

SUPPLEMENTARY INFORMATION

Photothermal therapy improves the efficacy of a MEK inhibitor in neurofibromatosis type 1-associated malignant peripheral nerve sheath tumors

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This document contains: 1) Figure S1: H&E staining of the tumors from M2 MPNST-bearing B6129SF1/J mice, **2) Supplementary Table 1:** List of p-values in this study.

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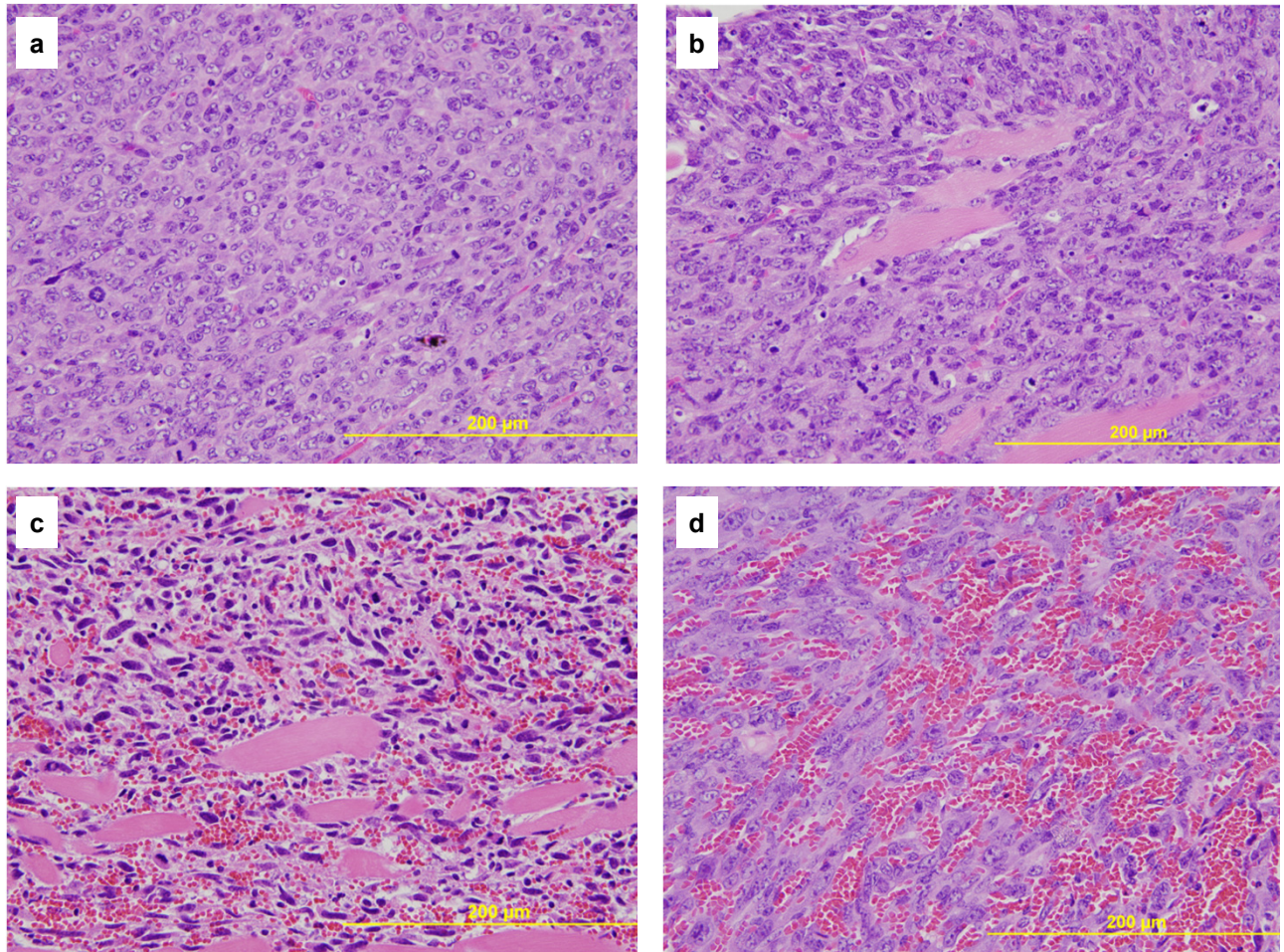


Figure S1. H&E staining of the tumors from M2 MPNST-bearing B6129SF1/J mice that were: a) Untreated, b) PD901-treated: 5 mg/kg PD901, c) PTT-treated: 1.0 mg/mL PBNPs at 1.5 W/cm² using an 808 nm NIR laser, or d) PD901 + PTT-treated: both PD901 and PTT treatments using identical treatment conditions for each individual therapy. Tumors were extracted 8 h after treatment.

