**Figure S1**

CD138+ cells isolated from either normal BM (n=3) or MM BM (n=6), and MM cell lines (MM.1S, OPM1, OPM2, RPMI.8226, U266, LR7, H929) has been incubated with isotype control or with anti- E, L or P-selectin (10μg/ml) for 1hr followed by FITC-conjugated secondary antibody. Expression of E-, L- and P-selectins has been evaluated using flow cytometry and expressed as ratio between MFI of selectin/MFI of isotype control. Normal plasma cells, MM primary cells, and MM cell lines presented lack of expression of E, L and P-selectins on.

**Figure S2**

MM1s cells were transfected with either PSGL-1 siRNA or scramble siRNA, and the expression of PSGL-1 has been evaluated using flow cytometry and expressed as ratio between mean fluorescence intensity (MFI) of PSGL-1 and MFI of isotype control. Down-regulation of PSGL-1 by siRNA was detected at the protein level using flow cytometry.

**Figure S3**

MM1s, RPMI8226, H929 and HUVECs (0.5 x 106 cell/ml) were cultured with increasing concentrations of GMI-1070 (0.1, 0.25, 0.5 and 1 mg/ml) for 24 hours. Cell survival was assessed by measuring 3-(4, 5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT; Chemicon International, Temecula, CA) dye absorbance. GMI-1070 did not have cytotoxic effects on MM cell lines (MM1s, H929 and RPMI8226) and on HUVECs.

**Figure S4**

HUVECs were transfected with scramble siRNAs or with E (i), L (ii) or P-selectin (iii) siRNA. HUVECs has been incubated with isotype control or with anti- E, L or P-selectin (10μg/ml) for 1hr followed by FITC-conjugated secondary antibody. Expression of E-, L- and P-selectins has been evaluated using flow cytometry and expressed as ratio between MFI of selectin/MFI of isotype control. E and P selectins were downregulated in HUVEC cells, and the absence of expression of L-selectin was not changed.
MM1S cells were co-cultured with stromal cells and treated with GMI-1070 500\(\mu\)M for 24hrs and changes in the mitochondrial potential in response to the Bcl-2 family of proteins were measured by BH3 profiling. BH3 profiling is a functional assay that enables measurement of changes to the Bcl-2 family of proteins regulates the mitochondrial apoptotic pathway (1-3). The BH3-only peptides used sequence and method of synthesis is as previously described(4). The percentage loss of mitochondrial membrane potential is calculated by normalization to the solvent only control DMSO (1%) and the positive control FCCP (100%), and values were expressed as percentile of MM1s cell when cultured alone with no treatment.

Figure S1

Expression of Selectins

<table>
<thead>
<tr>
<th>MFI Selectin/MFI Isotype</th>
<th>E-Sel</th>
<th>L-Sel</th>
<th>P-Sel</th>
</tr>
</thead>
</table>

Normal Subjects

MM Patients

MM Cell lines

Figure S2

Expression of PSGL-1 (MFI Selectin/MFI Isotype)

Scr
siRNA
siRNA PSGL1

Figure S3

Survival (%)

- H929
- RPMI
- MM1s
- HUVEC
Figure S4

i

Expression of E-Selectin (MFI Selectin / MFI Isotype)

Scr siRNA E-Sel

ii

Expression of L-Selectin (MFI Selectin / MFI Isotype)

Scr siRNA L-Sel

iii

Expression of P-Selectin (MFI Selectin / MFI Isotype)

Scr siRNA P-Sel

Figure S5

Percentage loss of Mitochondrial Potential (% of MM1S alone)

Noxa Puma 10 Puma 5 Hrk

MM1S alone MM1S + GMI-1070 MM1S + Stroma MM1S + stroma + GMI-1070

* p<0.05