

Miguel A. Esteban

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Curriculum Vitae



Miguel A. Esteban (MD PhD) is scientific director at 3DC STAR Lab in BGI Cell (Shenzhen, China). He is also professor, adjunct professor or honorary professor at multiple universities in China and abroad. Miguel obtained his BS in Medicine and Surgery from University of Navarra (Pamplona, Spain), and his specialization in Clinical Immunology from Hospital de la Princesa, (Madrid, Spain). He did his PhD in Biochemistry and Molecular Biology at University Autonoma of Madrid, and his postdoctoral study on renal cancer biology at the Imperial College (London, UK) lab of Professor Patrick Maxwell. He then worked at the Guangzhou Institutes of Biomedicine and Health (Chinese Academy of Sciences) from 2008 to 2023, after which he founded 3DC STAR Lab at BGI Cell. Miguel has received numerous awards including the Outstanding Award in Science and Technology of the Chinese Academy of Sciences, Innovation Award of the Guangdong Province, Honorary Citizen of Guangzhou, and National Friendship Award of China, among others. He has published 150 papers in top international journals including Cell, Nature, and Science. The team co-led by Miguel and his colleagues aims to understand and manipulate the mechanisms driving mammalian aging, degeneration, and regeneration.

Representative Recent Publications (*corresponding author)

1. Lai Y, Ramírez-Pardo I, Isern J, An J, Perdiguero E, Serrano AL, Li J, García-Domínguez E, Segalés J, Guo P, Lukesova V, Andrés E, Zuo J, Yuan Y, Liu C, Viña J, Doménech J, Gómez-Cabrera MC, Song Y, Liu L, Xu X, Muñoz-Cánoves P*, Esteban MA*. Multimodal cell atlas of the ageing human skeletal muscle. *Nature*, 2024. 629 (8010): 154–164.
2. Xu J, Guo P*, Hao S, Shangguan S, Shi Q, Volpe G, Huang K, Zuo J, An J, Yuan Y, Cheng M, Deng Q, Zhang X, Lai G, Nan H, Wu B, Shentu X, Wu L, Wei X, Jiang Y, Huang X, Pan F, Song Y, Li R, Wang Z, Liu C, Liu S, Li Y, Yang T, Xu Z, Du W, Li L, Tanveer A, You K, Dai Z, Li L, Qin B, Li Y, Lai L, Qin D, Chen J, Fan R, Li Y, Hou J, Ott M, Sharma A, Cantz T, Schambach A, Kristiansen A, Hutchins AP, Göttgens B, Maxwell PH, Hui L, Xu X*, Liu L*, Chen A*, Lai Y*, Esteban MA*. A spatiotemporal atlas of mouse liver homeostasis and regeneration. *Nature Genetics*, 2024. 56 (5): 953–969. Cover story
3. Cao J, Li W, Li J, Abdul M, Li C, Jiang Y, Jia W, Wu L, Liao Z, Sun S, Song W, Fu J, Wang Y, Lu Y, Xu Y, Nie Y, Bian X, Gao C, Zhang X, Zhang L, Shang S, Li Y, Fu L, Liu H, Lai J, Wang Y, Yuan Y, Jin X, Li Y, Liu C, Lai Y, Shi X, Maxwell PH, Xu X, Liu L, Poo M, Wang X, Sun Q*, Esteban MA*, Liu Z*. Live birth of chimeric monkey with high contribution from embryonic stem cells. *Cell*, 2023. 186 (23): 4996–5014. Cover story
4. Chen A, Liao S, Cheng M, Ma K, Wu L, Lai Y, Qiu X, Yang J, Xu J, Hao S, Wang X, Lu H, Chen X, Liu X, Huang X, Li Z, Hong Y, Jiang Y, Peng J, Liu S, Shen M, Liu C, Li Q, Yuan Y, Wei X, Zheng H, Feng W, Wang Z, Liu Y, Wang, Yang Y, Xiang H, Han L, Qin B, Guo P, Lai G, Muñoz-Cánoves P, Maxwell P, Thierry J, Wu Q, Zhao F, Chen B, Li M, Dai X, Wang S, Kuang H, Hui J, Wang L, Fei J, Wang O, Wei X, Lu H, Wang B, Liu S, Gu Y, Ni M, Zhang W, Mu F, Yin Y, Yang H, Lisby M, Cornall R, Mulder J, Uhlen M, Esteban MA*, Li Y*, Liu L*, Xu X*, Wang J*. Spatiotemporal transcriptomic atlas of mouse organogenesis using DNA nanoball patterned arrays. *Cell*, 2022. 185 (10): 1777–1792. Cover story
5. Mazid MA*, Ward C, Luo Z, Liu C, Li Y, Lai Y, Wu L, Li J, Jia W, Jiang Y, Liu H, Fu L, Yang Y, Ibañez D, Lai J, Wei X, An J, Guo P, Yuan Y, Deng Q, Wang Y, Liu Y, Gao F, Wang J, Zaman S, Qin B, Wu G, Maxwell P, Xu X, Liu L*, Li W*, Esteban MA*. Rolling back of human pluripotent stem cells to an 8-cell embryo-like stage. *Nature*, 2022. 605 (7909): 315–324.