

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341053319 A

(19) INDIA

(22) Date of filing of Application :09/08/2023

(43) Publication Date : 11/07/2025

(54) Title of the invention : TRANSFERRIN CONJUGATED RALOXIFENE LOADED GRAPHENE OXIDE NANORIBBON DRUG DELIVERY SYSTEM

(51) International classification	:C08K3/04, C01B32/198, A61K9/10, A61K47/04, A61K47/34, A61P35/00, A61K47/48, B82Y30/00	(71)Name of Applicant : 1)JSS COLLEGE OF PHARMACY, MYSURU Address of Applicant :SRI SHIVARATHREESHWARA NAGARA, MYSURU - 570 015, KARNATAKA, INDIA Karnataka India 2)INDIAN COUNCIL OF MEDICAL RESEARCH (72)Name of Inventor : 1)Hosahalli Veerabhadrappe Gangadharappa 2)Asha Puthuvilayil Johnson 3)Jyothi Swandenahalli Lakshmikanth
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

ABSTRACT TRANSFERRIN CONJUGATED RALOXIFENE LOADED GRAPHENE OXIDE NANORIBBON DRUG DELIVERY SYSTEM The present invention discloses a graphene oxide nanoribbon based drug delivery system comprising: (a) graphene oxide nanoribbon; (b) transferrin-conjugated functionalized polyethylene glycol; and (c) raloxifene, wherein transferrin is conjugated to a functionalized polyethylene glycol by an amide linkage between the carboxyl group of the functionalized polyethylene glycol and amino group of transferrin to form the transferring-conjugated functionalized polyethylene glycol; wherein the graphene oxide nanoribbon is surface modified with the transferrin-conjugated functionalized polyethylene glycol by π - π interaction; wherein raloxifene is attached to the modified surface of graphene oxide nanoribbon by π - π interaction; wherein said graphene oxide nanoribbon based drug delivery system is specific for breast cancer. The present invention also discloses a process for preparing the graphene oxide nanoribbon based drug delivery system.

No. of Pages : 44 No. of Claims : 11