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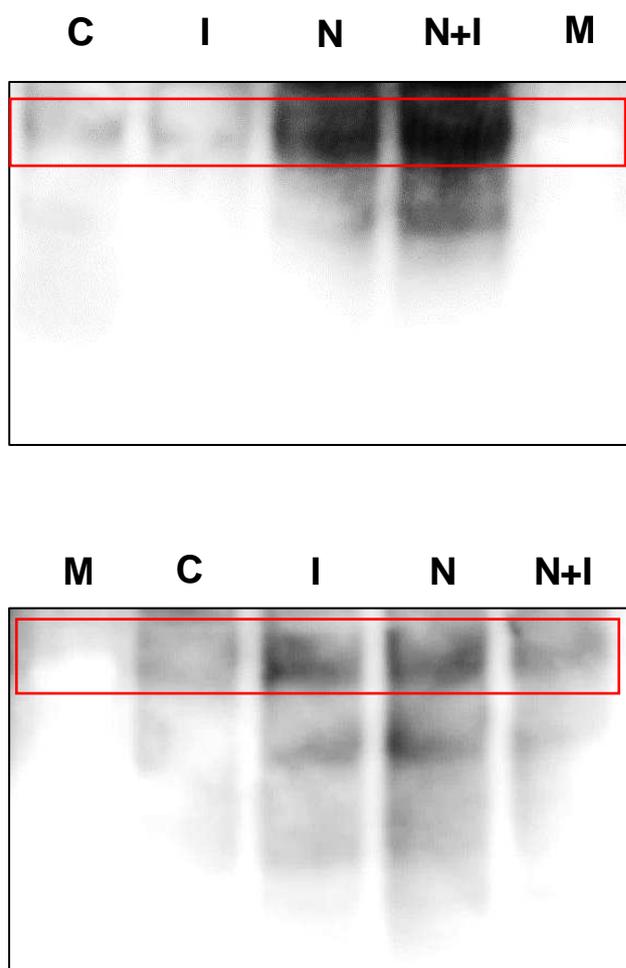
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# **Inorganic Nitrate Promotes Glucose Uptake and Oxidative Catabolism in White Adipose Tissue through the XOR Catalyzed Nitric Oxide Pathway**

