疫治疗疗效提供理论基础和治疗新策略。

The research was jointly conducted by Fudan University (Zhongshan Hospital) Liver Cancer Institute, Shenzhen BGI Institute of Life Sciences, University of Chinese Academy of Sciences and SCUT. The co-first author Zhong Yu and the co-author Xie Jiarui of the paper are both postgraduates of SCUT-Shenzhen BGI College Innovation Class of Genome Science, and researcher Liu Shiping, co-corresponding author, was from the first cohort of the said Innovation Class.

该研究由复旦大学（中山医院）肝癌研究所、深圳华大生命科学研究院、中国科学院大学、华南理工大学等机构合作完成，该论文的共同第一作者钟裕和共同作者谢嘉睿均为华南理工大学-深圳华大基因研究院“基因组科学”创新班硕士研究生，共同通讯作者刘石平研究员为“基因组科学”创新班首届学生。

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