

2024 International Conference for MedTech & Regenerative Medicine and Dentistry

4 - 7 December 2024

Gold Coast, Queensland Australia



Organisers



Institute for Biomedicine and Glycomics (IBG) | School of Medicine and Dentistry

Co - Organisers



Australia-China Centre for Tissue Engineering and Regenerative Medicine (ACCTERM)



Centre for Orofacial Regeneration, Reconstruction and Rehabilitation (COR3) | School of Dentistry

Wednesday, 4 December 2024 - Day 1 - Pre-Conference Workshop

Venue: Griffith University Gold Coast Campus, Building G26, Room 4.09

Start	End	Duration	Sessions
12:00	13:00	1:00	Registration
13:00	14:05	1:05	Regulatory Workshop <i>Chair: Professor Travis Klein, Queensland University of Technology</i>
13:05	13:30	0:25	Research to Real-World Impact: Aligning ISO Standards and TGA Guidelines with Translational Innovation <i>Dr Reuben Staples, University of Queensland</i>
13:30	13:55	0:25	Bridging the Gap: Key Strategies for Medical Device Design and Regulatory Success <i>Dr Sha Pather, COO, Akunah</i>
13:55	14:05	0:10	Q&A time allocation if needed.
14:05	14:35	0:30	Afternoon Tea & Coffee Break
14:35	16:45	2:00	Research and Industry Engagement
14:40	15:05	0:25	IBG Introduction and Showcase <i>Dr. Chris Davis, General Manager, Institute for Biomedicine and Glycomics, Griffith University</i>
15:15	15:40	0:25	Plenary Talk: Next Generation of Saliva Based Diagnostics for Disease Detection <i>Professor Chamindie Punyadeera, Griffith University</i>
15:40	16:40	1:00	Panel Discussion: Challenges and Opportunities in Biological and Medical Research Translation: Research Collaboration, R&D and Regulation <i>Facilitator: Professor Yin Xiao, Griffith University</i>
			Panellists: <i>Dr Reuben Staples, University of Queensland</i> <i>Dr Sha Pather, Akunah</i> <i>Dr. Chris Davis, Griffith University</i> <i>Professor Tony Weiss, the University of Sydney</i> <i>Professor Ross Crawford, Queensland University of Technology</i> <i>Professor Wai-Kwok Kelvin Yeung, The University of Hong Kong</i> <i>Professor Chengtie Wu, Chinese Academy of Sciences</i> <i>Mr. Stephen Choi, SXULTRASONIC Group</i>
16:40	16:45	0:05	Close of Pre-Conference Workshop <i>Professor Yin Xiao, Griffith University</i>
16:45	18:45	2:00	Welcome Reception and Networking <i>G26 Foyer All Welcome Cocktail Style with canapes</i>

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Thursday, 5 December 2024 - Day 2 – Conference

Venue: Griffith University Gold Coast Campus,

Plenary Sessions and Break Out Room 1: Building G26, Room 4.09 | Break Out Room 2: Building G16, Room 1.08

