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(57) Abstract :

The invention discloses a synthetic protein platform (1) for targeted drug delivery. The system integrates drug-binding unit (2), targeting ligand domain (3), protective shield domain (4), stimuli-responsive linker (5), and controlled release mechanism (6). This modular design enables precise payload encapsulation, immune shielding, and stimuli-responsive release, ensuring site-specific therapeutic action. The invention enhances treatment efficacy, reduces systemic toxicity, and offers scalable adaptability for diverse biomedical applications.

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