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(54) Title: ANTIBODY-DRUG CONJUGATES AND PRODUCTION THEREOF

(57) Abstract: Provided are antibody-drug conjugates and production thereof. The process of production comprises: a first reduction step, wherein an antibody is reduced in the presence of a transition metal ion; and one or more conjugation steps, wherein the reduced antibody conjugates with a linker-payload to generate an ADC; wherein the product of the last conjugation step is the final ADC product; wherein the process further comprises an optional second reduction wherein the antibody as a moiety of an ADC is further reduced, and wherein the second reduction is followed by a conjugation step; and wherein the process further comprises a deshielding treatment to remove the transitional metal incorporated in the antibody, which is concomitant with at least one of the conjugation steps or the second reduction step. The process advantageously allows for producing multiple-payload ADCs with designed formats of drug loading in a controllable manner.



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