



AVALON
GLOBOCARE CORP.

Corporate Presentation

August 3, 2021

www.Avalon-GloboCare.com

NASDAQ: AVCO

Forward-Looking Statements

Certain statements contained in this presentation may constitute “forward-looking statements”, which provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors as disclosed in our filings with the Securities and Exchange Commission located at their website (<http://www.sec.gov>). In addition to these factors, actual future performance, outcomes, and results may differ materially because of more general factors including (without limitation) general industry and market conditions and growth rates, economic conditions, and governmental and public policy changes. The forward-looking statements included in this presentation represent the Company's views as of the date of this presentation and these views could change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this presentation.

Corporate Overview and Highlights

- **Mission:** Avalon GloboCare Corp. (NASDAQ: AVCO) is a clinical-stage biotechnology company dedicated to develop and deliver innovative and transformative cellular technologies and therapeutics in the field of immuno-oncology.
- **History:** Founded in 2016 as OTCQB company; successfully uplisted to NASDAQ in December 2018; Headquarters in Freehold, NJ; approx. 120 FTEs (including subsidiaries)
- **Core Technology Platforms:**
 - Chimeric Antigen Receptor (CAR)-T: anti-CD19 AVA-001 (completed first-in-human trial)
 - RNA-based Flash-CAR™ (AVA-011, at IND-enabling stage)
 - Others (Exosomes / ACTEX™, QTY protein-Design Code, S-Layer Nanotechnology, MSCs)



Corporate Overview and Highlights

- **Core technology platforms with applications in oncology, inflammation (“cytokine storm”) and regenerative medicine**
- **Leveraging platform through strategic partnering opportunities:**
MIT, UPMC, BOKU, HydroPeptide, Arbele
- **Strong proprietary technologies and IPs:**
Addressing multi-billion dollar, unmet cell and gene therapy markets worldwide

Corporate Overview and Highlights

- **Recent Transformative Acquisition of SenlangBio:**
Execution of purchase agreement (June 14, 2021) to acquire **SenlangBio** as Avalon's wholly-owned subsidiary, currently the largest cell therapy company in Northern China
- Added Car-T assets which include 15 cell therapy candidates (autologous and universal), targeting both hematologic malignancies and solid tumors
- 16,000 sq-ft in-house GMP facility with large-scale bio-manufacturing and process development capacities



Senior Management, Board, Advisors

Board of Directors

Daniel Lu

Chairman of the Board

Congressman Billy Tauzin

*Director; Former U.S. Congressman;
Former President of PhRMA*

David Jin, M.D., Ph.D.

Director, CEO, President

Tevi Troy, Ph.D.

*Director; Chairman of Nomination/Governance
Committees
Former Deputy Director of U.S. Human Health Services*

Yancen Lu

*Director, Chairman of Compensation Committee
Founder and Managing Director, Pagoda Tree Group*

Steven Sanders, J.D.

*Director, Co-Chair of Compensation Committee
Founder of Ortoli Sosensadt Law Firm, NYC*

William Stilley

*Director, Chairman of Audit Committee
CEO, Adial Pharmaceuticals (Nasdaq:ADIL)*

Jianqiang Li, Ph.D.

Director, CTO, CSO of SenlangBio

Yue Charles Li

Director, M&A Taskforce

Senior Management Team

David Jin, M.D., Ph.D.

*CEO, President, Co-founder, BoD
U.S. Licensed Physician; Former Medical Resident, Fellow and
Faculty Member at Weill Cornell Medicine and New York-
Presbyterian Hospital; Senior Clinician-Scientist at Ansary Stem Cell
Institute; Former CMO of BioTime Inc. and OncoCyte Corporation*

Meng Li

*Co-founder, COO
Former WPP Group's company executive*

Luisa Ingargiola, MHA

CFO, Former CFO and BoD of several U.S. Public companies

Jianqiang Li, Ph.D.

CTO, BoD

Anna Azvolinsky, Ph.D.

Head, Media and Communication

Professor Daopei Lu, M.D. *Scientific Founder*

Team of Our Subsidiaries

David Jin, M.D., Ph.D.

Co-CEO, SenlangBio

Jianqiang Li, Ph.D.

CSO, Co-founder, SenlangBio

Shengmin Guo

Co-CEO, Co-founder, SenlangBio

John Luk, M.D., D.Sc.

President, AVAR Biotherapeutics (Pending JV)

Steven Sukel, J.D.

Managing Director, Avalon RT9 Properties, LLC

Scientific & Clinical Advisory Board

Robert S. Langer, Sc.D. --Massachusetts Institute of Technology; David H. Koch Institute Professor

Shahin Rafii, M.D. --Weill Cornell Medicine; Director of Ansary Stem Cell Institute, HHMI

