

**The endogenous tryptophan metabolite and NAD precursor quinolinic acid confers
resistance of gliomas to oxidative stress**

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Supplementary Information

Table

| Diagnosis | Subtype | Gender | Age at Diagnosis | Time to recurrence [y] |
|-----------|-----------|--------|------------------|------------------------|
| GBM | primary | m | 50 | 2 |
| GBM | primary | f | 47 | 1 |
| GBM | primary | f | 43 | 0.5 |
| GBM | primary | f | 38 | 1 |
| GBM | primary | m | 56 | 1 |
| GBM | primary | m | 26 | 2 |
| GBM | primary | m | 67 | 1 |
| GBM | primary | m | 60 | 0.5 |
| GBM | primary | f | 55 | 1 |
| GBM | primary | m | 53 | 6 |
| GBM | primary | m | 65 | 2 |
| | | | | |
| GBM | primary | m | 61 | |
| GBM | secondary | f | 37 | |
| GBM | primary | f | 64 | |
| GBM | primary | m | 60 | |
| GBM | primary | m | 46 | |
| GBM | primary | m | 46 | |
| GBM | secondary | f | 47 | |
| GBM | primary | f | 60 | |
| GBM | primary | f | 65 | |
| GBM | primary | m | 50 | |
| GBM | primary | m | 48 | |
| GBM | primary | f | 63 | |
| GBM | primary | m | 64 | |
| GBM | primary | f | 45 | |
| GBM | primary | m | 65 | |
| GBM | primary | m | 65 | |
| GBM | primary | m | 52 | |
| GBM | primary | m | 51 | |
| GBM | primary | f | 64 | |
| | | | | |

Subtype, age, gender and time to recurrence (where applicable for this study) of glioblastoma patients. GBM – glioblastoma; m – male; f - female

Legends

Supplemental Figure 1: IDO-1 expression in glioma tissue sections.

Supplemental Figure 2: Viability determined by MTT assay in T325 primary glioma cells (a) and HA1800 primary astrocytes (b).

Supplemental Figure 3: NAD⁺ levels in malignant glioma cells A172 and human astrocytes after application of FK866, A172 P=0.006, astrocytes P=0.002 (a). NAD⁺ levels in A172 glioma cells treated with TMZ, P=0.009 (b). NAD⁺ levels in A172 cells treated with FK866 and supplemented with QA (c).

Supplemental Figure 4: NAPRT expression in normal brain and glioma tissue WHO grade II-IV (28), P=0.86.

Supplemental Figure 5: Immunoblot of QPRT in shQPRT and control A172 cells (a). CD68/3-HAO co-expression in tissue sections of glioblastoma (b). Test for CD14 expression in A172 and human astrocytes (c), QPRT expression in additional primary cells (c).

Supplemental Figure 6: Survival analysis of glioblastoma patients with tumors expressing high or low levels of QPRT (28).

Supplemental Figure 7: Detection of QA and picolinic acid (PA) via GC/MS in supernatant of microglia, glioma cells lines, human astrocytes and glioma-initiating cells T325.