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[JP/JP]; -. ENDO, Kaori [JP/JP]; -. YAMAGUCHI,
Hiroyuki [JP/JP]; -.

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(74) Agent: BANAIT, Narinder, S.; Geron Corporation, 230
Constitution Drive, Menlo Park, CA 94025 (US).

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(71) Applicants (*for all designated States except US*): GERON
CORPORATION [—/US]; 230 Constitution Drive,
Menlo Park, CA 94025 (US). KYOWA HAKKO KO-
GYO CO., LTD. [JP/JP]; 1-6-1, Ohtemachi, Chiyoda-ku,
Tokyo 100-8185 (JP).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): CHIN, Allison,
C. [US/US]; -. HOLCOMB, Ryan [US/US]; -. PI-
ATYSZEK, Mieczyslaw, A. [PL/US]; -. SINGH,
Upinder [IN/US]; -. TOLMAN, Richard, L. [US/US]; -.
AKAMA, Tsutomu [JP/US]; -. KANDA, Yutaka [JP/JP];
-. ASAI, Akira [JP/JP]; -. YAMASHITA, Yoshinori

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(54) Title: TELOMERASE INHIBITORS AND METHODS OF THEIR USE

(57) Abstract: Thiazolidinedione compounds, compositions, and methods of inhibiting telomerase activity *in vitro* and treatment of telomerase mediated conditions or diseases *ex vivo* and *in vivo* are provided. The methods, compounds and compositions of the invention may be employed alone, or in combination with other pharmacologically active agents in the treatment of conditions or diseases mediated by telomerase activity, such as in the treatment of cancer. Also disclosed are novel methods for assaying or screening for inhibitors of telomerase activity.

WO 01/02377 A1