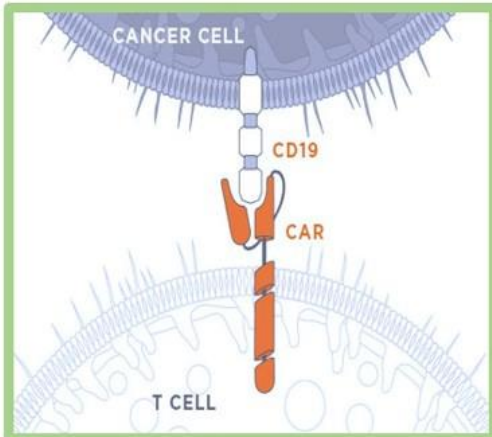
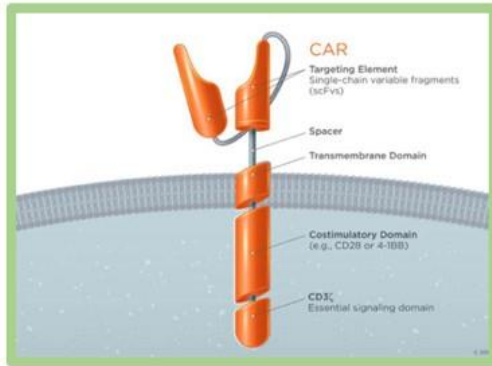
Yen-Michael Hsu, M.D., Ph.D. --University of Pittsburgh Medical Center, Chief of Cellular Therapy

James Gajewsk, M.D. --Former Medical Director, MD Anderson Cancer Center

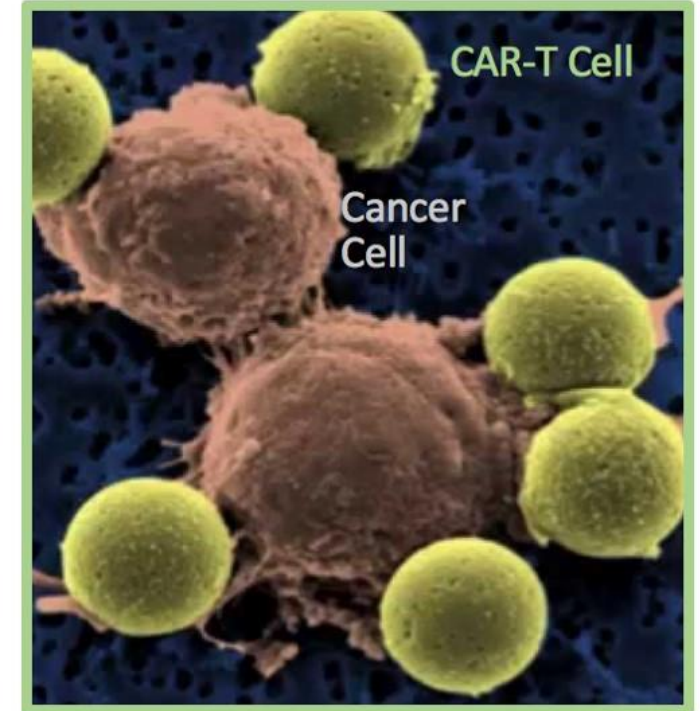
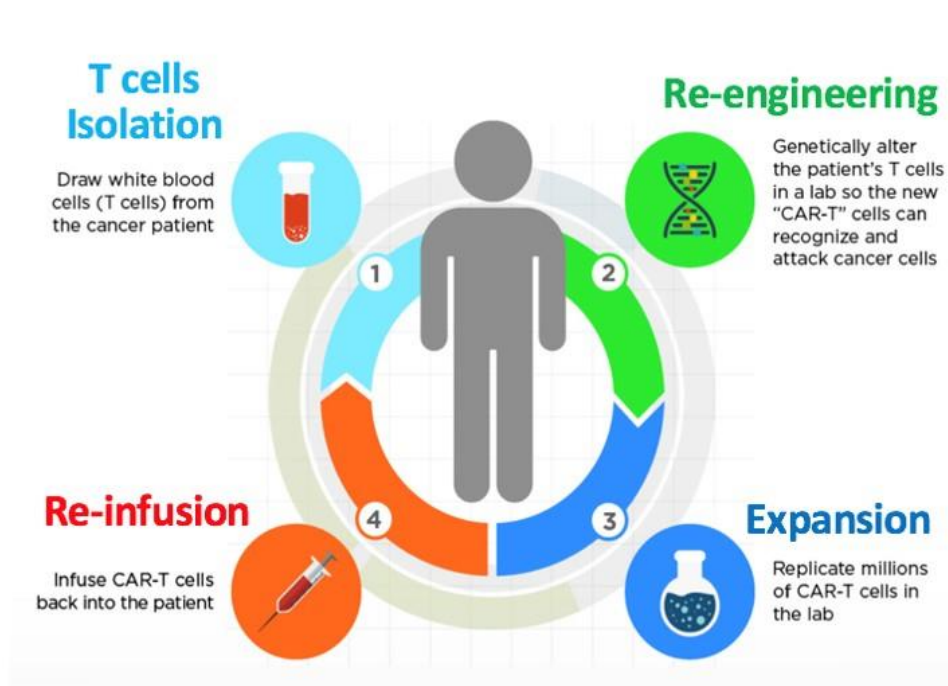
Peihua Peggy Lu, M.D. --Executive President, Lu Daopei Hospital

Uwe B. Sletyr, Ph.D. --Professor Emeritus, University of Natural Resources and Life Sciences
Full Member, Austrian Academy of Sciences

Core Technology Platform: CAR-T



Chimeric Antigen Receptor (CAR)

