

# Multifunctional Drugs-Loaded Carbomol Hydrogel Promotes Diabetic Wound Healing via Antimicrobial and Immunoregulation

Hehui Wang <sup>1,2,†</sup>, Jiale Jin <sup>2,†</sup>, Chi Zhang <sup>1</sup>, Fangyi Gong <sup>1</sup>, Baiwen Hu <sup>1</sup>, Xiaochuan Wu <sup>1</sup>, Ming Guan <sup>2,\*</sup> and Dongdong Xia <sup>1,\*</sup>

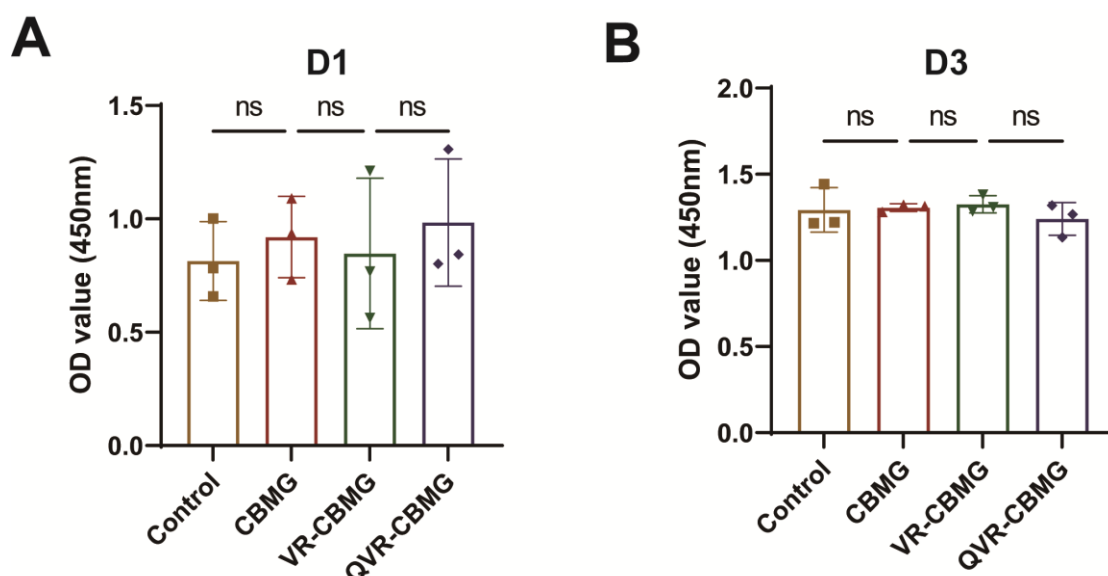
<sup>1</sup> Department of Orthopedics, The First Affiliated Hospital of Ningbo University, Ningbo 315000, China; fyywanghehui@nbu.edu.cn (H.W.); fyyzhangchi@nbu.edu.cn (C.Z.); fyygongfangyi@nbu.edu.cn (F.G.); fyyhubaiwen@nbu.edu.cn (B.H.); fyywuxiaochuan@nbu.edu.cn (X.W.)

<sup>2</sup> Department of Orthopedics, The First Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou 310000, China; 22018143@zju.edu.cn

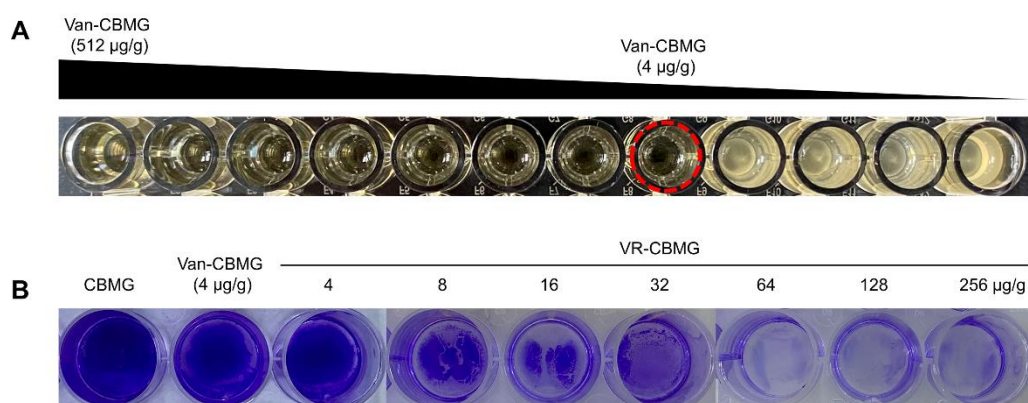
\* Correspondence: guanm@zju.edu.cn (M.G.); fyyxiadongdong@nbu.edu.cn (D.X.)

