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(54) Title: SUBSTITUTED 5-(PYRAZIN-2-YL)-1H-PYRAZOLO [3, 4-*B*] PYRIDINE AND PYRAZOLO [3, 4-*B*] PYRIDINE DERIVATIVES AS PROTEIN KINASE INHIBITORS

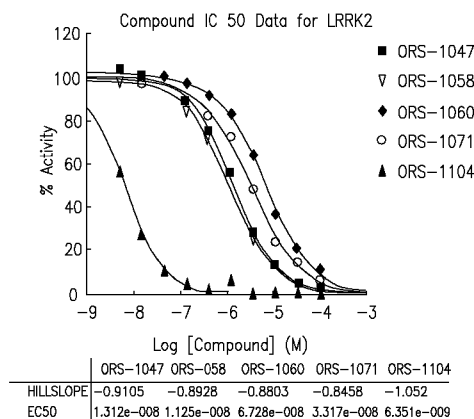


FIG. 1A

(57) Abstract: Substituted 5-(pyrazin-2-yl)-1H-pyrazolo [3, 4-*b*] pyridine, 5-(pyrazin-2-yl)-1H-pyrrolo[2,3-*b*]pyridine and pyrazolo [3, 4-*b*] pyridine derivatives according to formula I, II and VII, and methods for making same, which are inhibitors of constitutively activated Tyrosine Kinase-Like (TKL), CMGC protein kinases family members and can be useful in the treatment of Parkinson's disease, Alzheimer's disease, Down's Syndrome, Huntington's disease, other neurodegenerative and central nervous system disorders, cancer, metabolic disorders and inflammatory diseases. Also disclosed are pharmaceutical compositions including the compounds and methods of inhibiting wild type and/or mutated protein kinase activities of these families and the treatment of disorders associated therewith using compounds and pharmaceutical compositions including the compounds.