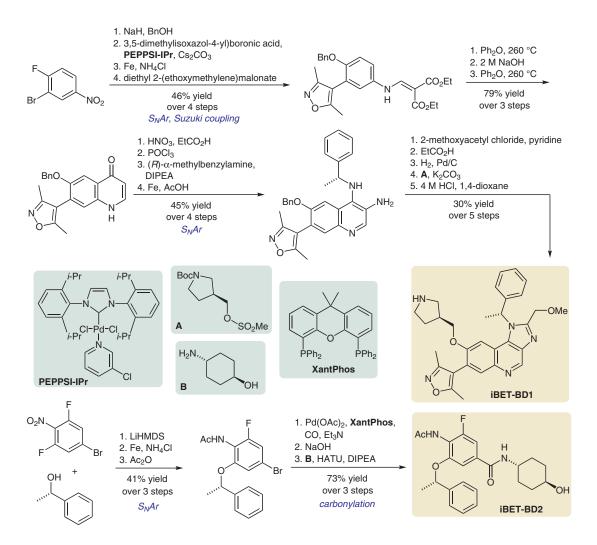
R. K. PRINJHA*, M. A. DAWSON* ET AL. (GLAXOSMITHKLINE MEDICINES RESEARCH CENTRE, STEVENAGE, UK; PETER MACCALLUM CANCER CENTRE, MELBOURNE, AND UNIVERSITY OF MELBOURNE, AUSTRALIA)

Selective Targeting of BD1 and BD2 of the BET Proteins in Cancer and Immunoinflammation Science 2020, 368, 387-394.

Selectively Binding a Bromodomain



Significance: The BET (bromo- and extraterminal) family of proteins are epigenetic readers, modulate gene expression, and are attractive anticancer targets. The human BET proteins contain two highly homologous bromodomains, BD1 and BD2, equally bound by classical inhibitors. Selective inhibitors enable studies on the individual functions of BD1 and BD2.

Comment: Prinjha, Dawson, and co-workers developed very selective inhibitors for BD1 (iBET-BD1) and BD2 (iBET-BD2), complementing recently developed ABBV-744 (Nature 2020, 578, 306). They show that BD1 inhibition replicates the effect of pan-BET inhibitors in cancer models, whereas BD2 inhibition is more effective in models of immunoinflammation.

Category

Chemistry in Medicine and Biology

Key words

BET inhibitors bromodomain epigenetics BRD4 cancer