Start	End	Duration	Sessions
8:00	9:00	1:00	Registration
9:00	9:40	0:40	Official Opening G26_4.09 <i>Chair: Professor Yin Xiao, Griffith University</i>
			Professor Lee Smith , Deputy Vice Chancellor (Research), Griffith University
			Professor Chengtie Wu , Director, Suzhou Institute of Biomedical Engineering and Technology, Chinese Academy of Sciences
			Professor YuanTong Gu , Pro Vice-Chancellor (Research Career Advancement) and Head of School, Mechanical, Medical & Process Engineering, Queensland University of Technology
			Professor Zhengjun Shang , Chairman and Dean, School and Hospital of Stomatology, Wuhan University
			Professor Paul Clarke , Executive Director, Institute for Biomedicine and Glycomics, Griffith University
			Distinguished Professor Yin Xiao , Founder and Director, ACCTERM, Griffith University ACCTERM Overview and Outlook
9:40	10:10	0:30	Group Photo - VIPs and All Morning Tea & Coffee Break G26 Foyer
10:10	11:45	1:35	Plenary Session I - Translational and Clinical Research G26_4.09 <i>Chair: Professor Zhiyong Li, Queensland University of Technology</i>
10:15	10:40	0:25	Plenary Talk: Innovations in Nanostructured 3D-Printed Bioceramics for Personalized Bone Healing <i>Professor Hala Zreiqat</i> , Biomaterials and Tissue Engineering Unit, University of Sydney
10:40	11:05	0:25	Plenary Talk: Carbonate Apatite Artificial Bone <i>Professor Kunio Ishikawa</i> , Chairman and Professor, Department of Biomaterials, Faculty of Dental Science, Kyushu University
11:05	11:30	0:20	Keynote Talk: Autologous Olfactory Ensheathing Cell Nerve Bridge Transplantation and Intensive Rehabilitation for Repairing Chronic Spinal Cord Injury <i>Professor James St John</i> , Head of the Clem Jones Centre for Neurobiology and Stem Cell Research, Griffith University
11:30	11:45	0:20	Keynote Talk: REGENERATING A WRIST LIGAMENT: From benchtop to clinical use. <i>Professor Randy Bindra</i> , Professor of Orthopaedic Surgery, Gold Coast University Hospital, School of Medicine and Dentistry Griffith University
11:45	12:15	0:20	Session II - Special Launch Ceremony G26_4.09
11:45	11:50	0:05	Scilight Press Introduction <i>Ms Louise Liu</i> , Scilight Press
11:50	11:55	0:10	Regenerative Medicine and Dentistry (RMD) Introduction <i>Professor Yin Xiao</i> , Chief Editor
11:55	12:00	0:05	Launch On Ceremony Photo
12:00	13:10	1:10	Lunch Poster Presentation G26_4.09 and Foyer

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13:10	15:00	1:50	Session III – Cell Biology and Technologies G26_4.09 <i>Chair: Dr Ju Jin, Griffith University</i>	Session IV - Biomaterials and MedTech G16_1.08 <i>Chair: Dr Haiyan Li, RMIT University</i>
13:15	13:30	0:15	Keynote: Development of Bioactive Materials for Organoid Culture <i>Professor Hongxu Lu, Biomaterials and Tissue Engineering Research Center, Shanghai Insitute of Ceramics, Chinese Academy of Sciences</i>	Keynote: Novel Microfluidics Models of Atherosclerosis and Atherothrombosis <i>Professor Hang Ta, Heart Foundation Future Leader Fellow, School of Environment and Science and Queensland Micro and Nanotechnology Centre, Griffith University</i>
13:30	13:45	0:15	Stem Cell-Based Therapies for Treating Osteoarthritis <i>Dr Jiaojiao Li, University of Technology Sydney</i>	Keynote: Nanoengineered Materials and Coatings for Medicine and Beyond <i>Professor Krasimir Vasilev, Matthew Flinders Professor, NHMRC Leadership Fellow, College of Medicine and Public Health, Flinders University</i>
13:45	14:00	0:15	Emerging Role of Osteoclasts and their Extracellular Vesicles in Bone Remodeling <i>Associate Professor Yang Zhang, Shenzhen University</i>	Keynote: Bioprinting the Tumour Microenvironment <i>Professor Travis Klein, Queensland University of Technology</i>
14:00	14:15	0:15	Targeting NAD+ Metabolism Against Neurodegeneration <i>Dr Yun Shi, ARC DECRA fellow, Griffith University</i>	Keynote: Influence of Virus-Mimetic Stiffness Modulation on Nanoparticle Cytosolic Delivery <i>Professor ChunXia Zhao, NHMRC Leadership Fellow, School of Chemical Engineering, University of Adelaide</i>
14:15	14:30	0:15	Human Skin Organoids with Functional Appendages and Vascular Networks <i>Dr Abbas Shafiee, Metro North Health, University of Queensland</i>	Biomaterial Surface-Mediated Macrophages Exert Immunomodulatory Roles by Exosomal CCL2 Induced Membrane Integrin β1 Trafficking in Recipient Cells <i>Associate Professor Ruiqiang Hang, Taiyuan University of Technology</i>
14:30	14:45	0:15	Advancing Cell Therapy for Spinal Cord Injuries through Innovative 3D Culture Techniques <i>Dr Mo Chen, Griffith University</i>	Rapid and Facile 3D-printing of Mechanically Robust and Bioactive Grafts for Challenging Rotator Cuff Tendon Injuries <i>Associate Professor Dai Fei Elmer Ker, Department of Biomedical Engineering, The Hong Kong Polytechnic University</i>
14:45	15:15	0:30	Afternoon Tea & Coffee Break	
15:15	17:05	1:50	Session V – ECRs/Students Rapid Fire Presentation – 1 <i>Chair: Dr Pingping Han, University of Queensland</i> Rapid Fire Oral No.1 – No.20	Session VI – ECRs/Students Rapid Fire Presentation – 2 <i>Chair: Dr Yuqing Mu, Griffith University</i> Rapid Fire Oral No.21 – No.39
17:05	17:15	0:10	Close of the Day	
17:15	18:15	1:00	Transport	
18:15	21:30	3:15	Gala Dinner and Awards The Moon Restaurant - 114 Esplanade, Surfers Paradise QLD 4217 All Welcome	

