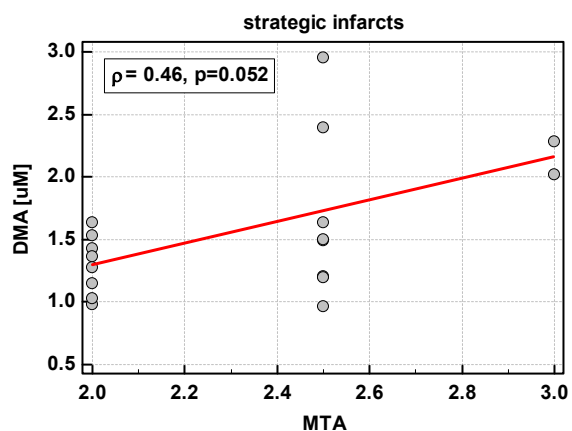


Title: Targeted metabolomic analysis of nitric oxide/L-arginine pathway metabolites in dementia: association with pathology, severity, and structural brain changes

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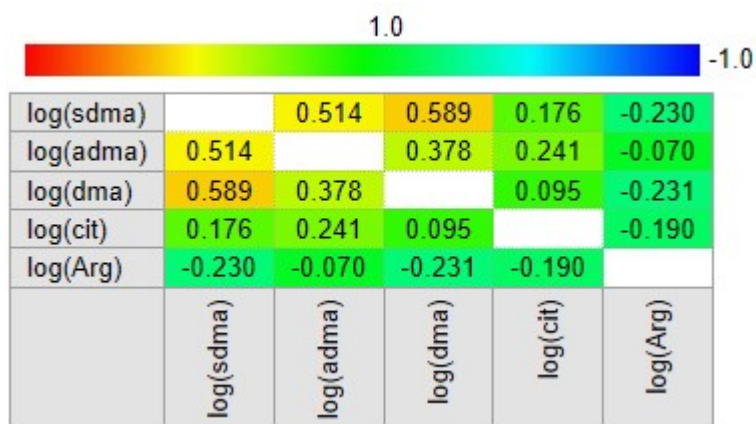
Supplementary Figure S1 The correlation between DMA and the degree of medial temporal lobe atrophy (MTA) in a subgroup of dementia patients with strategic infarcts



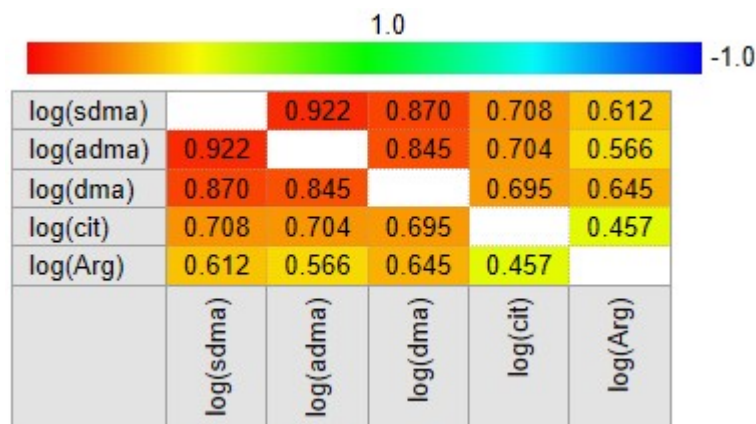
Data analyzed using Spearman rank test and presented as correlation coefficient rho (ρ).

Supplementary Figure S2. Correlograms showing the interrelationship between metabolites of arginine/No pathway depending on analyzed group

