

Supplementary material

A novel long-term intravenous combined with local treatment with human amnion-derived mesenchymal stem cells for a multidisciplinary rescued uremic calciphylaxis patient and the underlying mechanism

Lianju Qin^{1,†,*}, Jing Zhang^{2,†}, Yujie Xiao^{2,†}, Kang Liu², Yugui Cui¹, Fangyan Xu², Wenkai Ren², Yanggang Yuan², Chunyan Jiang¹, Song Ning¹, Xiaoxue Ye², Ming Zeng², Hanyang Qian², Anning Bian², Fan Li², Guang Yang², Shaowen Tang³, Zhihong Zhang⁴, Juncheng Dai³, Jing Guo⁵, Qiang Wang⁶, Bin Sun², Yifei Ge², Chun Ouyang², Xueqiang Xu², Jing Wang², Yaoyu Huang², Hongqing Cui², Jing Zhou¹, Meilian Wang⁷, Zhonglan Su⁸, Yan Lu⁸, Di Wu⁸, Jingping Shi⁹, Wei Liu¹⁰, Li Dong¹¹, Yinbing Pan¹², Baiqiao Zhao^{2,13}, Ying Cui^{2,14}, Xueyan Gao^{2,15}, Zhanhui Gao^{2,16}, Xiang Ma¹, Aiqin Chen¹, Jie Wang¹, Meng Cao¹, Qian Cui¹, Li Chen¹, Feng Chen¹⁷, Youjia Yu¹⁷, Qiang Ji¹⁷, Zhiwei Zhang¹⁷, Mufeng Gu¹⁸, Xiaojun Zhuang¹⁸, Xiaolin Lv², Hui Wang², Yanyan Pan², Ling Wang², Xianrong Xu², Jing Zhao¹⁹, Xiuqin Wang²⁰, Cuiping Liu²¹, Ningxia Liang²², Changying Xing², Jiayin Liu^{1,*}, Ningning Wang^{2,*}

¹ State Key Laboratory of Reproductive Medicine, Center of Clinical Reproductive Medicine, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

² Department of Nephrology, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

³ Department of Epidemiology and Biostatistics, School of Public Health, Nanjing Medical University, Nanjing, China

⁴ Department of Pathology, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

⁵ Department of Cardiology, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

⁶ Department of Rheumatology, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

⁷ Department of Obstetrics, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

⁸ Department of Dermatology, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

⁹ Department of Burn and Plastic Surgery, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

¹⁰ Department of Nuclear Medicine, The First Affiliated Hospital of Nanjing Medical University, Jiangsu

Province Hospital, Nanjing, China

¹¹ Department of Infection, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

¹² Department of Anesthesiology and Pain Management, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

¹³ Department of Nephrology, The First People's Hospital of Lianyungang, Lianyungang, China

¹⁴ Department of Nephrology, Northern Jiangsu People's Hospital, Yangzhou, China

¹⁵ Department of General Medicine, Geriatric Hospital of Nanjing Medical University, Nanjing, China

¹⁶ Department of Nephrology, BenQ Medical Center, The Affiliated BenQ Hospital of Nanjing Medical University, Nanjing, China

¹⁷ Department of Forensic Medicine, School of Basic Medical Sciences, Nanjing Medical University, Nanjing, China

¹⁸ Department of Human Anatomy, School of Basic Medical Sciences, Nanjing Medical University, Nanjing, China

¹⁹ Department of Outpatient Treatment Clinic, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

²⁰ Department of International Cooperation, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

²¹ Department of Biological Specimen Repository, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

²² Academy of Clinical and Translational Research, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China

† These authors contributed equally to this work.

* Correspondence to: Ningning Wang, Tel: +86-13813821064, E-mail: wangnn@njmu.edu.cn; Jiayin Liu, E-mail: jyliu_nj@126.com; Lianju Qin, E-mail: ljqin@njmu.edu.cn

Running title: HAMSCs for a multidisciplinary rescued uremic calciphylaxis patient

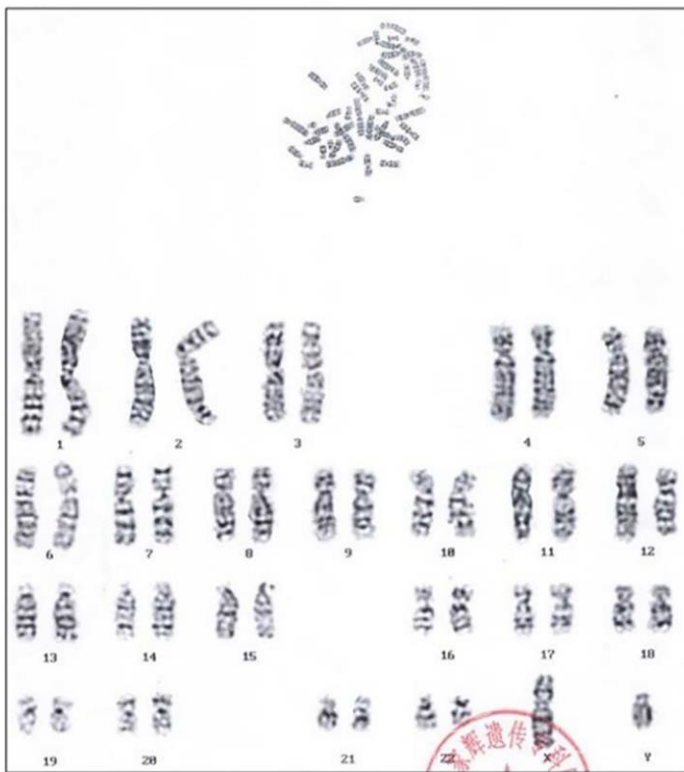
Supplementary Table S1 Skin biopsy statistical analysis of inflammatory cells and blood vessels during hAMSC treatment by light microscopy.

	Inflammatory cells			Blood vessels
	Neutrophils	Lymphocytes	Plasmocytes	
Magnification	400			100
Before hAMSC treatment	0.00	19.33	184.67	29.00
1 month after hAMSC treatment	65.00	75.00	59.00	125.00
20 months after hAMSC treatment	2.67	9.33	5.33	17.00

Supplementary Table S2 Target antibodies for the surface markers of hAMSCs.

Antibody name	Antibody brand and item number
FITC mouse IgG2a (isotype control)	BD: 555573
PE mouse IgG1 (isotype control)	BD: 555749
FITC-HLA-DR	BD: 562008
PE-CD44	BD: 555479
PE-CD73	BD: 550257
PE-CD90	BD: 555596
PE-CD105	BD: 560839
PE-CD11b	BD: 555388
PE-CD19	BD: 555413
PE-CD34	BD: 555822
PE-CD45	BD: 555483

PE, polyethylene; FITC, fluorescein isothiocyanate; BD: Becton, Dickinson and Company (New Jersey, USA).



Gene loci	A1	A2
D19S433	16.2	16.2
D5S818	8	11
D21S11	28	29
D18S51	17	17
D6S1043	18	18
D3S1358	17	17
D13S317	11	11
D7S820	10	11
D16S539	9	11
CSF1PO	10	12
Penta D	9	13
AMEL	X	Y
vWA	16	17
D8S1179	12	14
TPOX	9	11
Penta E	14	15
TH01	7	10
D12S391	17	18
D2S1338	19	23
FGA	23	27

Supplementary Figure S1 The karyotype and short tandem repeat (STR) of hAMSC10.