



## Cellular Biomedicine Group (CBMG) Presents Poster of TCRs Targeting AFP-Positive Liver Cancer at AACR Annual Meeting

**NEW YORK, NY and SHANGHAI, China, June 22, 2020** – Cellular Biomedicine Group Inc. (NASDAQ: CBMG) (“CBMG” or the “Company”), a biopharmaceutical firm engaged in the drug development of immunotherapies for cancer and stem cell therapies for degenerative diseases, today presented a poster during the 2020 American Association for Cancer Research (AACR) annual meeting to be held as a virtual meeting from June 22-24, 2020.

Poster Title: **“Selecting Clinical Lead of TCRs Targeting Alpha-Fetoprotein-Positive Liver Cancer on Balance of Risk and Benefit”**

Session: [Session PO.IM02.04 - Adoptive Cell Therapy 5](#)

Poster N°: 6589 (Board 1)

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Date: Monday, June 22, 2020

Time: 9:00 a.m.to 6:00 p.m. EDT

Location: San Diego Convention Center, Exhibit Halls A-F, Poster Virtual Meeting II:  
E-Posters

Website: <https://www.abstractsonline.com/pp8/#!/9045/presentation/7124>

C-TCR055 is CBMG’s proprietary clinical lead of TCR-T which specifically recognizes the HLA-A\*02:01 restricted AFP<sub>158-166</sub> peptide that is highly expressed in hepatocellular carcinoma (HCC) and other solid tumors. Preclinical studies suggested that C-TCR055 has optimal anti-tumor activities and a good safety profile. CBMG is currently conducting a Phase I clinical study in unresectable HCC in Fudan University Affiliated ZhongShang Hospital in Shanghai, China (NCT03971747).

### ABSTRACT

**Background:** Hepatocellular carcinoma (HCC) is the most common type of primary liver cancer with a poor prognosis and limited therapeutic options. Alpha-fetoprotein (AFP), an established clinical biomarker of HCC, has been employed as an attractive target for T cell-based immunotherapy against this disease given its high expression in the tumor and restricted expression in normal tissues. We have identified a number of T cell receptors (TCRs) recognizing the HLA-A\*02:01 restricted AFP<sub>158-166</sub> peptide FMNKFIYEI, providing a TCR candidate pool for identifying TCRs with optimal clinical benefit.

**Methods:** To select the ideal AFP TCR for clinical use, we evaluated the efficacy and safety profile of 7 TCRs on balance of their potency and specificity by testing their reactivity to normal



and transformed cells covering a variety of primary cell types and HLA serotypes, and potential protein candidate in human genome by an extensive alanine scan (X-scan).

**Results:** We first selected three TCR candidates based on the *in vitro* anti-tumor activity. Next we eliminated two potential cross-reactive TCRs based on their reactivity against normal and transformed cells covering a variety of primary cell types and HLA serotypes, respectively. We then excluded the potential cross-reactivity of the selected TCR with protein candidates in human genome identified by X-scan.

**Conclusion:** To date we have selected an AFP TCR with the optimal affinity, function, and safety profile, bearing properties that are expected to allow AFP TCR redirected T cells to specifically differentiate between AFP levels on tumor and normal tissues. An early phase clinical trial using T cells transduced with this TCR to treat HCC patients (NCT03971747) has been initiated.

#### **About Cellular Biomedicine Group, Inc.**

Cellular Biomedicine Group, Inc. (NASDAQ: CBMG) develops proprietary cell therapies for the treatment of cancer and degenerative diseases. The company conducts immuno-oncology and stem cell clinical trials in China using products from its integrated GMP laboratory. The Company's GMP facilities in China, consisting of twelve independent cell production lines, are designed and managed according to both China and U.S. GMP standards. Its Shanghai facility includes a "Joint Laboratory of Cell Therapy" with GE Healthcare and a "Joint Cell Therapy Technology Innovation and Application Center" with Thermo Fisher Scientific. These partnerships focus on improving manufacturing processes for cell therapies. CBMG currently has ongoing CAR-T Phase I clinical trials in China. The China NMPA (formerly CFDA) approved the Company's IND application for a Phase II trial for AlloJoin<sup>®</sup>, CBMG's "Off-the-Shelf" allogenic haMPC therapy for the treatment of Knee Osteoarthritis (KOA), and has accepted the Company's IND application for a Phase II trial for ReJoin<sup>®</sup> autologous haMPC therapy for the treatment of KOA. The NMPA has also accepted CBMG's dossier for an IND application for clinical trials of anti-BCMA CAR-T. CBMG is included in the broad-market Russell 3000<sup>®</sup> Index the small-cap Russell 2000<sup>®</sup> Index and the Loncar China BioPharma index. To learn more about CBMG, please visit [www.cellbiomedgroup.com](http://www.cellbiomedgroup.com).

#### **Forward-Looking Statements**

Statements in this press release relating to plans, strategies, specific activities, and other statements that are not descriptions of historical facts may be forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking information is inherently subject to risks and uncertainties, and actual results could differ materially from those currently anticipated due to a number of factors, which include any risks detailed from time to time in CBMG's reports filed with the Securities and Exchange Commission, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including risks relating to the impact of the COVID-19 pandemic on our operations, including risks associated with the evolving COVID-19 pandemic and actions taken in response to it. Generally, the words "believes," "anticipates," "may," "will," "should," "could," "expect," "plans," "intend," "estimate," "projects," "presents," "potential," "continue" and similar expressions or the negative thereof or comparable terminology are intended to identify forward-looking statements. These statements reflect our current views with respect to future events or to our future activities and involve known and unknown risks, uncertainties and other factors which may cause our actual activities, actions or achievements to be materially different from any future activities, actions or achievements expressed or implied by the forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements.



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