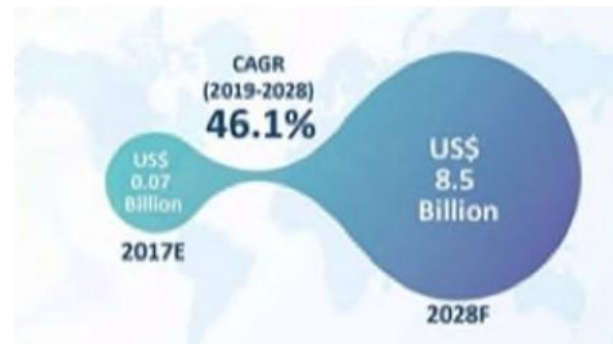


Autologous CAR-T Therapy for Blood Cancers
(B-cell Acute Lymphoblastic Leukemia, Non-Hodgkin's Lymphoma, MM)

Core Technology Platform: CAR-T



Global CAR-T Market

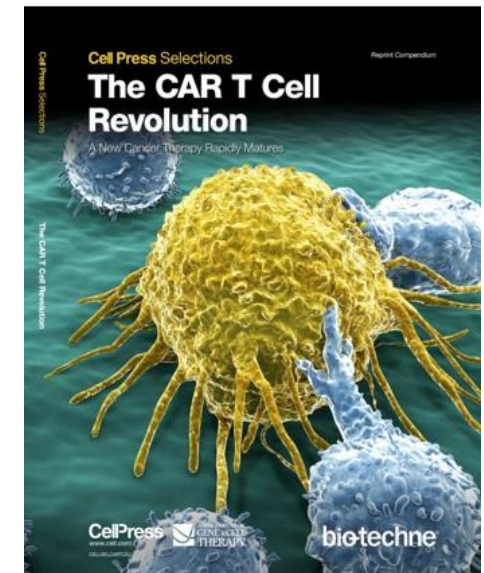


Mega M&A Deals

Aug.2017	Gilead - Kite	\$11.9 Billion
Jan.2018	Celgene - Juno	\$9 Billion
Jan.2019	BMS - Celgene	\$74 Billion

5 Approved Products

Kymriah	Novartis	2017 (auto, CD19, B-ALL)
Yescarta	Gilead/Kite	2017 (auto, CD19, lymphoma)
Tecartus	Gilead/Kite	2020 (auto, CD19, lymphoma)
Breyanzi	BMS/Juno	2021 (auto, CD19, MCL)
Abecma	BMS/Bluebird	2021 (auto, BCMA, MM)



Limitations of Current CAR-T

- **Adverse Effects / Toxicities:**
 - Cytokine Release Syndrome (CRS) / “Cytokine Storm”
 - CAR-Related Encephalopathy Syndrome (CRES)
- **Long Bio-manufacturing Time (about 2 weeks)**
- **Limited Effective Tumor Targets (CD19)**
 - Only for B-cell malignancies (blood cancers)
- **Poor Clinical Data for Solid Tumors**
- **Limited to Autologous CAR-T Approach**

Avalon-SenlangBio's Lead CAR-T Candidates

AVA-SenI-1904B

-- modified CAR density to minimize adverse effects

- Autologous anti-CD19 CAR-T
- For the treatment of relapsed/refractory B-cell ALL and NHL
- SenI_1940B overcomes the toxicity issues of conventional CAR-T therapy:

- CAR construct contains "MND promoter" → increase the percentage of CAR-positive cells but reduce the surface density of CAR molecules → potentially reduce the risk of CRS and CRES
- Successfully completed first-in-human clinical trial with Complete Remission Rate of 97.2% (35/36); only 5.6% (2/36) with Grade-3 CRS
- IND application approved by the Chinese Center for Drug Evaluation (CDE) to start Phase I clinical study in 3Q2021

↓ Adverse Effects/ Toxicities

AVA-SenI-NS7CAR

-- breakthrough in treatment of T-cell malignancies

- Autologous anti-CD7 CAR-T cell therapy candidate in clinical development
- For the treatment of relapsed/refractory T-cell ALL and T-cell lymphoblastic lymphoma (T-LBL)
- SenI_NS7CAR overcomes the poor cytotoxic effect against T-cell malignancies by conventional CAR-T therapy:

- "Natural Selection" approach: T-ALL/T-LBL patients have higher number of CD7-negative T cells in their peripheral blood (SenlangBio's discovery); select CD7-negative cells and make anti-CD7 CAR-T cells
- No need for CD7 disruption (such as by CRISPR-Cas9)
- More memory CAR-T cells in final product after natural selection; increased durability; reduced manufacturing cost
- In first-in-human clinical study, 8 out of 8 patients achieved complete remission; none developed > Grade-2 CRS or CRES side effects

Effective Against T-Cell Malignancies

FLASH-CAR™ -- A Multiplex, RNA-CAR Platform

Bloomberg

Business

Avalon GloboCare Advances Next Generation Cellular Immunotherapy with FLASH-CAR™ Technology for Blood Cancers

Avalon GloboCare Advances Next Generation Cellular Immunotherapy with FLASH-CAR™ Technology for Blood Cancers

