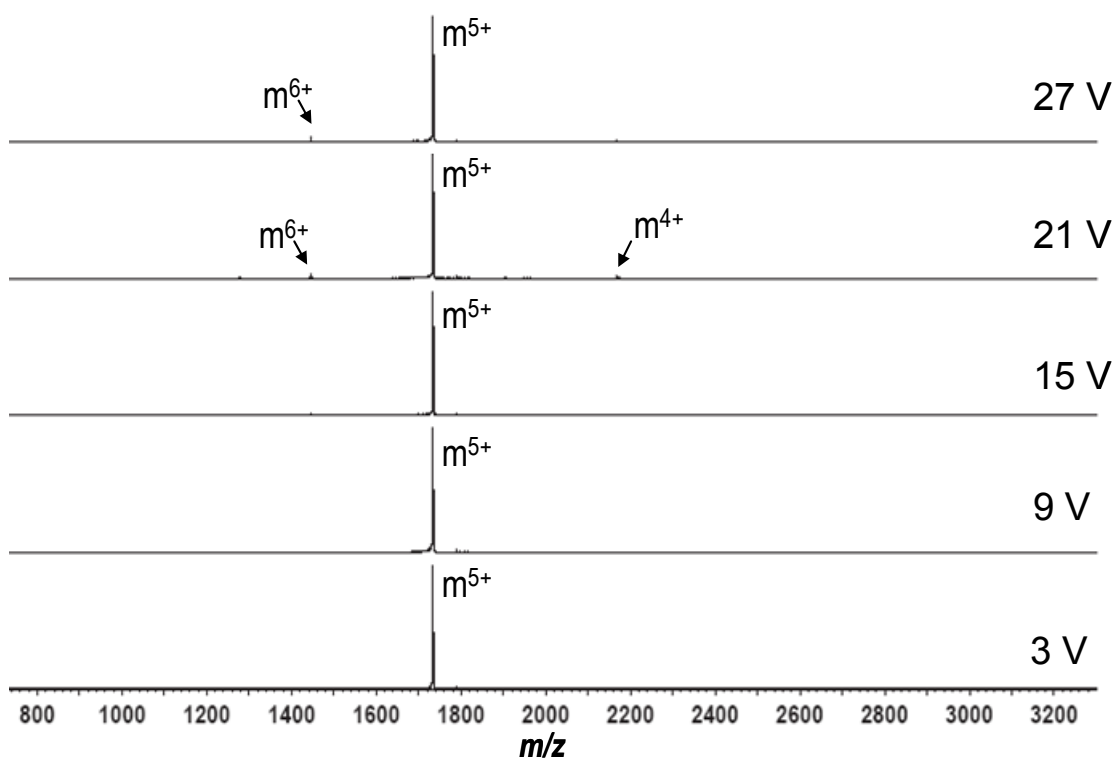


to the voltages at right to activate the dimer. Monomers and dimers are denoted as  $m$ , and  $d$ , respectively.  $d_a^{9+}$  denotes the mass to charge-selected MCP-1 dimer: Arixtra complex. The  $8^+$  charge state of the dimer: Arixtra complex,  $d_a^{8+}$ , observed at higher energies arises from the stripping of a proton from the complex during the CID process. The  $5^+$  monomer is also observed,  $m^{5+}$ .

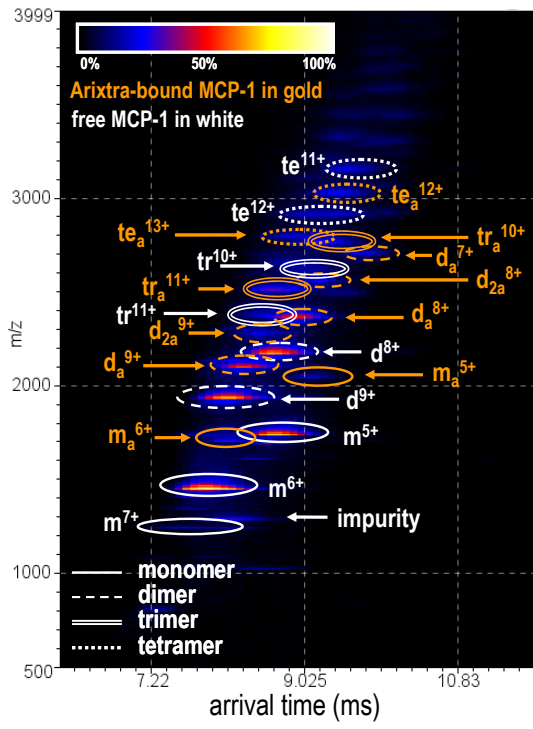
FIGURE 8. Mass spectrum obtained for the mass to charge-selected  $9^+$  MCP-1 dimer: Arixtra complex ( $d_a^{9+}$ ) with the application of 57V trap collision energy. Included in the dissociation products is a  $4^+$  MCP-1 monomer still bound by a single molecule of Arixtra,  $m_a^{4+}$ .  $4^+$  MCP-1 monomers bound to Arixtra with sequential losses of 80 Daltons are also observed denoted as  $m_{a-80}$ ,  $m_{a-160}$ , and  $m_{a-240}$ . These ions represent losses of  $SO_3$  from the bound molecule of Arixtra. We also observe un-adducted  $6^+$ , and  $5^+$  monomers of MCP-1 as well as each carrying an 80-Dalton adduct which represents a non-covalently bound  $SO_3$  group dissociated from the Arixtra, denoted  $m_{+80}$ . Water loss is observed from the  $9^+$  dimer plus Arixtra complex,  $d_{a-18}^{9+}$ , and a proton-stripped dimer: Arixtra complex is present,  $d_a^{8+}$ .

SUPPLEMENTAL FIGURE 1. Mass spectra obtained after isolating the  $5^+$  MCP-1 monomer at 1733  $m/z$  in the quadrupole region of the instrument. In successive acquisitions the trap collision energy was increased to the voltages at right. We attribute the observance of  $6^+$  and  $4^+$  monomers at higher trap collision energies to the dissociation of a small amount of  $10^+$  dimer which may be present under the  $5^+$  monomer peak. All peaks in the spectra correspond to monomers denoted  $m$ .

SUPPLEMENTAL FIGURE 2. Ion mobility heat map plotting arrival time versus  $m/z$  with intensity represented by the color scale provided. Data represents the same 10  $\mu$ M MCP-1, 20  $\mu$ M Arixtra solution shown in figure 6. Species from monomers to tetramers are denoted using the same notation as in 1A. Species representing MCP-1 without bound Arixtra are presented in white. Species containing one or two bound molecules of Arixtra are presented in gold with the subscripts  $a$ , and  $2a$ , respectively.



SUPPLEMENTAL FIGURE 1



SUPPLEMENTAL FIGURE 2