Technology Available for Industry-Academia Collaboration or Technology Licensing. "MAP4K3 is a novel therapeutic target for autoimmune disease, cancer, aging, and inflammatory disease"

Date: 2026. 03. 06

1. Title:

NHRI technology, "MAP4K3 is a novel therapeutic target for autoimmune disease, cancer, aging, and inflammatory disease" (abbreviated as **"The Technology"**) available for industry-academia collaboration or technology licensing.

2. Description:

GLK (also named MAP4K3) is a critical kinase of T-cell signaling. In T cells, GLK directly interacts with and activates PKCθ, leading to activation of IKK/NF-κB. GLK-deficient mice display impaired T-cell-mediated immune responses, decreased autoimmune phenotypes, and increased 40% life-span. Consistently, the frequencies of GLK-overexpressing T cells are correlated with disease severity of multiple autoimmune diseases. Remarkably, 39% lupus patients harbor GLK germline or somatic variants. GLK signaling in T cells selectively induces IL-17A, which plays critical roles in the pathogenesis of autoimmune diseases. Moreover, GLK also inhibits Treg differentiation. Thus, inhibition of GLK can obliterate autoimmune diseases by both blocking IL-17A production and inducing Treg cells.

Besides autoimmune diseases, GLK is a prognostic biomarker for the recurrence of lung and liver cancers. Furthermore, GLK overexpression in epithelial cells is an important pathogenic factor for COVID-19.

Collectively, GLK is a novel therapeutic target for cancer recurrence, inflammatory diseases, and autoimmune diseases. This technology is available for collaborative development or technology licensing with industry partners.

3. Potential collaboration partner qualifications:

(1) be incorporated and approved by law and does not have any record of misconduct or conviction for any offense.
(2) better to have related experience and skills for developing "**The Technology"**
(3) better to have experience of international collaboration and clinical trial.
(4) better to be ready to invest or be able to raise the funds.

4. Registration：

Please contact to Ms. Wan-Ping Hsieh (Address: Technology Transfer and Incubation Center, National Health Research Institutes, 35 Keyan Road, Zhunan Town, Miaoli County 35053, Taiwan, R.O.C., Tel: +88637-206166 # 33227, E-mail: wanping@nhri.edu.tw.

5. Other:

(1) NHRI retains the right to modify and terminate this announcement.

(2) If **The Technology** has been exclusively licensed, this announcement will automatically invalid.

(3) For detailed status of **The Technology**, please contact to the case officer.

Attachments:

I: Announcement

II: Industry-Academia Collaboration Proposal

III: Licensing Proposal