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Friday, 6 December 2024 - Day 3 – Conference

Venue: Griffith University Gold Coast Campus,

Plenary Sessions and Break Out Room 1: Building G26, Room 4.09 | Break Out Room 2: Building G16, Room 1.08

Start	End	Duration	Sessions	
8:00	9:00	1:00	Registration	
9:00	10:20	1:20	Plenary Session VII - MedTech Translation and Commercialisation <i>Chair: Professor Hongxu Lu, Chinese Academy of Sciences</i>	
9:05	9:30	0:25	Plenary Talk: Leveraging Tropoelastin Mechanobiology and Assembly to Enhance Wound Repair <i>Professor Tony Weiss, McCaughey Chair in Biochemistry, NHMRC Senior Leadership Fellow, Charles Perkins Centre, the University of Sydney</i>	
9:30	9:55	0:25	Plenary Talk: 3D Printing of Biomimetic Biomaterials: From Fundamental Study to Translational Application <i>Professor Chengtie Wu, Shanghai Institute of Ceramics, Chinese Academy of Sciences</i>	
9:55	10:10	0:15	Keynote: BioSpine: Non-Invasive Multimodal Rehabilitation for Recovery of Sensorimotor Function After Complete Spinal Cord Injury <i>Dr Claudio Pizzolato, Australian Centre of Precision Health and Technology (PRECISE), Griffith University</i>	
10:10	10:35	0:25	Morning Tea & Coffee Break	
10:35	11:55	1:20	Session VIII Research Showcase - Dental Application I <i>Chair: Dr. Jiaojiao Li, University of Technology Sydney</i>	Session IX Research Showcase - Orthopaedic Application and MedTech <i>Chair: Professor Krasimir Vasilev, Flinders University</i>
10:40	10:55	0:15	Keynote: Biological complications around Osseointegrated implants <i>Professor Marcelo Figueredo, School of Medicine and Dentistry, Griffith University</i>	Keynote: Decellularized Tissue Engineering Hyaline Cartilage Graft for Articular Cartilage Repair and Its Forward-Looking Test for Space Medicine <i>Professor Dongan Wang, Department of Biomedical Engineering, City University of Hong Kong</i>
10:55	11:10	0:15	Keynote: Biomimetic Calcium Phosphate Bone Substitutes: Preclinical Development and First-in-Human Clinical Trial Results <i>Professor Yuelian Liu, ACTA, VU University and University Amsterdam</i>	Keynote: Enhancing Bone-to-Implant Osseointegration via Photocurrent-Driven Immunoregulation and Calcium Influx Activation in Macrophages <i>Professor Wai-Kwok Kelvin Yeung, Department of Orthopaedics and Traumatology, School of Clinical Medicine, HKUMed, The University of Hong Kong</i>
11:10	11:25	0:15	Keynote: Fluorinated Porcine-Derived Guided Bone Regeneration Materials: From Concept to Practice <i>Professor Zhuofan Chen, Oral Implantology at the Hospital of Stomatology, Sun Yat-sen University</i>	Keynote: A 3D-Printed Phase-Interference Compensator to Improve Transcranial Ultrasound Imaging <i>Professor Christian M Langton, Griffith Centre of Biomedical and Rehabilitation Engineering, Griffith University</i>
11:25	11:40	0:15	Immunoengineering for Regenerative Dentistry	Granular Microporous Hydrogels for Promoting Tissue