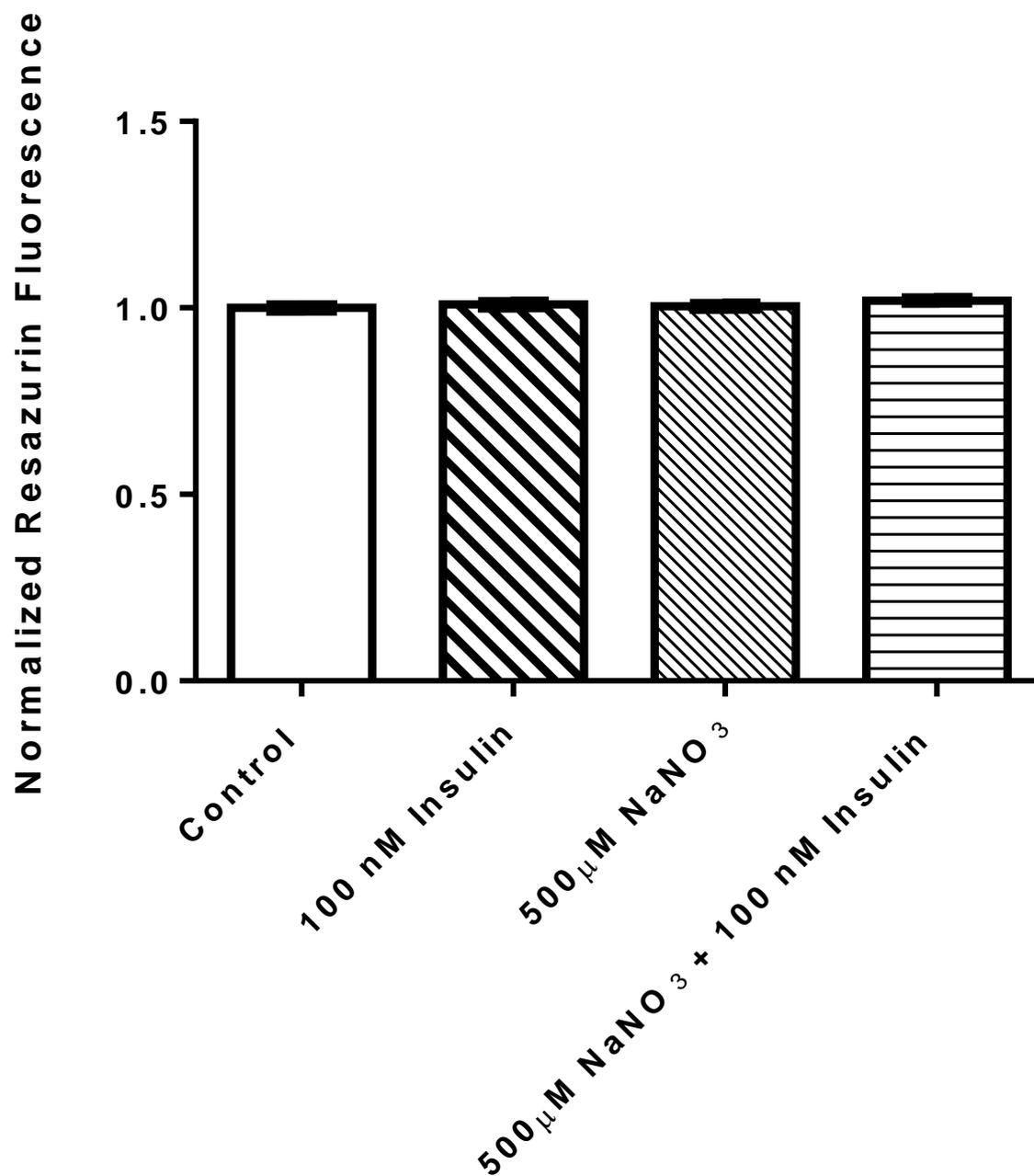
**Running Title:** Nitrate Enhances Adipose Tissue Glucose Metabolism

Ben D McNally<sup>1,2†</sup>, Amy Moran<sup>3†</sup>, Nicole T Watt<sup>3</sup>, Tom Ashmore<sup>2,4</sup>, Anna Whitehead<sup>3</sup>,  
Steven A Murfitt<sup>2</sup>, Mark T Kearney<sup>3</sup>, Richard M Cubbon<sup>3</sup>, Andrew J Murray<sup>4</sup>, Julian L  
Griffin<sup>1,2,5</sup>, Lee D Roberts<sup>3\*</sup>

