**006.2 IN VITRO COMBINATION TESTING AND SELECTION OF RESISTANCE TO ZOFLIDACIN COMBINED WITH SIX ANTIMICROBIALS FOR N. GONORRHOEAE**

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**Background** Resistance in Neisseria gonorrhoeae to all therapeutic antimicrobials has emerged. Novel antimicrobials for treatment are imperative and the first-in-class spiropropyrimidinetrione zoliflodacin appears promising. Zoliflodacin could be introduced in dual antimicrobial therapies to prevent the emergence of resistant strains. We investigated the in vitro activity and selection of resistance to zoliflodacin alone and in combination with six novel, currently or previously used therapeutic antimicrobials against N. gonorrhoeae.

**Methods** The international gonococcal reference strains examined were WHO F (wild-type), and WHO O, WHO V, and WHO X (strains with different AMR profiles). Zoliflodacin was evaluated alone or in combination with ceftriaxone, spectinomycin, gentamicin, tetracycline, cethromycin, and sitafloxacin in checkerboard assays, time-kill curve analysis, and induction of selected resistance studies.

**Results** Zoliflodacin alone or in combination with all six antimicrobials showed rapid rates of in vitro killing compared against all examined strains in time-kill studies. Tetracycline or cethromycin combined with zoliflodacin decreased the rate of zoliflodacin growth inhibition, while ceftriaxone or gentamicin increased the rate of cell killing. The frequency of induced/selected zoliflodacin resistance mutations was low for zoliflodacin and further reduced for all antimicrobial combinations. All resistant mutants contained the gyrB mutations D429N, K450T or K450N, resulting in zoliflodacin MICs of 0.5–4 mg/L consistent with previous results.

**Conclusion** Zoliflodacin, alone or in combination with STI therapeutic antimicrobials has a rapid and high in vitro efficacy against gonococci with low resistance emergence. Zoliflodacin remains a promising novel oral therapeutic for gonorrhoea monotherapy and as part of dual antimicrobial therapy with low resistance emergence potential. A phase III clinical trial evaluating efficacy and safety of zoliflodacin for uncomplicated gonorrhoea treatment is planned in 2019.

**Disclosure** No significant relationships.

**006.3 EFFICACY OF RESISTANCE GUIDED THERAPY FOR MYCOPLASMA GENITALIUM USING DOXYCYCLINE FOLLOWED BY AZITHROMYCIN OR MOXIFLOXACIN**

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**Background** Macrolide-resistance in Mycoplasma genitalium (MG) exceeds 50% in many nations and increasing quinolone-resistance is reported. Recent data showed resistance-guided therapy (RGT) using doxycycline then sitafloxacin for macrolide-resistant MG cured 92% of infections and doxycycline-azithromycin for macrolide-susceptible MG cured 95%. As sitafloxacin is not widely available, we undertook a study of RGT to evaluate the efficacy of moxifloxacin in RGT to provide data that is relevant to international guidelines and to assess the efficacy of this alternative approach in a population with 15–20% quinolone-resistance (ParC mutations).

**Methods** Patients attending Melbourne Sexual Health Centre between April 2017–June 2018 with urethritis, cervicitis or proctitis were treated with doxycycline (7 days) and azithromycin (1g, then 500 mg daily 3 days) and macrolide-susceptible MG cured 95% (95% CI 89.7–98%). Analysis of selected macrolide resistance is underway but will not exceed 4.3% (95% CI 2.2–8.6%).

**Conclusion** Despite 15–20% quinolone resistance in Melbourne the sequential strategy of doxycycline-moxifloxacin achieved unexpectedly high cure (92%), and did not differ to doxycycline-sitafloxacin, a more effective macrolone, suggesting the use of doxycycline may improve cure through reducing pre-treatment load. Doxycycline followed by azithromycin for susceptible infections consistently achieves 95% cure and low levels of selected resistance (<5%).

**Disclosure** No significant relationships.

**006.4 EFFICACY AND COST-EFFECTIVENESS OF QHPV VACCINE WITH IMIQUIMOD OR PODOPHYLLOTOXIN FOR PATIENTS WITH ANOGENITAL WARTS (HIPVAC)**

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**Background** The comparative efficacy, and cost-effectiveness, of imiquimod (IMIQ) or podophyllotoxin (PDX) cream, either alone or in combination with the quadrivalent HPV vaccine (Gardasil®; Merck) in the treatment and prevention of recurrence of anogenital warts is unknown.

**Methods** A randomised, controlled, multi-centre, partially-blinded factorial trial with an economic evaluation. Participants had new or recurrent warts; not treated within 3 months; no HPV-vaccination. Randomisation, stratified by gender,