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Solar UV-Induced Skin Cancer Inhibitor

IP Status: Issued US Patent; **Issued Patent No.** 10,487,054

Highly effective inhibitor of solar UV-induced skin cancer

ADA-07 is a novel potent T-LAK cell-originated protein kinase (TOPK) inhibitor that effectively suppresses solar ultraviolet (SUV) induced skin carcinogenesis. The novel compound, 5-((1s, 3s)-adamantan-1-yl)-3-(hydroxyimino) indolin-2-one, directly inhibits TOPK, an upstream activator of mitogen-activated protein kinase (MAPK) cascades involved in inflammation, DNA damage and tumor development. Testing shows ADA-07 is a promising chemopreventive or potential therapeutic agent against SUV-induced skin carcinogenesis.

TOPK inhibitor may prevent and treat SUV-induced skin cancer

T-LAK cell-originated protein kinase (TOPK), an oncogenic protein involved in various cellular functions, is highly expressed in many cancers. While evidence suggests that inhibiting TOPK might be useful in cancer chemoprevention and treatment, very few effective TOPK inhibitors have been discovered. Targeting SUV-induced signaling could be an effective chemoprevention and chemotherapy strategy against skin cancer. ADA-07 is a T-LAK cell-originated protein kinase (TOPK) inhibitor that may prevent and treat SUV-induced skin carcinogenesis by directly targeting (inhibiting) TOPK.

Phase of Development

- In Vivo / animal studies

Benefits

- Suppresses solar ultraviolet (SUV) induced skin carcinogenesis
- Promising chemopreventive or potential therapeutic agent

Features

- T-LAK cell-originated protein kinase (TOPK) inhibitor
- Directly inhibits TOPK, an upstream activator of mitogen-activated protein kinase (MAPK)
- cascades involved in inflammation, DNA damage and tumor development

Applications

- Sunscreens
- Solar ultraviolet (SUV) induced skin cancer prevention and treatment
- Treatment of high risk cancer patients (i.e., immunosuppressed)
- Post-surgery applications to prevent recurrence

Technology ID

20170106

Category

Engineering & Physical Sciences/Chemicals
Life Sciences/Human Health
Life Sciences/Pharmaceuticals
Agriculture & Veterinary/Veterinary Medicine

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Researchers

Zigang Dong, MD, PhD

Ann M. Bode, PhD
Professor, The Hormel Institute

External Link (www.hi.umn.edu)
Kanamata Reddy, PhD
Research Associate, The Hormel Institute

Publications

ADA-07 Suppresses Solar Ultraviolet–Induced Skin Carcinogenesis by Directly Inhibiting TOPK
Molecular Cancer Therapeutics , 16(9); 1–12, September 2017

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