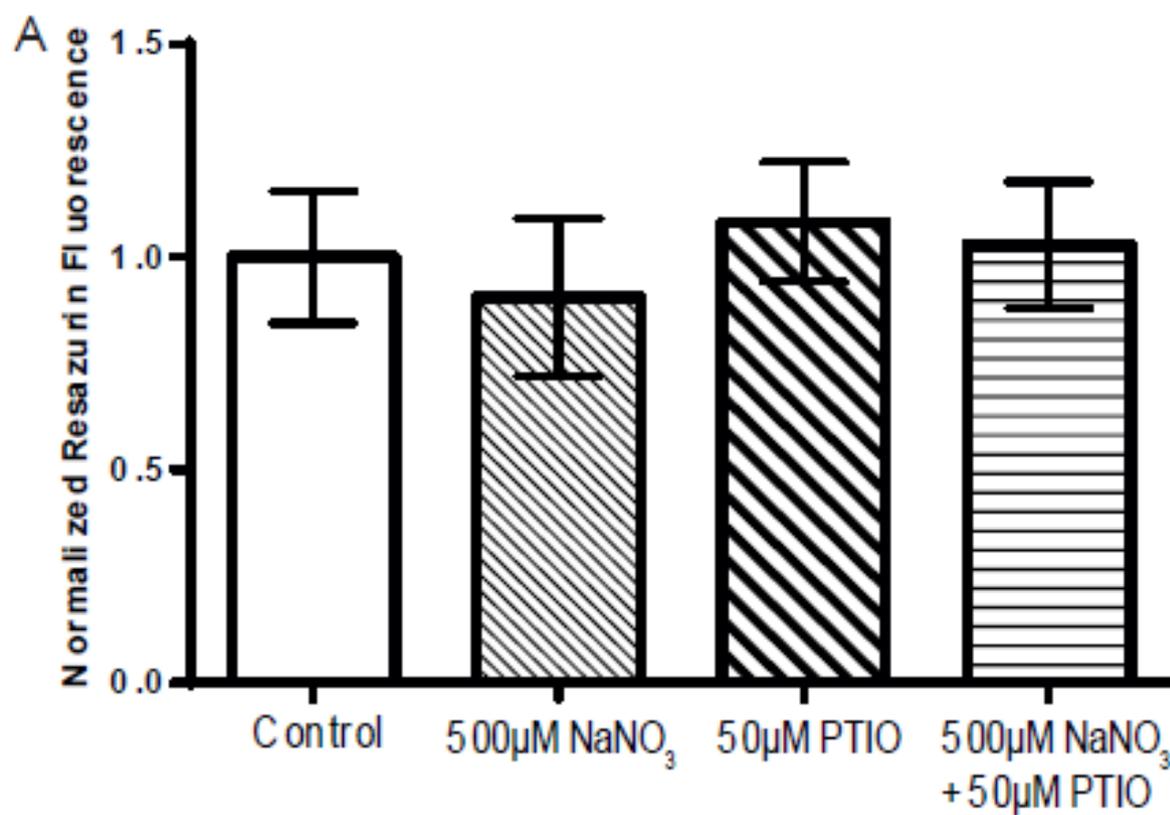
1. Medical Research Council – Human Nutrition Research, Elsie Widdowson  
Laboratory, 120 Fulbourn Road, Cambridge, CB2 9NL, UK.
2. Department of Biochemistry and Cambridge Systems Biology Centre, University of  
Cambridge, 80 Tennis Court Road, Old Addenbrooke's Site, Cambridge, CB2 1GA,  
UK.
3. Leeds Institute of Cardiovascular and Metabolic Medicine, School of Medicine,  
University of Leeds, Leeds, LS2 9JT, UK
4. Department of Physiology, Development and Neuroscience, University of Cambridge,  
Downing Street, Cambridge, CB2 3EG, UK.
5. Biomolecular Medicine, Systems Medicine, Department of Metabolism, Digestion and  
Reproduction, Imperial College London, SW7 2AZ, UK.



