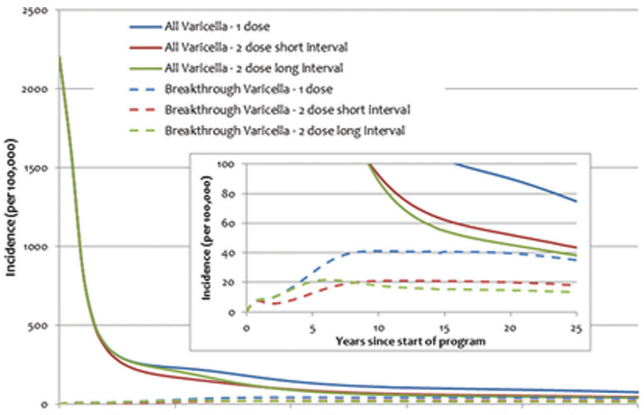

Figure 1: The projected health impact (incidence per 100,000 population) of universal varicella vaccination in Jordan considering three vaccination strategies: 1 dose administered at 12 months, 2 doses with a short interval (2nd dose 6 months after 1st, at 18 months) and 2 doses with a long interval (2nd dose 4 years after 1st, at 5 years). All varicella (across all age groups) is the sum of natural and breakthrough varicella. The inset graph is a more detailed view of the larger graph, with a y-axis going from 0-100, compared to the full y-axis ranging from 0 to 2500.

Disclosures. **W. Hayajneh**, Merck & Co., Inc.: Consultant, Consulting fee. **J. Maalouf**, Merck & Co., Inc.: Employee, Salary. **B. Kuter**, Merck & Co., Inc.: Employee, Salary.**T. Weiss**, Merck & Co., Inc.: Employee, Salary. **V. Daniels**, Merck & Co., Inc.: Employee, Salary. **L. Wolfson**, Merck & Co., Inc.: Employee, Salary.

1025. Serum and Lung Pharmacokinetics of ASN100, a Monoclonal Antibody Combination for the Prevention and Treatment of *Staphylococcus aureus* Pneumonia

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Background. Monoclonal antibodies (mAbs) are well-suited for the prevention and treatment of acute bacterial infections. ASN100 is a combination of two fully human IgG1 mAbs, ASN-1 and ASN-2 that together neutralize six *Staphylococcus aureus* cytotoxins, alpha-hemolysin (Hla) and five leukocidins (HlgAB, HlgCB, LukED, LukSF [PVL] and LukGH) that are important in the pathogenesis of *S. Aureus* pneumonia. We aimed to characterize the pharmacokinetics (PK) of ASN100 in both serum and lung epithelial lining fluid (ELF) in male and female healthy volunteers.

Methods. The safety, tolerability, and serum and lung PK of single intravenous infusion of ASN100 was evaluated in a Phase 1 study. Eight subjects (3:1 randomization) in two double-blind cohorts received ASN100 (doses of 3600 mg or 8000 mg) or placebo. ASN-1 and ASN-2 were administered in a fixed dose 1:1 ratio. Twelve subjects received ASN100 open-label at doses of 3600 mg or 8000 mg and each underwent two bronchoalveolar lavage (BAL) fluid collections either on days 1 and 30 or on days 2 and 8 post-dosing. ASN-1 and ASN-2 concentrations were determined by ELISA. The ELF concentrations were normalized based on urea concentrations in serum and BAL fluid.

Results. No dose limiting toxicity was observed. Adverse events (AEs) showed no association of increased incidence with higher dose. All AEs were mild or moderate in severity, with 83.3% of subjects receiving ASN100 reporting at least one AE vs. 100% of placebo subjects. A dose proportional increase in serum peak and exposure (AUC) of ASN-1 and ASN-2 was observed and the serum PK of ASN-1 and ASN-2 were comparable (approximate half-life of each antibody was 3 weeks). Penetration of ASN-1 and ASN-2 into the ELF of the lung was observed at the first post-dose time point of 24 hours, peak concentrations were observed after day 2 and the mAbs remained detectable at day 30.

Conclusion. ASN100 was safe and well tolerated at doses up to 8000 mg (4000 mg ASN-1 and 4000 mg ASN-2). The PK profiles of ASN-1 and ASN-2 were comparable following simultaneous administration. Significant lung concentrations of each mAb were demonstrated between day 1 and 30 post-dosing. These data support continued clinical development of ASN100 for the prevention and treatment of *S. Aureus* pneumonia.