- * RNA-Based Chimeric Antigen Receptor (CAR) Design Compatible with Broad Range of Immune Effector Cells, Including T (CAR-T) and Natural Killer Cells (CAR-NK) Without the Use of Viral Vectors
- * Capable of Targeting Multiple Tumor Antigens for Potentially Superior Therapeutic Effects
- * Rapid 1-2 Day Bio-manufacturing Time to Quickly Meet Treatment Needs in Patients with Relapsed/Refractory Leukemia, Lymphoma and Other Cancer Types
- * First FLASH-CAR™ Candidate, AVA-011, Enters Process Development Phase to Generate Clinical-Grade CAR-T and CAR-NK Cells
- * Joint Filing for Provisional and PCT Patents Completed with Strategic Partner Arbele Limited



FLASH-CAR™ -- A Multiplex, RNA-CAR Platform

Multiplex, RNA-Based Flash-CAR™ Covers Broad Spectrum of Immuno-Oncology Targets

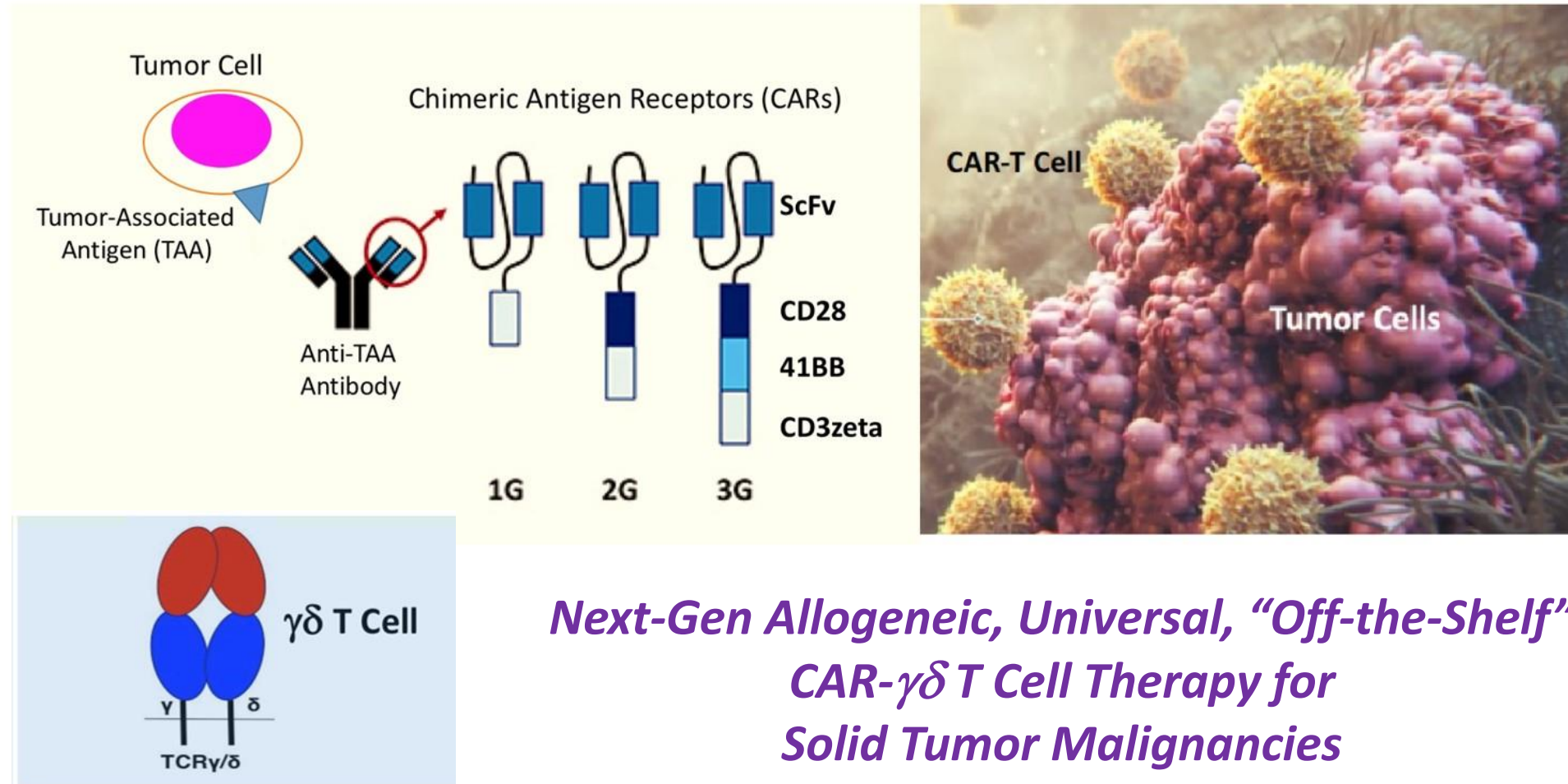
- Auto- or Allo-CAR T targeting multiple tumor antigens
- Proliferation inducer for in vivo expansion of CAR-T
- Safety target/switch
- Rapid bio-production time (1-2 days)
- Inducible vector for tumor site specific expression of anti-tumor mediators to induce host response, such as checkpoint inhibitors, activators of Dendritic Cell, T Cells and NK cells

Simultaneous Activation of Tumor-Attacking Immune Cells:

- **T Cells**
- **Dendritic Cells**
- **Natural Killer Cells**
- **Macrophages**

Currently at IND-enabling (process development stage) to generate clinical-grade AVA-011 CAR-T