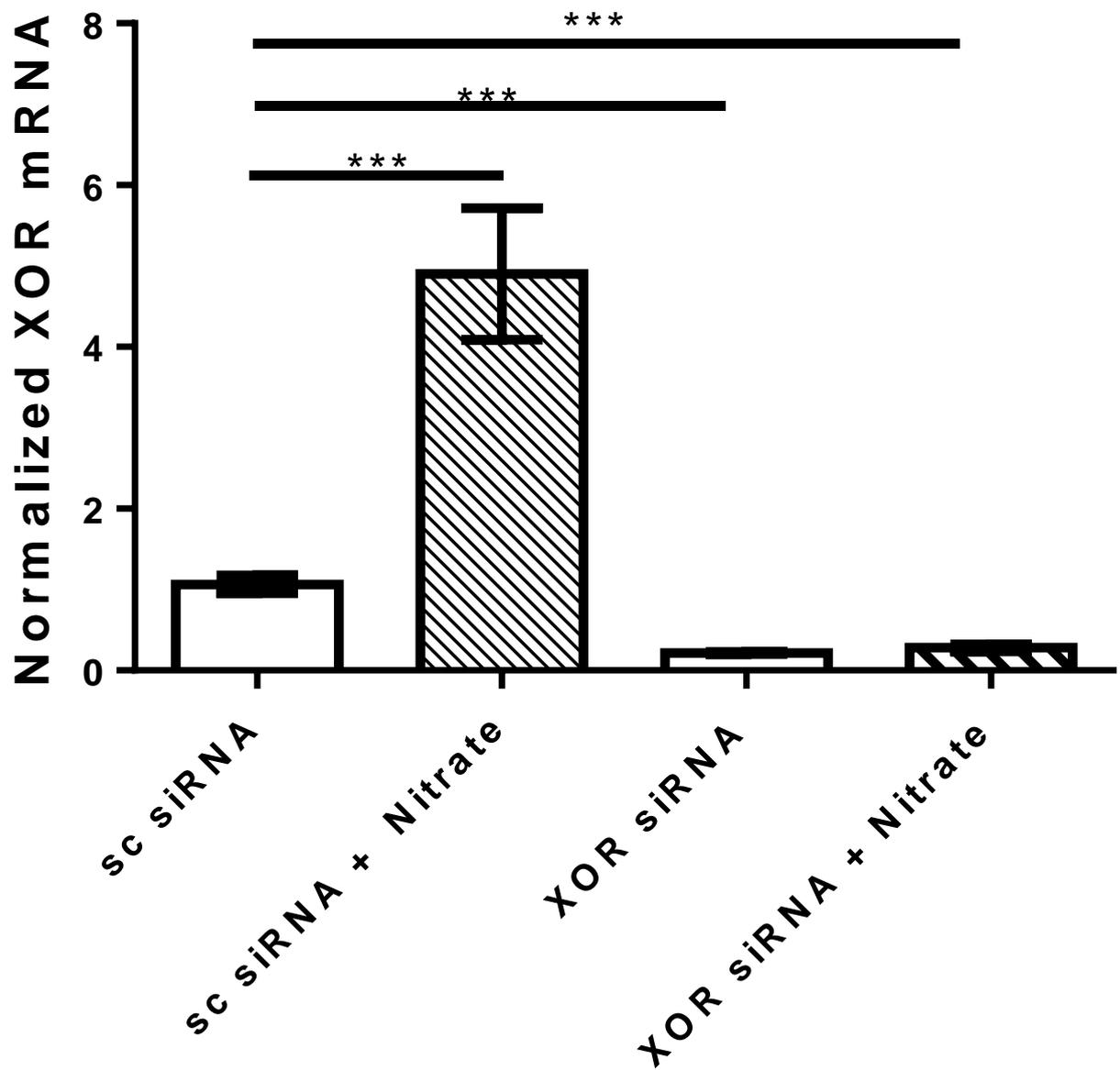
**Supplementary Figure 1** Immunoprecipitation blots of cell surface biotinylated Glut4 from primary mouse adipocytes treated with 500  $\mu$ M nitrate with and without 100 nM insulin showing 50 kDa molecular weight marker. C = control, I = 100 nM insulin, N = 500  $\mu$ M nitrate, N+I = 500  $\mu$ M nitrate + 100 nM insulin, M = 50 kDa molecular weight marker.