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			<i>Dr Yinghong Zhou, Centre for Orofacial Regeneration, Reconstruction and Rehabilitation (COR3), University of Queensland</i>	Regeneration <i>Dr Haiyan Li, School of Engineering, RMIT University</i>
11:40	11:55	0:15	Extracellular Vesicles in Periodontitis Management <i>Dr Pingping Han, Centre for Orofacial Regeneration, Reconstruction and Rehabilitation (COR3), University of Queensland</i>	Drug Discovery Using Native MS: Protein-Ligand Complexes and Beyond <i>Dr Miaomiao Liu, NHMRC Fellow, Institute for Biomedicine and Glycomics, Griffith University</i>
11:55	13:00	1:05	Session X Research Showcase - Dental Application II <i>Chair: Associate Professor Jingjing Quan</i>	
12:00	12:15	0:15	Keynote: Exploration of the Application of Piezoelectric Bioactive Materials in Oral Tissue Regeneration and Repair <i>Professor Yan Wang, Hospital of Stomatology, Guanghua School of Stomatology, Sun Yat-sen University</i>	
12:15	12:30	0:15	Keynote: Brittle-Ductile Threshold in Lithium Disilicate Under Sharp Sliding Contact <i>Professor Han Huang, School of Advanced Manufacturing, Sun Yat-sen University, China</i>	
12:30	12:45	0:15	Nano-Engineered Dental Implants: Topography, Therapy & Trigger <i>Dr Karan Gulati, Deputy Director of the Centre for Orofacial Regeneration, Reconstruction and Rehabilitation (COR3), University of Queensland</i>	
12:45	13:00	0:15	Endochondral Repair of Jawbone Defects Using Periosteal Cell Spheroids <i>Dr Wei Ji, Department of Implantology, School and Hospital of Stomatology, Wuhan University, Wuhan, Hubei, China.</i>	
13:00	14:00	1:00	Lunch	
14:00	14:05	2:00	Session XII - Guided Gold Coast Health & Knowledge Precinct Tour	
14:05	14:20	0:15	Gold Coast Health & Knowledge Precinct Brief Introduction <i>Craig Rowsell, Director, Gold Coast Health & Knowledge Precinct</i>	
14:20	14:30	0:10	Conference Wrap-up Vote of Thanks	
14:30	16:00	1:30	Guided Gold Coast Health & Knowledge Precinct Tour	
16:00			Close of the Day	
18:00	21:00	3:00	VIPs Dinner by Invitation	

Saturday, 7 December 2024 - Day 4

Small Group Meetings /Coffee Chats /Social Activities organized among delegates by delegates.
Please contact the conference committee if any special requirements.

Rapid Fire Oral Sessions

Number	Name			Organisation
1	Dr.	Angus	Weekes	Queensland University of Technology
2	Mr.	Ao	Jia	Nanchang University
3	Mr.	Boyi	Jiang	Sichuan University
4		Chun	Liu	The University of Queensland
5	Mr.	Cuong Hung	Luu	Griffith University
6	Dr.	Dan	Wang	The Chinese University of Hong Kong
7	Dr.	Di	Cui	Deakin University
8	Prof.	Fei	Tong	Nanchang University
9	Dr.	Han	Yu	Queensland University of Technology
10	Mr.	Haotong	Xu	Queensland University of Technology
11	Dr.	Hongjian	Zhang	Chinese Academy of Sciences
12	Dr.	Hua	Liu	Zhejiang University
13	Dr.	Jiawei	Jiang	Huazhong University of Science and Technology
14	Dr.	Jie	Zeng	Guangzhou Medical University
15	Mr.	Jillis	Ernst	Queensland University of Technology
16	Dr.	Jin	Shao	Taikang Bybo Dental
17	Miss	Jinghong	Yang	Sun Yat-Sen University
18	Dr.	Ju	Jin	Griffith University
19	Dr.	Lei	Lei	Central South University Xiangya Stomatological Hospital
20	Dr.	Lili	Li	Nanjing University
21	Mr.	Lv	Xie	Sun Yat-sen University
22	Dr.	Meng	Zheng	Huazhong University of Science and Technology
23	Dr.	Mengru	Shi	Sun Yat-sen University
24	Miss	Mengxi	Su	Sun Yat-sen University
25	Dr.	Minghao	Liu	Queensland University of Technology
26	Dr.	Pei	Wang	Nanchang University
27	Miss	Ruidi	Xia	Sun Yat-sen University
28	Mr.	Ruoyan	Meng	Queensland University of Technology
29	Ms.	Shiqi	Zhou	Sun Yat-sen University
30	Dr.	Wei	Lu	Zhejiang University
31		Weicai	Wang	Sun Yat-sen University
32		Chen	Zhou	Sun Yat-sen University
33	Miss	Yifan	Liu	Nanchang University
34	Ms.	Yin	Zi	Zhejiang University
35	Mr.	Yong	Ao	Sun Yat-sen University
36	Prof.	Yuanman	Yu	East China University of Science and Technology
37	Mr.	Yunkun	Qu	Queensland University of Technology
38	Dr	Zeyu	Luo	Sichuan University
39	Dr	Zhengni	Liu	The University of Queensland
40	Dr.	Zhibo	Yang	Chinese Academy of Sciences