Avalon-SenlangBio CAR- $\gamma\delta$ T Cell Therapy Platform



Avalon-SenlangBio CAR- $\gamma\delta$ T Cell Therapy Platform

T lymphocytes bearing the CD3 antigen can be split into $\alpha\beta$ or $\gamma\delta$ T cells based on their heterodimeric receptor chain
Senlang's allogeneic CAR-T therapy utilizes $\gamma\delta$ T cells



T cell



95%

$\alpha\beta$ T cell



TCR composed of α and β chains

1-5%

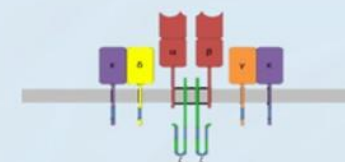
$\gamma\delta$ T cell



TCR composed of γ and δ chains

Note: Ratio varies between individuals and depending on disease

TCR structure of $\alpha\beta$ T cell



TCR structure of $\gamma\delta$ T cell



Advantages of allogeneic CAR-T based on $\gamma\delta$ T cells

- Great candidate for off-the-shelf CAR-T since antigen recognition is not MHC restricted, meaning donor compatibility is not required
- $\gamma\delta$ T cells are pre-programmed to target cancerous cells, and does not cause graft versus host reaction (GvHD)
- $\gamma\delta$ T cells utilizes both adaptive immunity and innate immunity
- $\gamma\delta$ T cells **express various NK cell receptors**

Breakthrough & Proprietary Technologies

- *Isolation and purification of $\gamma\delta$ T cells from human cord blood*
- *Enhanced expansion of $\gamma\delta$ T cells in culture (> 5,000-fold)*
- *Generated a robust pipeline of CAR- $\gamma\delta$ T cell-therapy candidates against solid tumors*

Avalon-SenlangBio CAR- $\gamma\delta$ T Cell Therapy Platform

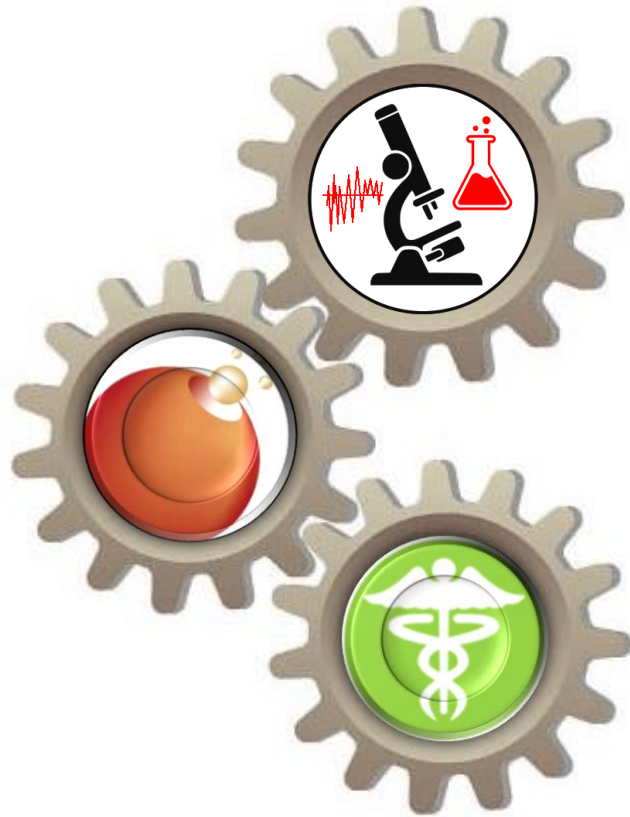


Solid tumors

Avalon-SenlangBio allogeneic, universal (“off-the-shelf”) CAR- $\gamma\delta$ T cell-therapy candidates in development

Targets	Indications
Mesothelin	Malignant mesothelioma, pancreatic cancer, ovarian tumor, triple negative breast cancer, endometrial cancer, gastric cancer
GD2	Neuroblastoma
IL-13Rα2	Malignant glioma
HER-2	Advanced osteosarcoma, glioblastoma multiforme, breast cancer
CD171	Neuroblastoma, Gangliocytoma
EGFRVIII	Glioblastoma
EphA2	Malignant glioma
PSMA	Prostate cancer
WT1-TCR	Non-small cell lung cancer, other WT-1 positive tumors
NY-ESO-1-TCR	Melanoma, other NY-ESO-1 positive tumors

Seamless Vertical Integration in Cellular Medicine



Research & Development

(Upstream)

Bio-processing & Bio-manufacturing

(Midstream)

Clinical Programs & Commercialization

(Downstream)

Strategic Partners -- Co-development R&D



**QTY Protein Design Code
to Develop Decoy Cytokine &
Chemokine Receptors to
Combat
“Cytokine Storm” and
Cancer Metastasis
(AVA-Trap™)**

**PIs: Shuguang Zhang, PhD
Robert Langer, PhD**



**Process Development of
Clinical-grade AVA-011 (Flash-
CAR™) and ACTEX™
(Exosome-based Technology)**

**Co-development of Point-of-
Care Automated PD for
Cellular Therapy (PMAPsys™)**

PI: Yen-Michael Hsu, MD, PhD



*University of Natural Resources
and Life Sciences, Vienna*

**S-Layer Nanotechnology
to develop mucosal vaccine
for COVID-19 and Flu**

**Novel Extracorporeal
Hemofiltration device for
“Cytokine Storm”**

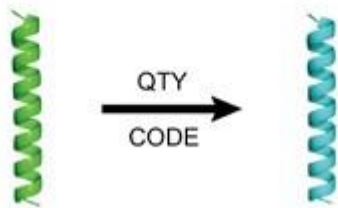
**PIs: Uwe B. Sleytr, PhD
Eva-Katharin Ehmoser, PhD**

