

“Structural development of retinoids and application of thalidomide as a multi-template for drug discovery”

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Retinoids, typically all-trans retinoic acid, act as ligands for a nuclear receptor heterodimer composed of RAR and RXR. Structural development of retinoids, including computer-assisted molecular design has been performed to produce various structures of synthetic retinoids. Agonists and antagonists for nuclear receptors RAR and RXR have been created.

Thalidomide has been used as a multi-template for structural development of various biological response modifiers. The structural development was performed based on activity toward hypothetical target molecule/phenomenon to create various bio-active compounds, including TNF- production regulators, anti-angiogenic agents, androgen antagonists, COX-inhibitors, and cell invasion inhibitors.