Poster Session

Number	Name		Organisation
1	Biao-Qi	Chen	Huaqiao University
2	Mr. Chengwu	Liu	Sun Yat-sen University
3	Cong	Wang	The University of Queensland
4	Divya	Chopra	The University of Queensland
5	Enmao	Xiang	The University of Queensland
6	Prof. Fei	Tong	Nanchang University
7	Mr. Fen	Liu	Nanchang University
8	Dr. Qi	Gan	East China University of Science and Technology
9	Leyao	Xu	Sun Yat-sen University
10	Dr. Lichun	Zheng	Nanjing University
11	Mr. Mingyang	Yuan	Queensland University of Technology
12	Dr. Qian	Yan	Taiyuan Normal University
13	Dr. Runhua	Yao	Taiyuan University of Technology
14	Seongmin	Ha	Sun Yat-sen University
15	Miss Shudan	Deng	Sun Yat-sen University
16	Tian	Xu	The University of Queensland
17	Dr. Ting	Zhang	Nanjing University
18	Dr. Wendong	Gao	Griffith University
19	Dr. Xiangyu	Zhang	Taiyuan University of Technology
20	Miss You	Wu	Sun Yat-sen University
21	Dr. Yueyue	Wang	Taiyuan University of Technology
22	Dr. Yuqing	Mu	Griffith University
23	Dr. Zhuwei	Huang	Sun Yat-sen University

Translation of Research and Innovation for Better Life



- Full Program
- Speakers' Bios
- Abstracts



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Acknowledgement

Special Supports

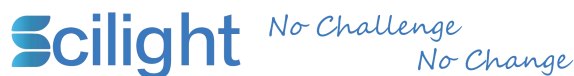
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Regenerative Medicine and Dentistry (RMD)

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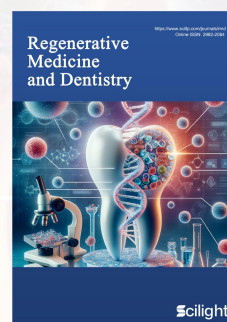


Associate Editor

Prof. Akon Higuchi
Eye Hospital, Wenzhou
Medical University

Journal Introduction

Regenerative Medicine and Dentistry (RMD) is a peer-reviewed, open-access, international journal published quarterly online by Scilight Press. The journal aims to provide a comprehensive platform for the dissemination of pioneering research and advancements in regenerative medicine and dentistry. It seeks to foster interdisciplinary research, drive innovation, and translate scientific discoveries into clinical applications that improve patient outcomes.



Journal Scope

The journal covers a broad range of topics within regenerative medicine and dentistry, including but not limited to:

- **Stem Cell Research:** Stem cell isolation, characterization, and differentiation, as well as their application in tissue engineering and regenerative medicine.
- **Tissue Engineering:** Scaffold development and strategies for tissue and organ regeneration, fabrication techniques, and 3D bioprinting.
- **Regenerative Approaches in Medicine and Dentistry:** Advanced technologies in regenerative medicine and dentistry.
- **Biomaterials:** Design and synthesis of novel biomaterials for dental and medical applications, biocompatibility, biodegradability, and functionalization of biomaterials in regenerative medicine.
- **Clinical Applications and Translational Research:** Translational studies that bridge laboratory findings with clinical practice and clinical trials in regenerative medicine and dentistry.
- **Cell and Gene Therapies:** Cellular therapies in regenerative medicine and dentistry, immunomodulation and cell-based therapy for degenerative disease, injury, and tissue regeneration, advanced gene editing technologies such as CRISPR/Cas9, and gene delivery in the therapeutic application of tissue regeneration.

