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The role of molecular crowding in long-range metalloprotein electron transfer:
Dissection into site- and scaffold-specific contributions

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1 **The Role of Molecular Crowding in Long-Range Metalloprotein Electron Transfer:**

2 **Dissection into Site- and Scaffold-Specific Contributions**

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16

17 **Abstract**

18 Here we report the effect of molecular crowding on long-range protein electron transfer
19 (ET) and disentangle the specific responses of the redox site and the protein milieu. To this
20 end, we studied two different one-electron redox proteins that share the cupredoxin fold
21 but differ in the metal centre, T1 mononuclear blue copper and binuclear Cu_A, and
22 generated chimeras with hybrid properties by incorporating different T1 centres within

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