## S1 Table:

Summary of the anticancer activity mechanisms mediated by melatonin, *Propionibacterium acnes*, and their combination. (+: active, ++: highly active, - : no activity, -/+: slight activity).

| Anticancer<br>mechanism | Melatonin | Propionibacterium acnes | Combination effect |
|-------------------------|-----------|-------------------------|--------------------|
| -                       | +         | ++                      | +++                |
| Apoptosis               | +         | ++                      | +++                |
| induction               |           |                         |                    |
| Inhibition of           | +         | -                       | +                  |
| VEGF                    |           |                         |                    |
| expression              |           |                         |                    |
| INF-γ induction         | ++        | +                       | +++                |
| Induce tumor            | +         | ++                      | +++                |
| necrosis                |           |                         |                    |
| Reduction of            | +         | -                       | ++                 |
| tumor size              |           |                         |                    |
| Inhibit                 | -/+       | -/+                     | +                  |
| metastasis              |           |                         |                    |