Supplementary Material (ESI) for Molecular BioSystems

Supporting Information

Novel use of fluorescent glucose analogues to identify a new class of triazine-based insulin mimetics possessing useful secondary effects

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Running title: NBDG as a screening tool for novel insulin mimetics

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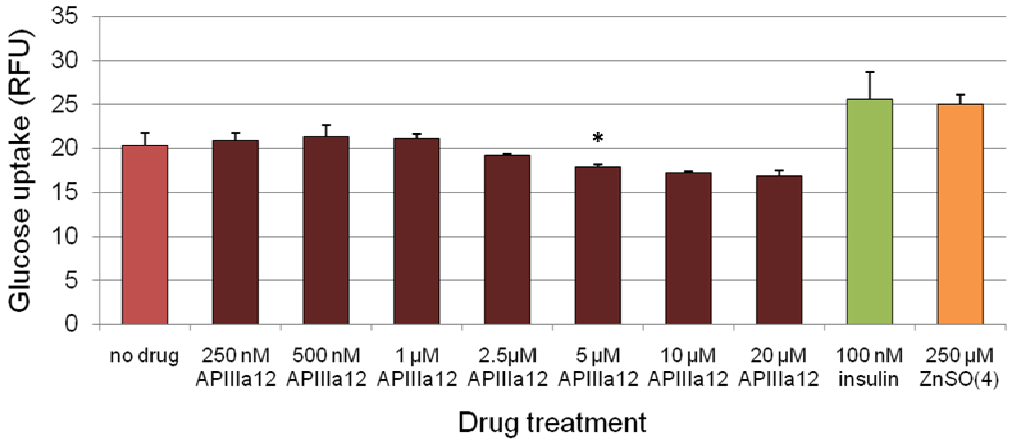
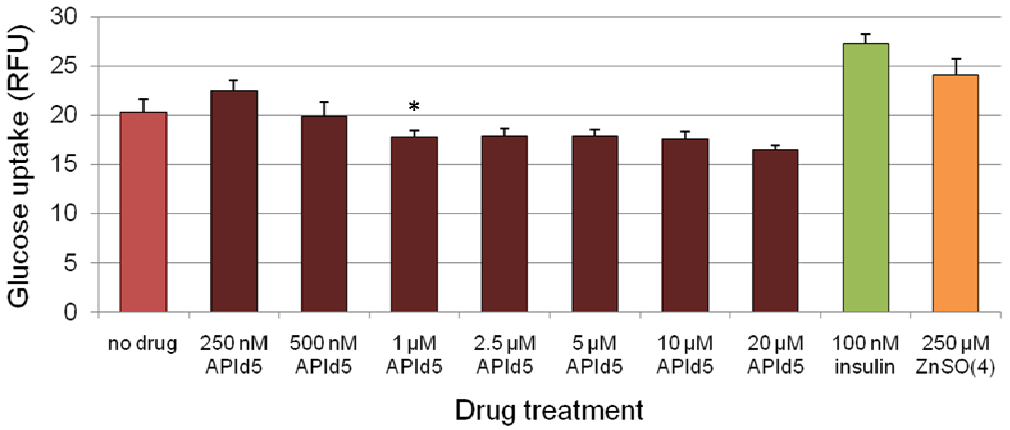
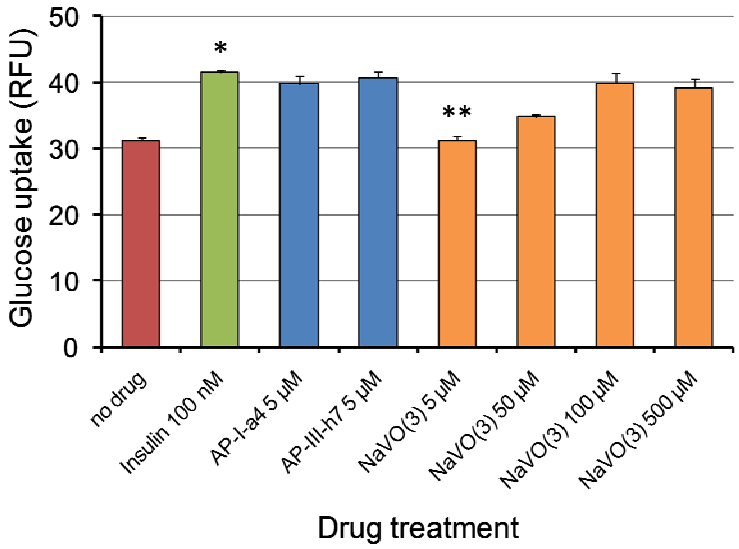
Supplementary figure 1)



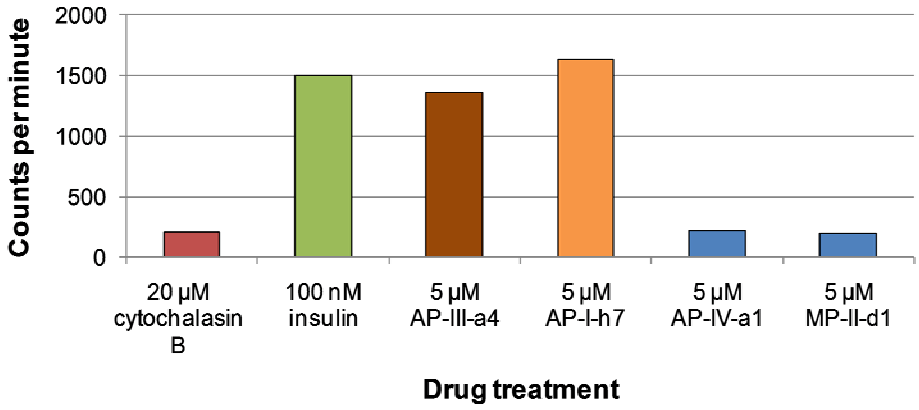


Supplementary figure 1: Re-testing of purified stocks of triazine-based compounds AP-III-a12, AP-I-d5 confirmed that they inhibit NBDG uptake in adipocytes. Compounds were tested at a number of concentrations ranging from 250 nM - 20 µM and compared with insulin and the known insulin mimetic compound, zinc sulfate. Error=SD. 3 wells of a 96-well plate/data point. *= $P<0.05$ compared to no treatment. Data is representative of three independent experiments.

Supplementary figure 2)



Supplementary figure 3)



Supplementary figure 2: Comparison of 6-NBDG uptake in 3T3-L1 adipocytes after treatment with compounds AP-III-a4, AP-I-h7 or the small molecule insulin mimetic, sodium metavanadate. 100 nM insulin treatment is included as a positive control. Error = SD; * = P <0.05 compared to no drug treatment; ** = P <0.05 compared to 5 µM AP-III-a4 or 5 µM AP-I-h7.

Supplementary figure 3: Uptake of 2-deoxy-D-[2,6-3H]glucose in 3T3-L1 adipocytes after treatment with 100 nM insulin, 5 µM insulin mimetics AP-III-a4 or AP-I-h7 for 30 min. Cytochalasin B treatment is used as a negative control for studies of cellular uptake of radio- labeled glucose. Two negative compounds from the 6-NBDG-based screen, AP-IV-a1 and MP-II-d2 are included for comparison.