SUPPLEMENTARY TABLE 1: List of p-values in this study**Figure 1c**

| Annexin V+ 7AAD- | p-value |
|---------------------------------------|----------|
| Vehicle vs. 0.1 μ M PD901 | 0.004 |
| 0.1 μ M PD901 vs. 1 μ M PD901 | 0.023 |
| 1 μ M PD901 vs. 10 μ M PD901 | 0.001 |
| 7AAD+ | p-value |
| Vehicle vs. 0.1 μ M PD901 | 3.11E-04 |
| 0.1 μ M PD901 vs. 1 μ M PD901 | 0.321 |
| 1 μ M PD901 vs. 10 μ M PD901 | 0.008 |

Figure 1d

| G0/G1 | p-value |
|--|---------|
| Vehicle vs. 0.1 μ M PD901 | 0.018 |
| Vehicle vs. 1 μ M PD901 | 0.001 |
| Vehicle vs. 10 μ M PD901 | 0.001 |
| 0.1 μ M PD901 vs. 1 μ M PD901 | 0.003 |
| 0.1 μ M PD901 vs. 10 μ M PD901 | 0.003 |
| 1 μ M PD901 vs. 10 μ M PD901 | 0.031 |

Figure 2b

| Temperature after 10 minutes | p-value |
|------------------------------|----------|
| Vehicle vs. 0.1 mg/mL | 0.105 |
| 0.01 mg/mL vs. 0.02 mg/mL | 0.025 |
| 0.02 mg/mL vs. 0.03 mg/mL | 0.049 |
| 0.03 mg/mL vs. 0.04 mg/mL | 0.111 |
| 0.04 mg/mL vs. 0.05 mg/mL | 0.122 |
| 0.05 mg/mL vs. 0.1 mg/mL | 1.28E-04 |
| 0.1 mg/mL vs. 1.0 mg/mL | 1.18E-05 |

Figure 2c

| Viability (+ 1.5 W/cm ²) | p-value |
|--------------------------------------|----------|
| Vehicle vs. 0.01 mg/mL | 0.048 |
| Vehicle vs. 0.02 mg/mL | 3.55E-05 |
| Vehicle vs. 0.03 mg/mL | 3.54E-06 |
| Vehicle vs. 0.04 mg/mL | 3.01E-04 |
| Vehicle vs. 0.05 mg/mL | 4.80E-05 |

Figure 2d

| Annexin V+ 7AAD- | p-value |
|--------------------------------------|---------|
| 0.03 mg/mL vs. Vehicle | 0.002 |
| 0.03 mg/mL vs. 1.5 W/cm ² | 0.002 |
| 0.03 mg/mL vs. 0.01 mg/mL | 0.007 |
| 0.03 mg/mL vs. 0.05 mg/mL | 0.001 |

| 7AAD+ | p-value |
|--------------------------------------|----------|
| 0.05 mg/mL vs. Vehicle | 9.28E-05 |
| 0.05 mg/mL vs. 1.5 W/cm ² | 9.35E-05 |
| 0.05 mg/mL vs. 0.01 mg/mL | 0.039 |
| 0.05 mg/mL vs. 0.03 mg/mL | 0.001 |

Figure 3a

| Viability | p-value |
|---------------------------|---------|
| LOW Combo vs. LOW PD901 | 0.029 |
| LOW Combo vs. LOW PTT | 0.002 |
| HIGH Combo vs. HIGH PD901 | 0.009 |
| HIGH Combo vs. HIGH PTT | 0.024 |

Figure 4b

| Survival | p-value |
|---------------------|---------|
| Untreated vs. PTT | 0.220 |
| Untreated vs. PD901 | 0.003 |
| Untreated vs. Combo | 0.003 |
| PTT vs. PD901 | 0.400 |
| PTT vs. Combo | 0.006 |
| PD901 vs. Combo | 0.003 |