



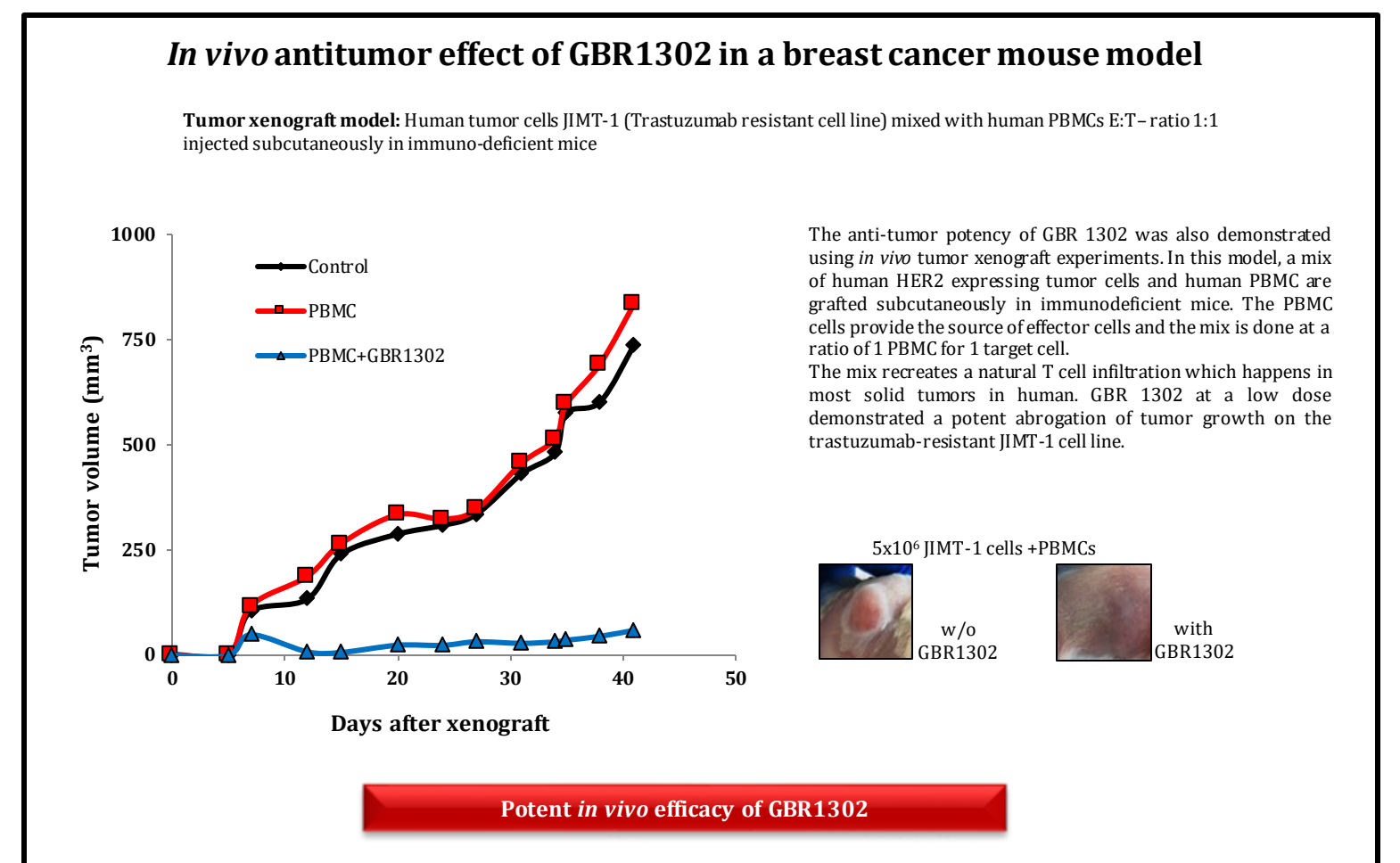
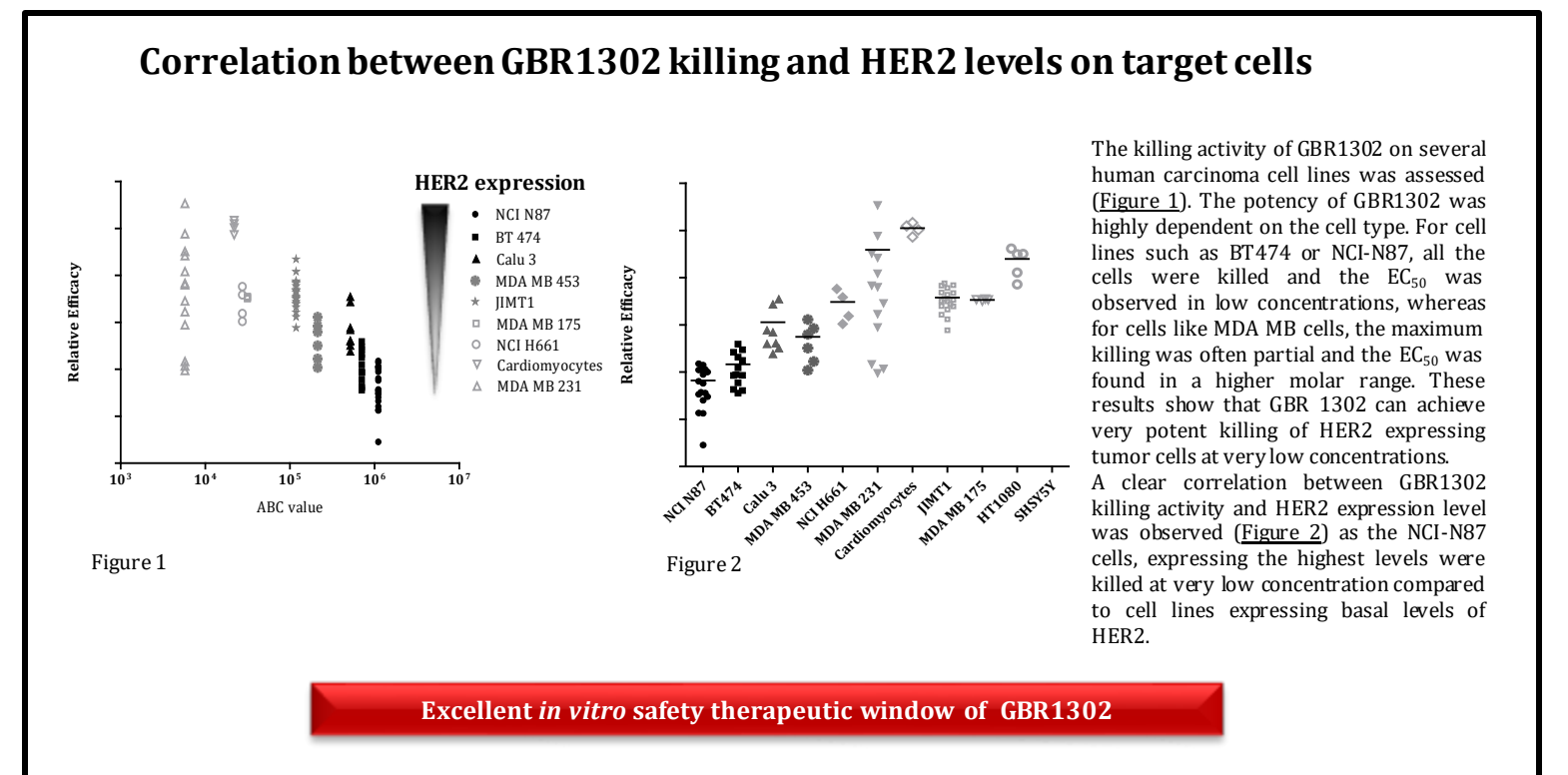
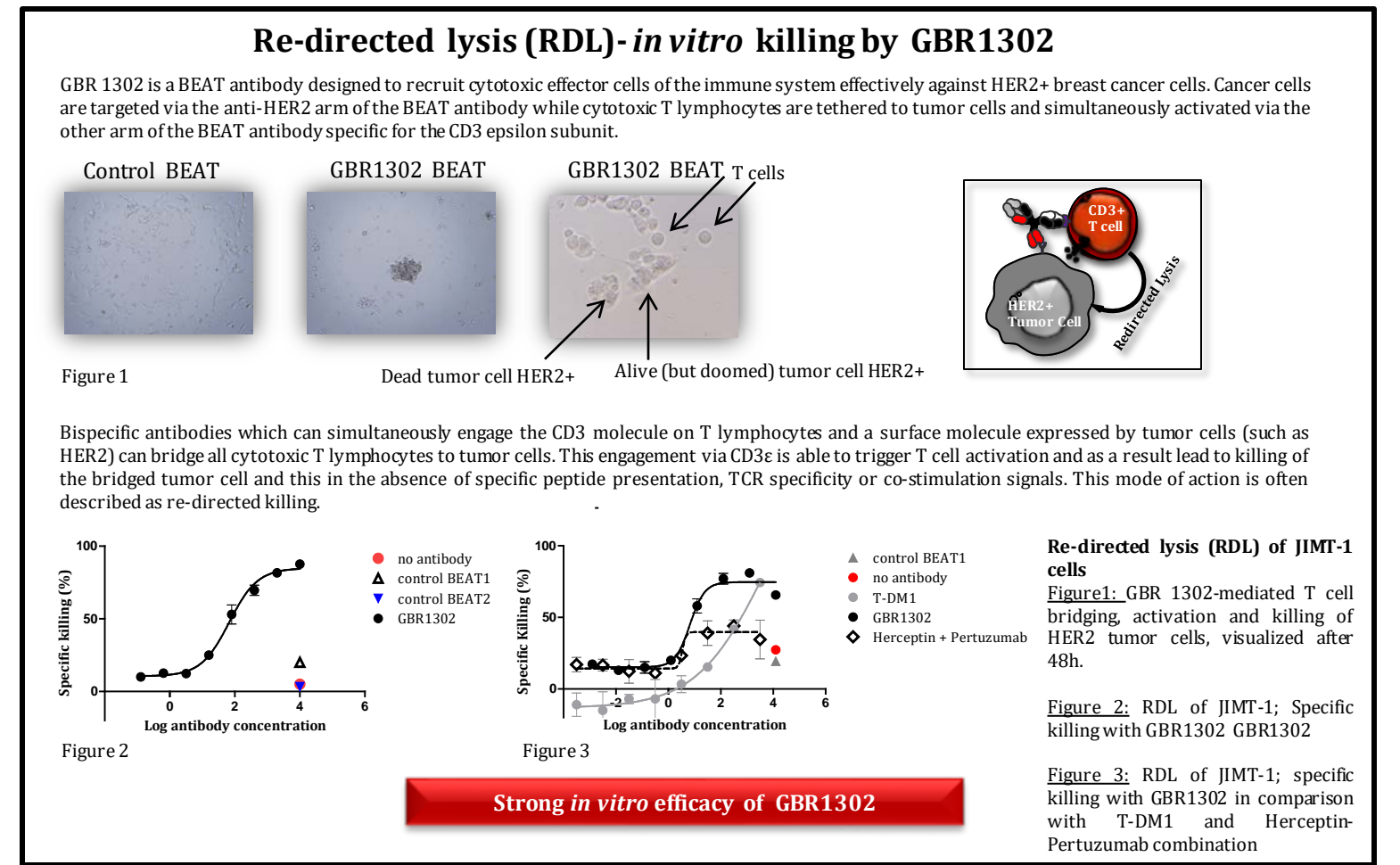
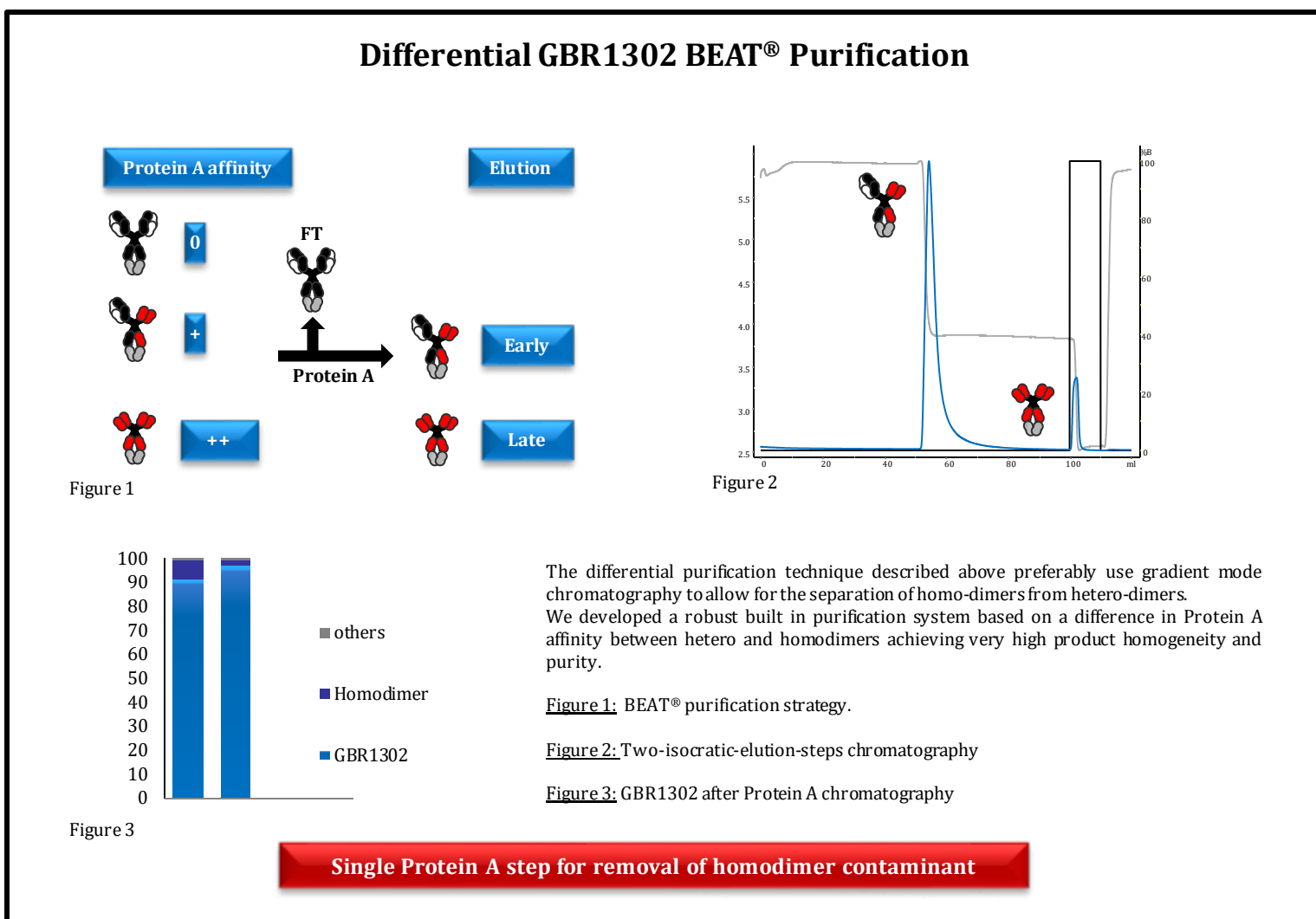
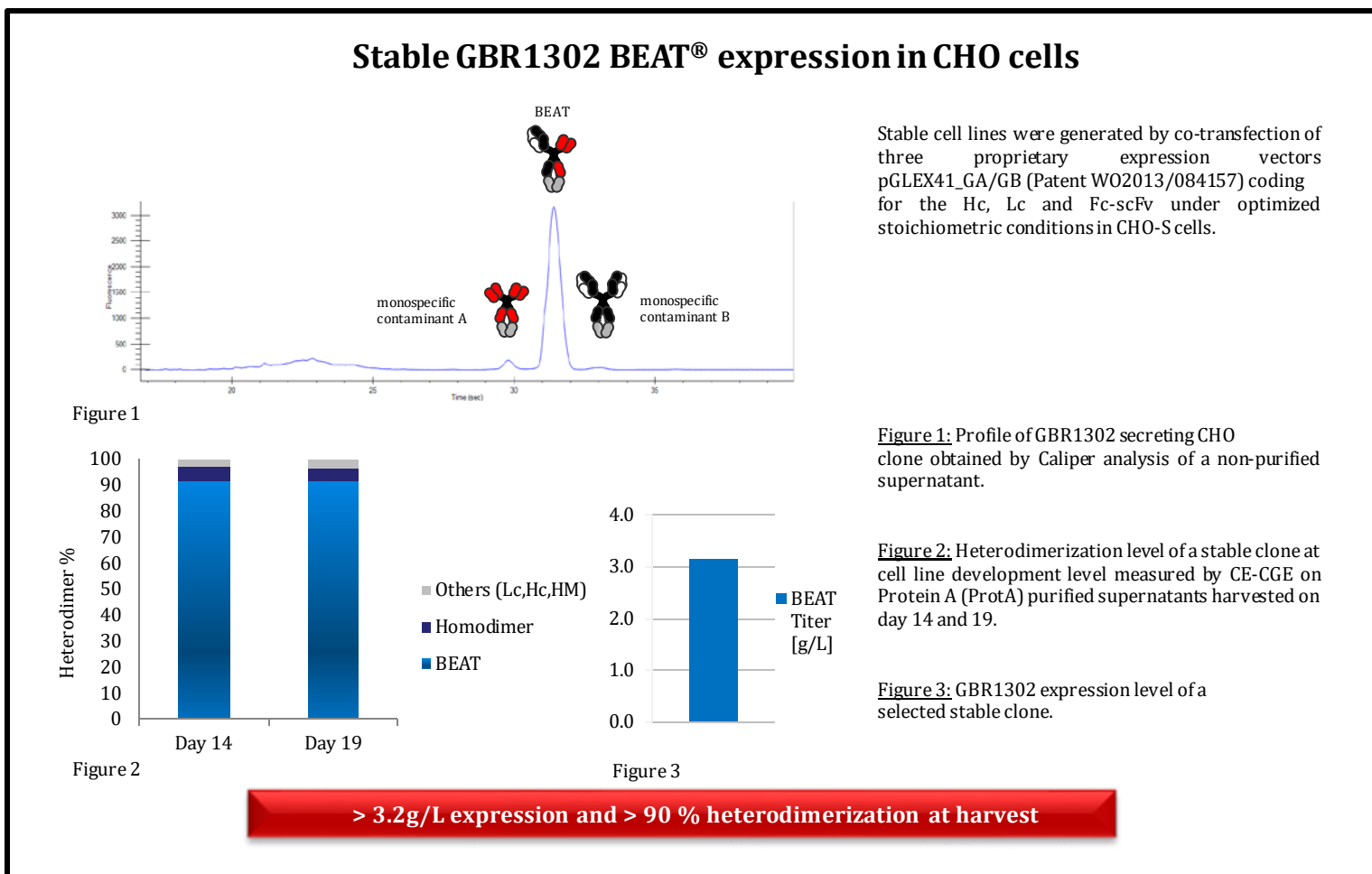
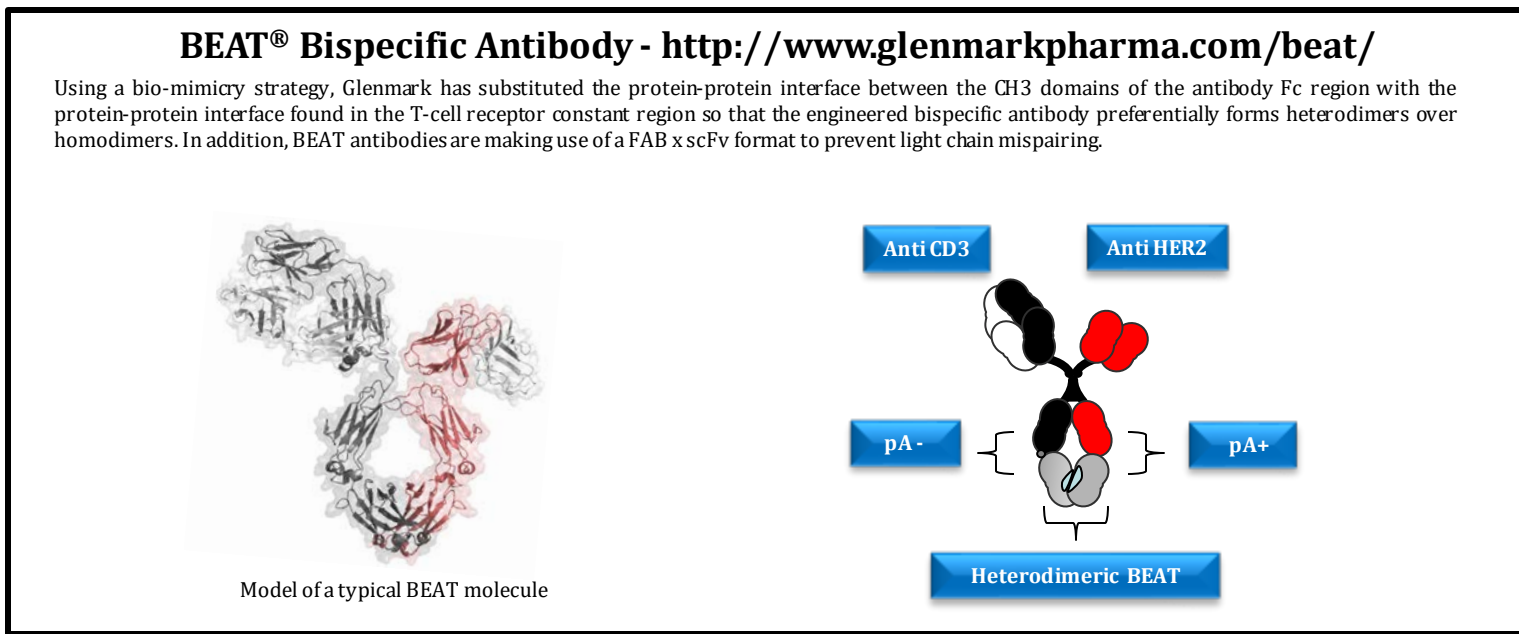
GBR1302- BEAT[®] bispecific antibody for the treatment of HER2 positive cancers

Jonathan Back, Darko Skegro, Pierre Moretti, Romain Ollier, Amelie Croset, Camille Delon, Julie Macoin,