† These authors contributed equally to this work.

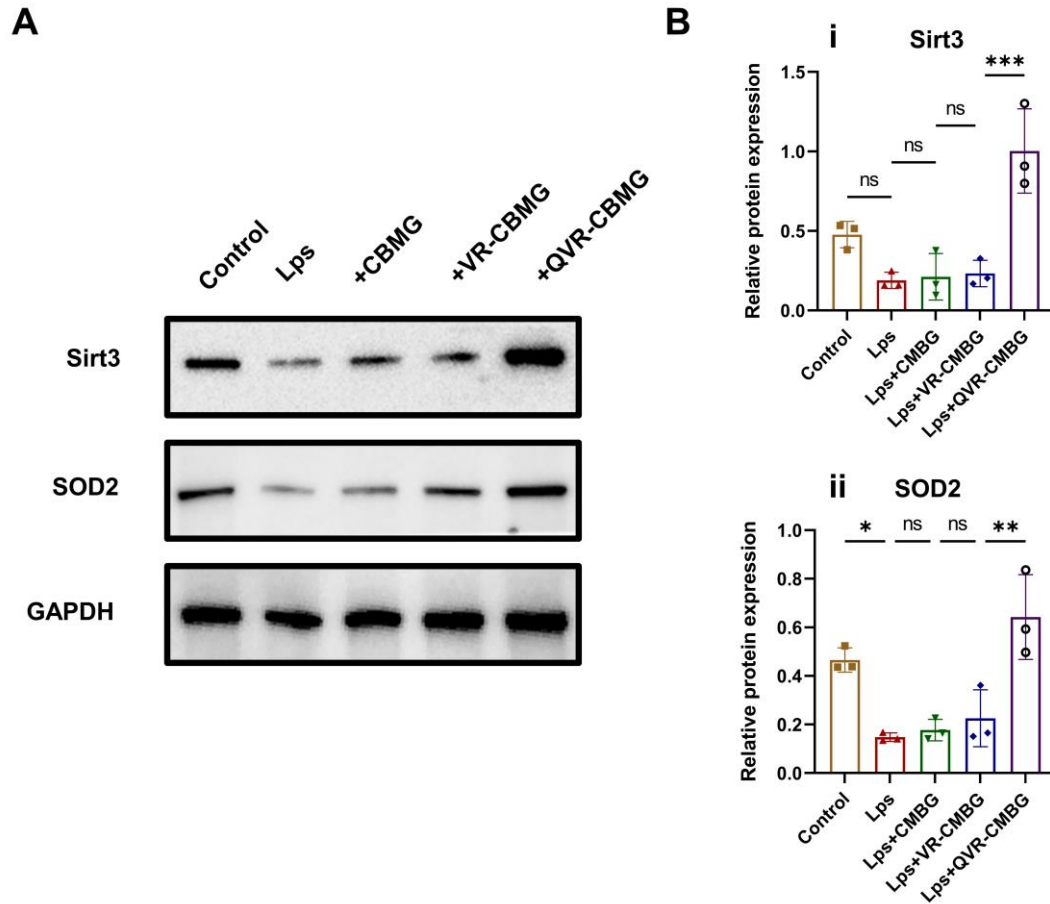
## 1. Supporting figures



**Figure S1. A.** The CCK-8 results of macrophages on 1 days. **B.** The CCK-8 results of macrophages on 3 days. OD, optical density. (Data represen mean  $\pm$  SD,  $n = 3$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  and \*\*\*\* $p < 0.0001$ ).



**Figure S2. A.** The broth microdilution method to determine the minimum inhibitory concentration of Van-CBMG against MRSA. **B.** Crystal violet staining of biofilm after treatment with different samples. The composition of VR-CBMG was mixed with Van (4  $\mu\text{g/g}$ ) and various contents of Rif from 4  $\mu\text{g/g}$  -256  $\mu\text{g/g}$ .



**Figure S3. A.** Western blot of Sirt3/SOD2 in different groups. **B.** Protein expression result of Sirt3/SOD2. (Data represent mean  $\pm$  SD,  $n = 3$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  and \*\*\*\* $p < 0.0001$ ).