

COMBINATION THERAPY FOR TREATING MELANOMA

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Value Proposition: *Synergistic combination of intratumoral oncolytic therapy and MEK inhibition for treating metastatic melanoma.*

Technology Description

Researchers at Washington University in St. Louis have developed a highly effective combination therapy using two commercially available drugs for treating melanoma. Melanoma is deadly form of skin cancer with an increasing incidence rate. It is readily treatable if caught early, however, specific mutations can lead to poorer outcomes. Currently, anti-PD-1 checkpoint inhibitors stand as the primary pharmacological treatment for NRAS-mutant melanoma. However, this only offers patients a modest benefit.

This technology combines two FDA approved therapies, intratumoral administration of talimogene laherparepvec (T-VEC) with a MEK inhibitor (binimetinib) that work synergistically to treat patients with NRAS mutated melanoma. T-VEC is a genetically modified herpes virus which deletes two genes and adds a gene for human GM-CSF and works by replicating in cancer cells, causing them to burst and stimulate an immune response. Binimetinib selectively inhibits MEK, a central kinase in the tumor promoting MAPK pathway.

Stage of Research

Proof of concept. Treated 7 patients with the combination and 6/7 have achieved a complete response whereas 2/7 patients treated with T-VEC alone or in other combinations achieved a complete response.

Publications

- Tony Yao, Rita E Chen, Melissa Yamada, J Russell Moore, Marissa Jimenez, Tammy Huang, Lynn Cornelius, George Ansstas, Naresha Saligrama, David Y Chen. Combined talimogene laherparepvec and binimetinib in patients with NRAS-mutated melanoma induces anti-tumor immunity. medRxiv 2026.03.09.26347765; doi: <https://doi.org/10.64898/2026.03.09.26347765>.

Applications

- Treatment of metastatic melanoma

Key Advantages

- Synergistic combination with T-VEC and MEK inhibition for patients with NRAS mutations
- Uses two commercially available drugs

Patents

Patent pending

Related Web Links – [George Ansstas Profile](#); [David Chen Profile](#)