**OR385**

*SNP identification of Africanized honeybees*

**Nadine C Chapman,** Julie Lim, Amro Zayed, Thomas E Rinderer, Benjamin P Oldroyd

Australia is currently *Varroa* free, but testing has shown that Australian commercial honeybees are highly susceptible to *Varroa*. Curently, Africanized 'killer' honeybees cannot be differentiated genetically from non-Africanized bees. Australia has banned honeybee imports from areas where Africanized bees are extant and this constrains beekeepeer's ability to import improved genetic stock, in particular strains with resistance to *Varroa*. The ability to differentiate Africanized bees from other strains would enable Australian beekeepers to safely import improved genetic stock from overseas. We are testing a panel of 144 SNPs on African bees from South Africa (*Apis mellifera scutellata*), Cape bees from South Africa (*A. mellifera capensis*) and hybrids of the two, Africanized bees from Brazil and Texas, European honeybees from Italy (*A. mellifera ligustica*) and Yugoslavia (*A. mellifera carnica*), European-derived American honeybees, Varroa-resistant stocks from America and Australian commercial and feral honeybees. We hope to identify a set of diagnostic SNPs that can be used to certify that honeybee queens and semen are free of 'Africanization'. The technology is likely to have applications for population genetic studies world wide.