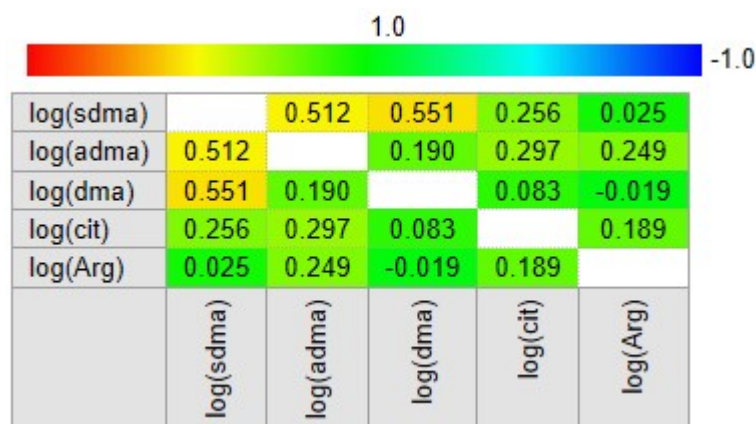
a. Controls: blood donors



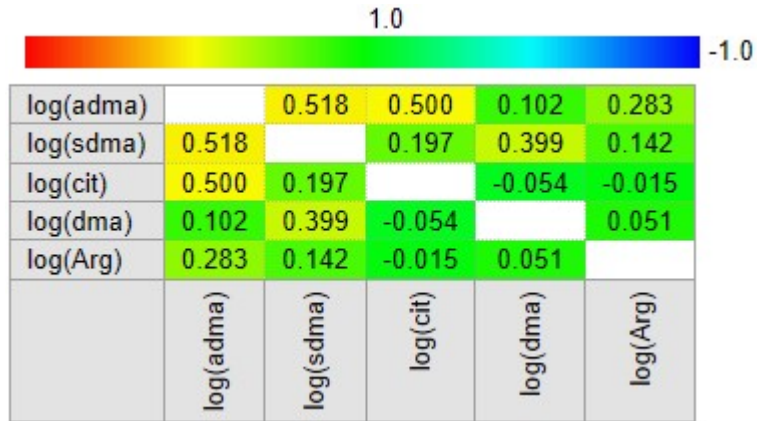
b. Controls: non-demented patients



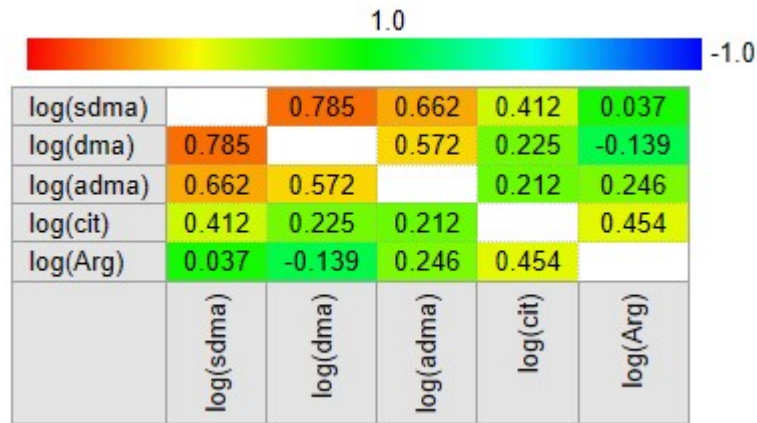
c. Dementia patients: all



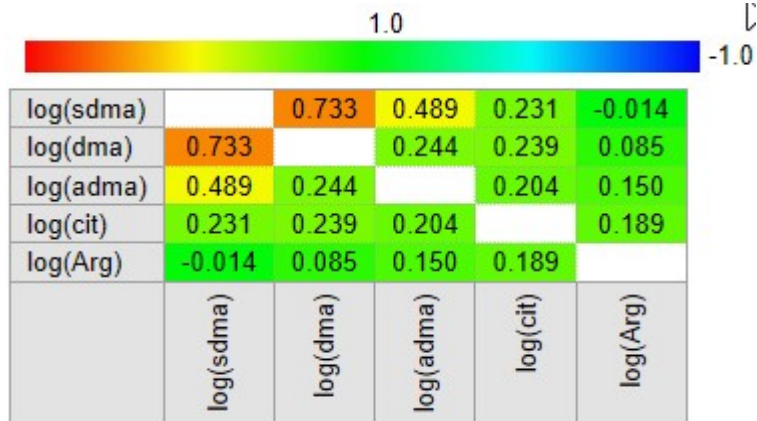
d. Dementia patients: Alzheimer disease



e. Dementia patients: mixed-type dementia



f. Dementia patients: vascular dementia



Data presented as Pearson correlation coefficients.

Supplementary Table S1. Variables independently associated with intermediates in NO metabolism (multiple regression)

| Dependent variable | Healthy controls | Dementia-AD | Dementia-VaD |
|---------------------------|---|---|--|
| Arginine (Arg) | DMA: $r_p=-0.23$, $p=0.012$ $R^2=0.05$ | no variables retained | no variables retained |
| ADMA | SDMA: $r_p=0.53$, $p<0.0001$ $R^2=0.28$ | Arg: $r_p=0.31$, $p=0.039$ SDMA: $r_p=0.48$, $p<0.001$ Cit: $r_p=0.50$, $p<0.001$ $R^2=0.49$ | SDMA: $r_p=0.49$, $p=0.001$ $R^2=0.24$ |
| SDMA | ADMA: $r_p=0.41$, $p<0.0001$ DMA: $r_p=0.49$, $p<0.0001$ $R^2=0.45$ | ADMA: $r_p=0.52$, $p<0.001$ DMA: $r_p=0.41$, $p=0.005$ $R^2=0.39$ | ADMA: $r_p=0.47$, $p=0.003$ DMA: $r_p=0.73$, $p<0.0001$ $R^2=0.64$ |
| Citrulline (Cit) | ADMA: $r_p=0.25$, $p=0.006$ $R^2=0.06$ | ADMA: $r_p=0.50$, $p<0.001$ $R^2=0.25$ | no variables retained |
| DMA | SDMA: $r_p=0.59$, $p<0.0001$ $R^2=0.34$ | SDMA: $r_p=0.40$, $p=0.005$ $R^2=0.15$ | SDMA: $r_p=0.73$, $p<0.0001$ $R^2=0.54$ |

Results of multiple regression (stepwise method) presented as variables retained in the model (in bold) together with partial correlation coefficient (r_p ; net correlation, without the interference of others) and statistical significance as well as goodness of fit of the model represented by the coefficient of determination R^2 .