

Peer Review

Review of: "The Development of Differentiation-Based Therapy for Breast Cancer Using EDAR and XEDAR Signalling Pathways: A Conceptual Framework"

Emmanuel Faderin¹

1. Southern Illinois University-Edwardsville, United States

The review explores the conceptual framework for the development of differentiation-based therapy in breast cancer, focusing on EDAR and XEDAR signaling pathways.

It dives into the potential transformation of aggressive breast cancer, such as triple-negative breast cancer (TNBC), into a controllable disease by the induction of cellular differentiation rather than cytotoxicity.

It talks about two phases

Phase 1: Reconstitute the expression of XEDAR by using DNA demethylating agents.

Phase 2: Activation of the pathway by using synthetic ligands that can effectively mimic natural processes with fewer side effects.

It is an innovative article and gives an insight into a potential angle to combat the challenges faced with cancer such as triple negative breast cancer (TNBC). The following suggestion is recommended.

Epidemiological data can be provided that include the global and regional prevalence rates of TNBC and other aggressive subtypes, highlighting the survival rates and prognosis for TNBC compared to other breast cancer subtypes to underline its clinical challenge.

Objectives

For Objective 2, I will suggest providing the structure of EDAR and XEDAR (crystal structure etc.) and indicating the structural differences between EDAR and XEDAR, including specific structural details of EDAR and XEDAR.

Under Objective 5, correct the typographical error by removing the redundant "5. approach."

Proposed Solutions.

One of the solutions you proposed is "structural optimization of synthetic ligands could be supported by advanced computer modeling to predict ligand-receptor interactions". I recommend indicating if there are reported synthetic ligands that can act on these pathways or proposed synthetic ligands in literature that can act on the pathways. The current limitations of these ligands as to give an insight into optimization strategy.

If there are no reported ligands, I think talking about optimization without a lead molecule seems far-fetched.

Declarations

Potential competing interests: No potential competing interests to declare.