Christel Aebischer-Gumy, Martin Bertschinger, Stanislas Blein & Samuel Hou

Glenmark Pharmaceuticals SA, La Chaux-de-Fonds, Switzerland

Glenmark Pharmaceutical's BEAT[®] platform is a novel bispecific heavy chain heterodimerization platform based on a unique concept of bio-mimicry. Our technology is compatible with any type of antibody scaffold and a scFv-FAB format has been developed to allow a "Plug & Play" approach wherein antibodies from either phage display or hybridoma sources can be paired without any restrictions, and subsequently manufactured using industrially-compatible processes. Using our BEAT[®] platform, we have produced a BEAT antibody -GBR1302- designed to effectively recruit cytotoxic T cells against HER2 positive breast cancer cells including the trastuzumab-resistant breast cancer cell line JIMT-1. In terms of manufacturing, we expressed more than 3 g/l of GBR1302 with greater than 90% heterodimerization at harvest and over 97% after proteinA based purification. The excellent manufacturing attributes and pre-clinical efficacy of our T cell redirecting BEAT antibody warrant further clinical development as a treatment for HER2 positive cancers.



We have generated a novel bispecific BEAT[®] antibody (GBR1302) which can simultaneously bind HER2(+) tumor cells and CD3ε on cytotoxic T cells. GBR1302 potently re-direct T cells to HER2 positive cancer cells showing strong tumor cell lysis activity. The differential killing efficacy of HER2 (3+) and HER2 (0+) cells reveals an excellent safety-efficacy margin. This essential feature supports the assumption that in patients with HER2 (3+) cancers, a dose of GBR1302 that will kill tumor cells but not normal cells can likely be achieved. Furthermore, GBR1302 shows the following attributes that warrant their clinical investigation; BEAT[®] GBR1302 bispecific antibody can be produced using standard antibody technology with industrial relevant expression yield. GBR1302 bispecific antibodies have unique advantages which also include a built-in purification system for manufacturing.