Multifunctional compounds to treat and prevent cancer and inflammatory diseases

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Technology description

CCTEC has filed patent applications covering screens to identify COX-2 inhibitors that possess additional properties that are potentially beneficial.
Large numbers of selective COX-2 inhibitors have already been synthesized by academics and by industry. Based on in vitro testing, some but not all COX-2 inhibitors possess off-target effects including:
Inhibiting expression of members of the ClassI family of receptors tyrosine kinase including EGFR and HER-2/neu
Downregulation of cyclin Dl
Induction of PTEN
Downregulation of human papillomavirus oncoproteins E6 and E7
The screens are designed to detect these non-COX effects and select for agents with multiple properties. For example, by comparing the ability of different COX-2 inhibitors to inhibit the production of human papillomavirus oncoproteins in a cervical carcinoma cell line (CaSKI), it will be possible to predict which COX-2 inhibitor will be more useful for preventing or treating cervical cancer.

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