Disclosures. **Z. Magyarics**, Arsanis Biosciences GmbH: Employee, Salary. Arsanis, Inc.: Shareholder, Share options. **F. Leslie**, Arsanis., Inc.: Employee and Shareholder, Salary. **S. A. Luperchio**, Arsanis Inc.: Employee and Shareholder, Salary. **B. Jilma**, Arsanis Biosciences GmbH: Investigator, Investigator fee. **C. Stevens**, Arsanis Inc.: Employee and Shareholder, Salary.**E. Nagy**, Arsanis: Employee and Shareholder, Salary.

1026. Comparison of Viral Loads in Patients with Co-infections vs. Single-virus Infections

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Background. Molecular testing for respiratory viruses in clinical practice is common, often with multiple viruses detected. Viral load has been correlated with illness severity, but correlation of co-detection of viruses and viral load is less clear. We sought to compare cycle threshold (Ct) values, a marker inversely related to viral load, between single vs. co-detection of common respiratory viruses.

Methods. Children <18 years with respiratory symptoms and/or fever who presented to the ED or were admitted were enrolled. Nasal/throat specimens were obtained and combined. Singleplex qRT-PCR was used to test for 11 respiratory viruses. Clinical and demographic information were collected.

Results. From 11/15/15-7/15/16, 1255 children were enrolled, with median age of 26.5 months, 53.4% male, 54.3% White, 38.7% Black, 6.4% other, and 23.5% Hispanic. The median days of illness were 3 days. Of the total cohort, 904 (72%) tested positive for at least one viral pathogen. **Table 1**compares Ct values of single vs. co-detection for each individual virus.

Table 1.

	N	Ct-Median (IQR)	p-value	Days of Illness - Median (IQR)	p-value
Respiratory Syncytial Virus (RSV) Single	144	25.5 (22.86-29.03)	0.05	4 (3-5)	0.82
RSV-Co-detection	63	27.0 (23.47-33.82)		3 (3-7)	
Human Rhinovirus (HRV)-Single	289	27.5 (23.79-32.50)	0.000	3 (2-4)	0.002
HRV-Co-detection	117	32.8 (29.08-35.49)		3 (2-6)	
Adenovirus (AdV)-Single	79	28.7 (23.84-33.62)	0.001	3 (2-4)	0.06
Adv-Co-detection	7	32.8 (27.40–36.69)		3 (2-4)	
Human metapneumovirus (HMPV)-Single	75	28.8 (25.37-32.22)	0.75	4 (3-6)	0.45
HMPV-Co-detection	30	28.2 (24.86-33.11)		4 (3-7)	
Parainfluenza (PIV)-Single	36	25.2 (23.75-28.76)	0.005	3.5 (2-5.5)	0.34
PIV-Co-detection	15	28.8 (26.04-34.50)		3 (1–4)	
Flu-Single	127	26.6 (24.71-30.51)	0.34	3 (2-5)	0.83
Flu-Co-detection	26	28.0 (25.98-30.14)		3.5 (2-6)	

Conclusion. Single detection with RSV, HRV, AdV, and PIV had lower Ct values, indicating higher viral loads, compared with co-detection with other viruses. Additional research is needed to understand the reason for lower viral loads for co-detection vs. single detection in select respiratory viruses.

Disclosures. **W. Schaffner**, Pfizer: Scientific Advisor, Consulting fee. Merck: Scientific Advisor, Consulting fee. Novavax: Consultant, Consulting fee. Dynavax: Consultant, Consulting fee. Sanofi-pasteur: Consultant, Consulting fee. GSK: Consultant, Consulting fee. Seqirus: Consultant, Consulting fee. **N. B. Halasa**, sanofi pasteur: Research Contractor, Research support. Astra Zeneca: Research Contractor, Grant recipient.

1027. Study to Address Threats of Acute Respiratory Infections among Congregate Military Populations (ATARI)

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Background. More than 90% of active duty personnel receive influenza vaccinations yearly. Despite high coverage, influenza-like illnesses (ILI) remain a frequent cause of missed duty and hospitalizations, particularly in U.S. military recruits. More research is needed on the epidemiology and etiology of ILI to reduce the burden of respiratory infections in congregated military settings.

Methods. We conducted a prospective cohort study to assess ILI patterns among US Army recruits in a 9-week basic combat training course at Ft. Benning, GA. Demographic data, vaccination history, and information on recent illness were collected at enrollment in January 2017. Participants were divided into two platoons with staggered biweekly visit schedules. Visits occurred from reception through training, with nasal swabs and symptom surveys (all visits) and blood draws (weeks 8 and