Avalon-MIT QTY Code Co-development Program

QTY code-generated novel therapeutic targets for cancer immunotherapy and other clinical applications

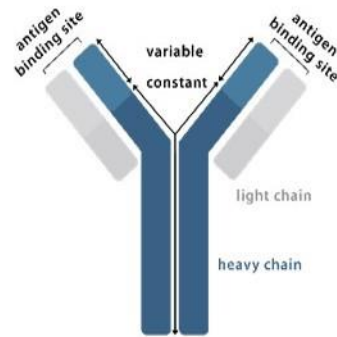
QTY Code for Protein Design & Modification

* **QTY code** is a genetic modification tool for systematically exchanging (membrane) proteins' primary sequence to regulate its solubility



Insoluble ⇌ Soluble

Designed QTY proteins directly serve as recombinant monoclonal antibodies

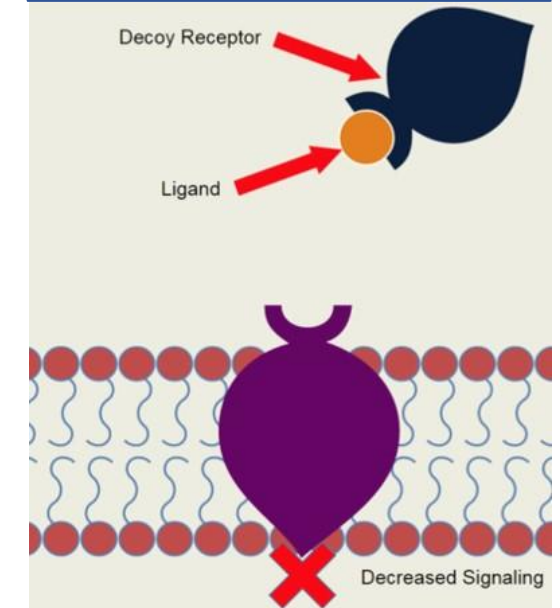


Design of the QTY receptors resemble structure of common antibodies

Exchanging the sequence origin (host) of the –Fc region can regulate protein's reactivity

- ➔ Novel biopharmaceuticals
- ➔ Novel targets for CAR-T therapy

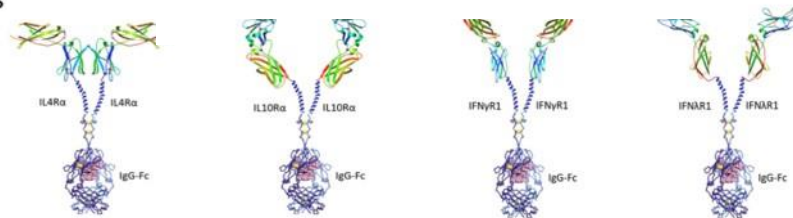
QTY Proteins as Decoy Receptors



Avalon-MIT QTY Code Co-development Program

Avalon GloboCare Achieves Major Milestones Advancing Immunotherapeutic Program towards Combatting Cytokine Storm Associated with COVID-19 Lung Damage and Mortality

- Completed Functional Studies of Six QTY Code Designed Variant Cytokine Receptors as “Molecular Mop” to Remove Excessive Cytokines (“Cytokine Storm”) Related to Coronavirus Infection and Cellular Immunotherapy
- Jointly Filed Provisional Patents with Professor Shuguang Zhang’s Team of Massachusetts Institute of Technology (MIT)
- Scientific Manuscript Accepted for Publication by the Journal QRB Discovery of Cambridge University Press



AVA-Trap™

QTY Decoy Cytokine Receptors: COVID-19 “Cytokine Storm”

QTY Decoy Chemokine Receptors: Cancer Metastasis

The image shows the top portion of an MIT News article. At the top left is the MIT logo and the text "Massachusetts Institute of Technology". To the right are links for "NEWS" and "VIDEO". The main title "MIT News" is prominently displayed in white on a black background, with the subtitle "ON CAMPUS AND AROUND THE WORLD" below it. A "Browse" button is visible on the right. Below the header is a large, vibrant microscopic image of cells, with a large, textured, purple and blue cell in the foreground and several smaller, glowing purple and blue cells in the background against a dark blue field with small white specks.