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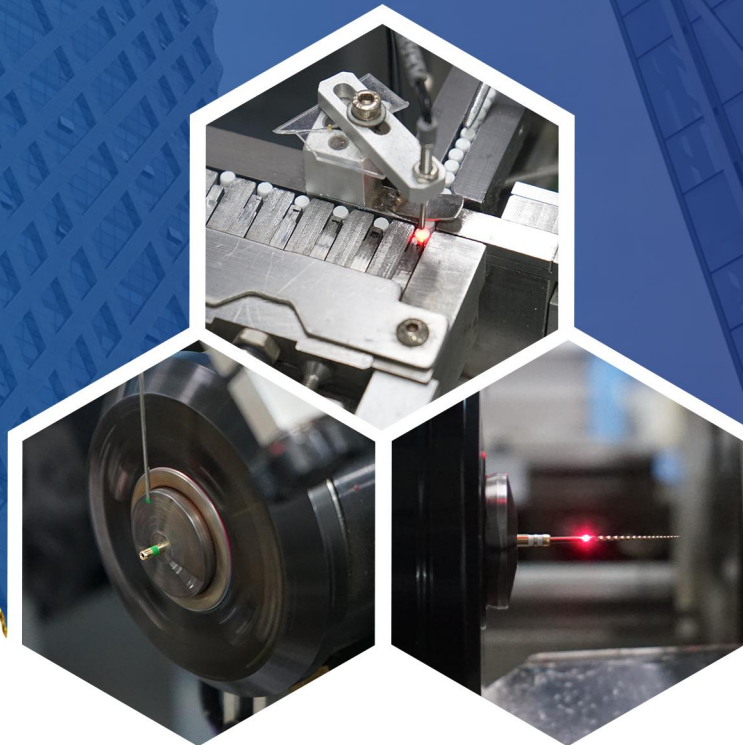
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MAIN PRODUCTS

- ROTARY FILES
- AUXILIARY INSTRUMENTS
- MANUAL FILES
- DENTAL MATERIALS
- ENLARGERS
- ENDO EQUIPMENT

CERTIFICATES



COMPANY PROFILE

Huizhou Videya Technology Co., Ltd., founded in 2011, is a professional manufacturer and supplier of dental instruments, integrating R&D, production, marketing, and after-sales service.

After decades of development, our company has gradually built up a strong R&D and manufacturing capacity along with a complete QA/QC (Quality Assurance/Quality Control) system.

Our product range includes endodontic instruments, general dental instruments, consumables, and dental equipment. These products are registered with the CFDA (China Food and Drug Administration), and have obtained ISO 13485, CE, and FDA certifications.

Our mission is to become a first-class national brand. We are committed to continuous innovation, aiming to provide dentists globally with high-quality, safe, and efficient products as well as the best services.

We look forward to establishing win-win cooperation with dental distributors and dentists around the world.



COMPANY PROFILE

REGEN-aGEEK is a company initiated from the scientific and technological achievements of the First Prize of the National Science and Technology Progress Award. Based on nearly two decades of clinical translational research in stem cells and regenerative medicine, the company dedicated to creating the DASEA bio-manufacturing platform, to achieve the "5" goals for the scalable manufacturing of biological products such as cells and exosomes: Digitalized, Automated, Scalable, Enclosed, Activated.

The DASEA platform effectively addresses the limitations inherent in the traditional petri dish-based methods for large-scale cell cultivation. It achieves a notable reduction in the costs associated with cell production, concurrently enhancing the quality and stability of the cells. This platform offers an integrated solution tailored to meet the industrial-scale cell and derivative preparation needs of clients within the downstream cellular industry. The stem cells and exosomes prepared by DASEA have obtained quality inspection reports from the NIFDC and been recognized by China NMPA, as well as several large tertiary hospitals to conduct multiple clinical trials (incl. COVID-19 and dry eye syndrome). These clinical studies have demonstrated excellent therapeutic outcomes. REGEN-aGEEK is dedicated to "Making regeneration clinically accessible and affordable".

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DASEA Regenbio
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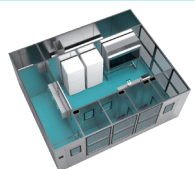
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