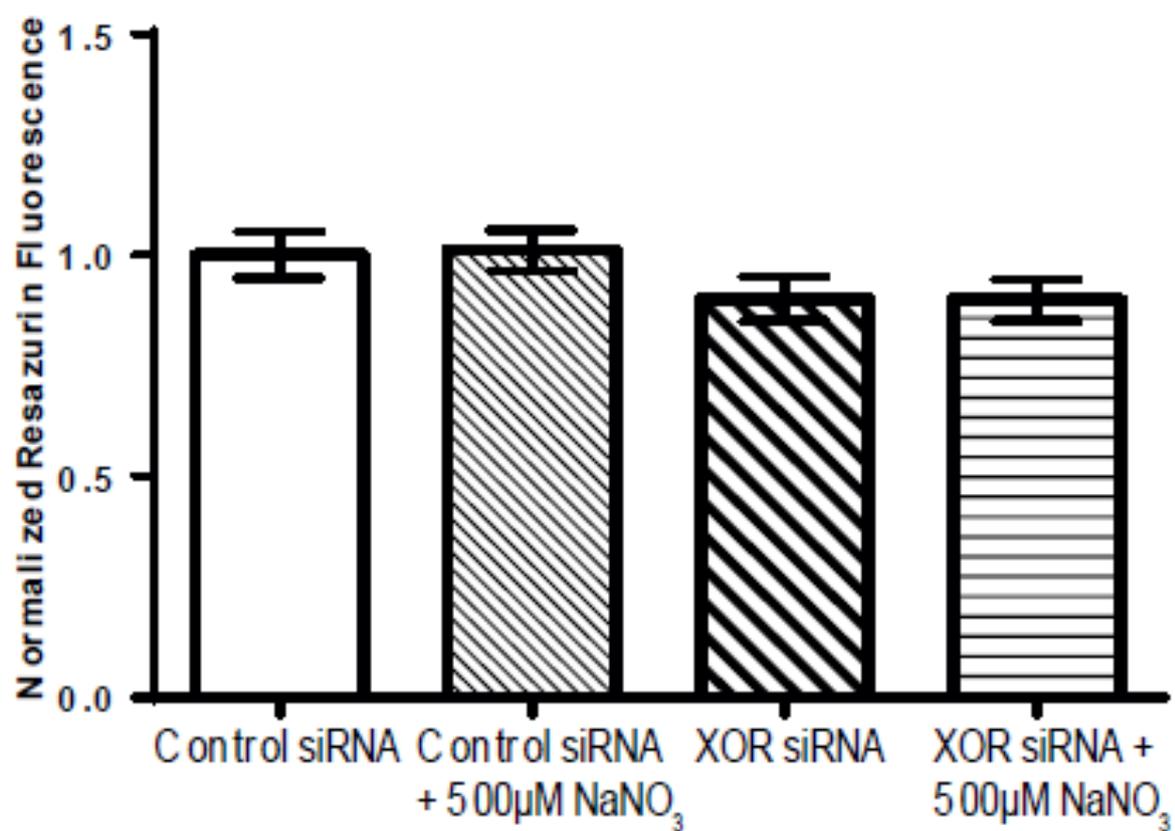
**Supplementary Figure 2** Resazurin cell viability assay in primary adipocytes treated with 500 μM nitrate, 100 nM insulin, or 500 μM nitrate and 100 nM insulin ( $n \geq 22$ ). Data is displayed as Mean  $\pm$  SEM.



**Supplementary Figure 3** Resazurin cell viability assay in primary adipocytes treated with 500 µM nitrate, 50 µM PTIO, or 500 µM nitrate and 50 µM PTIO (n = 8). Data is displayed as Mean ± SEM.



**Supplementary Figure 4** Xanthine Oxidoreductase (XOR) expression in primary adipocytes treated with scrambled control siRNA or siRNA against XOR with and without 500  $\mu$ M nitrate (n = 3). Data is displayed as Mean  $\pm$  SEM. \*\*\*,  $P \leq 0.001$ .



**Supplementary Figure 5** Resazurin cell viability assay in primary adipocytes treated with negative control siRNA or siRNA against XOR with and without 500 µM NaNO<sub>3</sub> (n = 6). Data is displayed as Mean ± SEM.

Supplementary Data

**Supplementary Table 1.** Table of morphological parameters of rats treated with 0.7 mM NaCl or 0.7 mM NaNO<sub>3</sub> in drinking water for 18 days. Table detailing start and final weights, food and water intakes, daily nitrate intake, and plasma insulin concentration. Data were analysed by Student's t-test and are Mean  $\pm$  SEM. \*\*\* P  $\leq$  0.0001.

	<b>0.7 mM NaCl (n = 6)</b>	<b>0.7 mM NaNO<sub>3</sub> (n = 6)</b>
<b>Start weight (g)</b>	265 $\pm$ 5	270 $\pm$ 4
<b>End weight (g)</b>	406 $\pm$ 8	415 $\pm$ 9
<b>Food intake (g/day)</b>	30 $\pm$ 1	30 $\pm$ 1
<b>Water intake (mL/day)</b>	30 $\pm$ 3	36 $\pm$ 3
<b>Nitrate intake (mg/kg/day)</b>	1 $\pm$ 1	8 $\pm$ 2 ***
<b>Plasma Insulin (<math>\mu</math>g / L)</b>	1.18 $\pm$ 0.2	1.16 $\pm$ 0.3