Proteins may halt the severe cytokine storms seen in Covid-19 patients

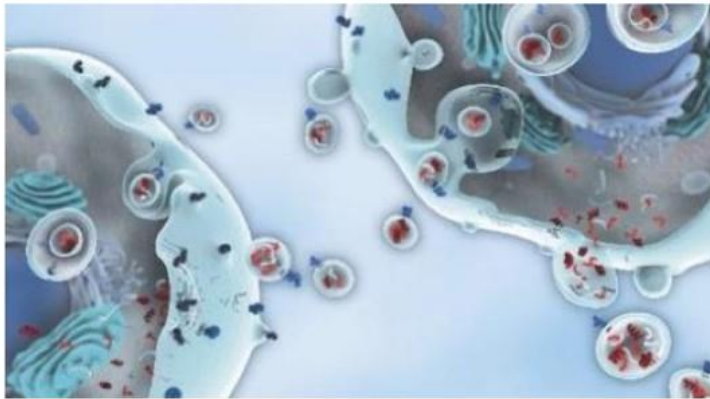
Avalon's ACTEX™ Program



The Nobel Prize in Physiology or Medicine 2013



J. Rothman R. Schekman T. Sudhof



Stem Cell-Derived Exosome Technology

(Avalon Clinical-grade Tissue-specific Exosomes: ACTEX™)

ACTEX Types	ACTEX Cell-of-Origin	ACTEX Applications
● ACTEX-E	<i>Endothelial Cells (HUVEC), Endothelial Progenitor Cells</i>	Wound Management, Skincare, Anti-Scar, Anti-Wrinkle, Anti-Acne, Hair Growth, Orthopedic Application, ...etc
● ACTEX-M	<i>Mesenchymal Stem Cells (Adipocyte/ Umbilical Cord/Umbilical Blood)</i>	Wound Management, Skincare, Anti-Scar, Anti-Wrinkle, Anti-Acne, Hair Growth, Orthopedic Application, ...etc
ACTEX-N	<i>Neuronal Stem Cells</i>	Neurodegenerative Disorders
ACTEX-BF	<i>Brown Fat Progenitor Cells</i>	Weight Management, Metabolic Syndromes
ACTEX-NK	<i>Natural Killer Cells</i>	Immune Health; Supplement/Booster to Cellular Immunotherapy
ACTEX-ES	<i>Embryonic Stem Cells (from IVF)</i>	Pluripotent Applications

● Currently under co-development and commercialization strategy with HydroPeptide LLC to generate ACTEX-based skin-care and orthopedic products

In-House Large-Scale Bio-manufacturing

Large-scale Cell Therapy Manufacturing Capacity

- 1600m² GMP facility
- 5 autologous CAR-T production lines with estimated annual output of **5,000** unit doses
- 2 universal CAR-T production lines with estimated annual output of **10,000** unit doses
- In-house research and production capabilities for lentivirus, plasmids, T cell culture, testing & clinical trials



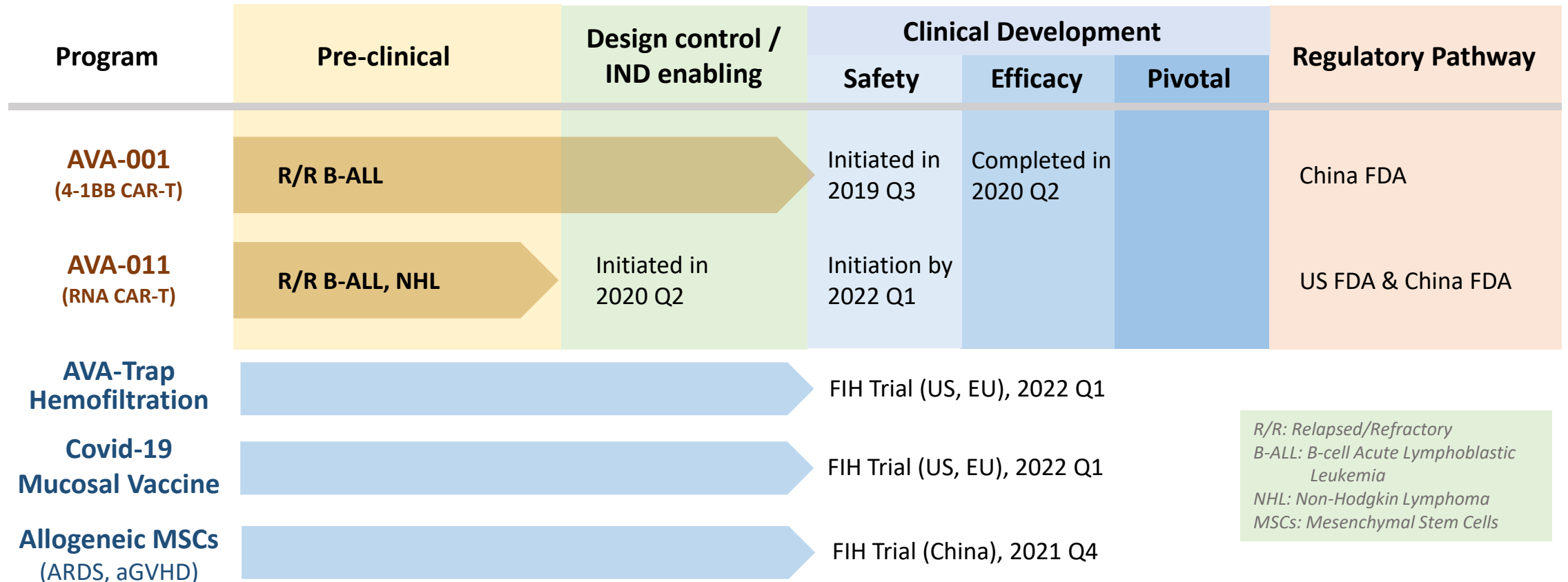
Strategic Partners -- Clinical Development & Trials

