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Silica nanoparticles as sources of silicic acid 1 favoring wound healing in vitro 2 3 Sandrine Quignard ^{*a,b,**}, Thibaud Coradin ^{*a*}, Jonathan J. Powell^{*b,c*}, Ravin Jugdaohsingh^{*b,c*} 4 ^aSorbonne Universités, UPMC Univ. Paris 06, CNRS, Collège de France, UMR 7574, 5 Laboratoire de Chimie de la Matière Condensée de Paris, F-75005 Paris, France 6 ^b Biomineral Research Group, MRC Elsie Widdowson Laboratory, Cambridge CB1 9NL, UK 7 ^cBiomineral Research Group, Department of Veterinary Medicine, University of Cambridge, 8 Madingley Rd, Cambridge CB3 0ES, UK 9 10 11 Graphical abstract 12 Scratch assay 13 SiO Si(OH)₄ 14 SiO, Si(OH) 15 **Fibroblast** 16 17 Positively-charged silica nanoparticles are readily internalized by human skin fibroblasts, releasing silicic acid intracellularly,

- and favoring their proliferation/migration in an *in vitro* wound healing model 18
- 19
- 20

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