

CLAIMS

1. Use of an anti-KMA antibody and a proteasome inhibitor in the manufacture of a medicament for combination therapy for the treatment of multiple myeloma in a subject, in which the anti-KMA antibody comprises a V_H and a V_L , the V_H comprising a
5 complementarity determining region (CDR) 1 comprising an amino acid sequence as shown in SEQ ID NO: 6, a CDR2 comprising an amino acid sequence as shown in SEQ ID NO: 7 and a CDR3 comprising a sequence as shown in SEQ ID NO: 8 and the V_L comprising a CDR 1 comprising an amino acid sequence as shown in SEQ ID NO: 9, a CDR2 comprising an amino acid sequence as shown in SEQ ID NO: 10 and a CDR3 comprising a sequence as shown in
10 SEQ ID NO: 11, in which the anti-KMA antibody binds to or specifically binds to an epitope of KMA comprising a sequence set forth in SEQ ID NO: 5, and in which the subject has relapsed multiple myeloma, and in which the multiple myeloma is refractory to at least one proteasome inhibitor.
2. Use according to Claim 1, in which the medicament is formulated for simultaneous or
15 sequential administration.
3. Use according to Claim 1 or 2, in which the proteasome inhibitor is selected from the group consisting of marizomib, oprozomib, epoxomicin, salinosporamide A, carfilzomib, ixazomib and bortezomib.
4. Use according to Claim 1 or 2, in which the proteasome inhibitor is bortezomib.
- 20 5. Use according to any preceding claim, in which:

the V_H comprises an amino acid sequence at least about 95% identical to the amino acid sequence shown in SEQ ID NO: 1 and the V_L comprises an amino acid sequence at least about 95% identical to the amino acid sequence shown in SEQ ID NO: 2; or

the V_H comprises an amino acid sequence as shown in SEQ ID NO: 1 and the V_L
25 comprises an amino acid sequence as shown in SEQ ID NO: 2.
6. Use according to any preceding claim, in which the medicament comprises an anti-KMA antibody dosage ranging from 0.3 mg/kg to 30 mg/kg.
7. Use according to any of Claims 1 to 5, in which the medicament comprises an anti-KMA antibody dosage ranging from 10 mg/kg to 30 mg/kg.

8. Use according to any of Claims 1 to 5, in which the medicament comprises a proteasome inhibitor dosage ranging from 0.5 mg/m² to 1.5 mg/m².
9. Use according to any preceding claim, in which the medicament further comprises one or more additional anti-cancer agents.
- 5 10. Use according to Claim 9, in which the additional anti-cancer agent is dexamethasone.
11. Use according to Claim 9, in which the additional anti-cancer agents are dexamethasone and lenalidomide.
12. Use according to any preceding claim, in which the subject is characterised by one or more of the following:
 - 10 the subject achieved at least a minimal response to their most recent line of therapy; or the subject is refractory to at least one, at least two, at least three, at least four prior lines of therapy.
 13. Use according to any preceding claim, in which the subject is refractory to bortezomib.
 14. Use according to any preceding claim, in which a serum sample obtained from the
 - 15 subject is characterised by one or more of the following:
 - a serum level of kappa free light chain less than 250 mg/ml;
 - a serum level of HGF between 0.18 ng/ml and 1.6 ng/ml;
 - a serum level of MIF between 414 pg/ml and 4707 pg/ml;
 - a serum level of CCL27 between 150 pg/ml and 600 pg/ml;
 - 20 a serum level of G-CSF between 20 pg/ml and 65 pg/ml;
 - a serum level of CXCL9 between 70 pg/ml and 550 pg/ml; or
 - a serum level of CXCL10 between 300 pg/ml and 900 pg/ml.
 15. Use according to any preceding claim, in which the subject is selected for treatment based on high serum levels of one or more of the following factors relative to control serum
 - 25 levels: hepatocyte growth factor (HGF), macrophage inhibitory factor (MIF), CCL27, G-CSF, CXCL9, and CXCL10.

16. Use according to Claim 15, in which the subject is selected for treatment when a serum sample obtained from the subject is characterised by one or more of the following:

a serum level of HGF above 0.5 ng/ml;

a serum level of MIF above 5000 pg/ml;

5 a serum level of CCL27 above 500 pg/ml

a serum level of G-CSF above 55 pg/ml;

a serum level of CXCL9 above 550 pg/ml; or

a serum level of CXCL10 above 850 pg/ml.