Lu Daopei Hospital Network

- Beijing Lu Daopei Hospital
- Hebei Yanda Lu Daopei Hospital
- Shanghai Lu Daopei Hospital
- Lu Daopei Medical Group
- Hubei Provincial Biolake Stem Cell Bank
- Lu Daopei Hematology Research Institute
- Performed over 1200 cases of HSCT in 2019
- Performed over 1000 cases of CAR-T so far
- Top-ranked hematology and BMT program in Asia



Avalon Clinical Programs -- Timeline



R/R: Relapsed/Refractory
 B-ALL: B-cell Acute Lymphoblastic Leukemia
 NHL: Non-Hodgkin Lymphoma
 MSCs: Mesenchymal Stem Cells

Avalon-SenlangBio Clinical Programs

NO.	Partnering Hospitals	Products	Indications	No. of patients
1	Hebei Yanda Lu DaoPei Hospital	CD19/CD22/CD19+CD22/BCMA/CD123	B-ALL/NHL/MM/AML	135
2	The Second Hospital of Hebei Medical University	CD19/CD22/CD19+CD22/ BCMA/CD123/CD30/GD-2/CLL-1	B-ALL/NHL/MM/AML/HL/NB	89
3	The Fourth Hospital of Hebei Medical University	CD19/CD22/CD19+CD22/ BCMA/CD30/CD123	B-ALL/NHL/MM/AML/HL	35
4	Xuanwu Hospital Capital Medical University	IL-13Ra2/HER2/GD2/EphA2/EGFRviii	GBM	13
5	Tianjin Blood Research Institute	CD19/CD19+CD22/CD123/CD7	B-ALL/NHL/AML/T-ALL	7
6	Halison International Peace Hospital	CD19	B-ALL/NHL	5
7	Handan First Hospital	CD19/CD22/CD19+CD22/ BCMA/CD30/CD123	B-ALL/NHL/MM/AML/HL	5
8	Chengde medical college affiliated hospital	CD19/CD22/CD19+CD22/ BCMA/CD30/CD123	B-ALL/NHL/MM/AML/HL	5
9	Cangzhou People's Hospital	CD19	B-ALL/NHL	4
10	Handan Central Hospital	CD19/CD22/CD19+CD22/ BCMA/CD30/CD123	B-ALL/NHL/MM/AML/HL	2
11	North China University of Science and Technology Affiliated Hospital	CD19/BCMA	B-ALL/NHL/MM	1
12	Taiyuan Central Hospital	CD19/BCMA	B-ALL/NHL/MM	5
13	Hebei Medical University First Hospital and others	CD19/CD22/CD19+CD22/ BCMA/CD30/CD123/CD7	B-ALL/NHL/MM/AML	3

Total : 309

309

Completed cases of cell therapies

15

Cell therapy products

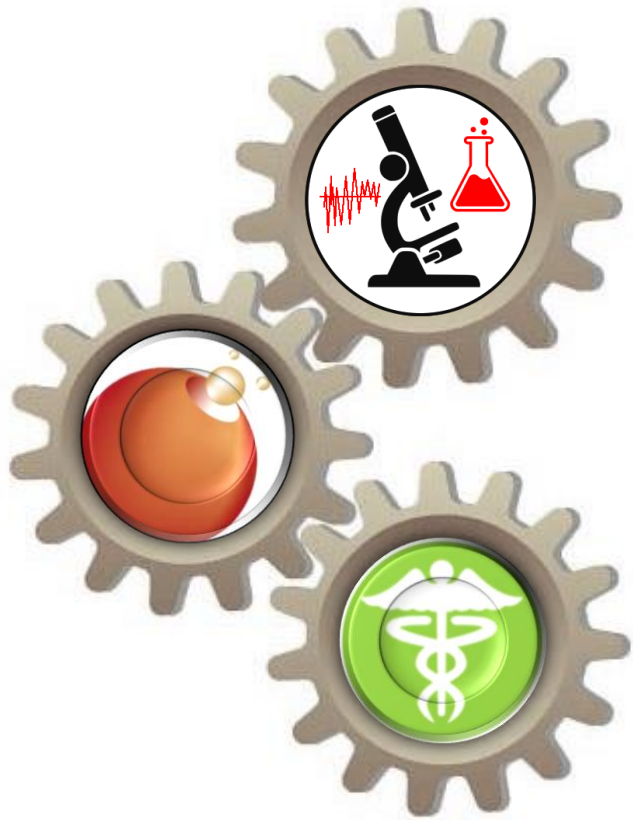
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Partnering hospitals

9

Indications

Seamless Vertical Integration in Cellular Medicine



- ↑ **Better and Safer Cellular Immunotherapy
IPs & Licensing Opportunities**
- ↓ **Overall Manufacturing Time and Cost**
- ↑ **Patient Accessibility
International Multi-Center Clinical
Trials**

Financial Highlights

- Successfully uplisted from OTCQB to NASDAQ in December 2018
- Purchased headquarters building in Freehold/New Jersey in 2017 (USD \$8M), which generates average annual revenue of USD \$1.2M
- Successfully filed for USD \$50M mixed shelf offering (S3) in January 2019
- Chairman provided USD \$20M credit facility, enabling acceleration of R&D and clinical programs
- Shares outstanding: 82M

Contacts

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