Stock Options. **P. Radspinner**, FluGen: Board Member and Founder, Salary and Stock Options. **R. Aitchison**, FluGen: Consultant, Consulting fee. **P. Bilsel**, FluGen: Employee, Salary and Stock Options.

1971. A Randomized, Double-Blind, Placebo-Controlled Trial to Assess the Safety and Tolerability of a Respiratory Syncytial Virus (RSV) Neutralizing Monoclonal Antibody (MK-1654) in Healthy Subjects

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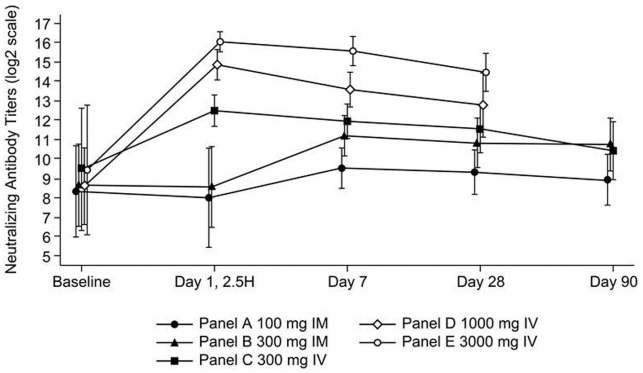
Background. Respiratory syncytial virus (RSV) is the most common cause of lower respiratory tract infection and hospitalization in infants. Prophylaxis for RSV infection is only recommended for the highest risk infants, leaving the majority of infants unprotected. MK-1654 is a fully human monoclonal antibody targeting the RSV fusion (F) protein with Fc domain mutations to extend half-life that is being developed to provide passive immunity against RSV in infants. The safety profile, development of anti-drug antibodies (ADAs), serum neutralizing antibody (SNA) titers, and pharmacokinetics (PK) in healthy adult volunteers receiving single-ascending doses of MK-1654 was evaluated.

Methods. In this double-blinded ongoing Phase 1 study, healthy adults of non-childbearing potential (19 to 59 years) were randomized in a 3:1 ratio to receive a single dose of MK-1654 or placebo (0.9% sodium chloride injection, USP) as a bolus intramuscular injection (IM) or in an intravenous infusion (IV) for at least 2.5 hours. Dose levels included 100 and 300 mg IM, and 300, 1,000, and 3,000 mg IV. Standard methods were used to assess safety and tolerability. Serum was tested for ADAs and RSV A SNA titers at time points up to day 120 and up to day 90, respectively. MK-1654 adult PK and estimated PK for infants will be reported separately.

Results. A total of 152 subjects (male = 117, female = 35) have been enrolled (mean age = 41 years). No deaths, serious adverse events, discontinuations due to AEs, clinically significant laboratory AEs, or dose-dependent pattern of drug-related AEs were reported. Sixty-six subjects reported 181 clinical AEs (97.8% mild and 2.2% moderate in intensity). The most common AEs (≥5%) were headache, nasal congestion, vessel puncture site hemorrhage, oropharyngeal pain, rhinorrhea and nausea. No treatment emergent ADAs have been identified through time points tested. Administration of MK-1654 resulted in a dose-dependent increase in RSV A SNA titers through Day 90 (figure). Updated safety, SNA titers and ADAs will be provided.

Conclusion. MK-1654 was generally well tolerated at doses up to 300 mg IM and up to 3,000 mg IV and resulted in a dose-dependent increase in SNA titers, reflecting biologically active MK-1654 in the serum. No treatment emergent ADAs have been observed.



Disclosures. **A. Aliprantis**, Merck: Employee and Shareholder, Salary and stock options. **D. Wolford**, Merck: Employee and Shareholder, Salary and stock options. **L. Caro**, Merck: Employee and Shareholder, Salary and stock options. **B. Maas**, Merck: Employee and Shareholder, Salary and stock options. **H. Ma**, Merck: Employee and Shareholder, Salary and stock options. **K. Vora**, Merck: Employee, Salary. **D. Geng**, Merck: Employee and Shareholder, Salary and stock options. **R. Railkar**, Merck: Employee and Shareholder, Salary and stock options. **A. Lee**, Merck: Employee and Shareholder, Salary and stock options. **L. Sterling**, Merck: Investigator, Research grant. **E. Lai**, Merck: Employee and Shareholder, Salary and stock options.

1972. Safety and Immunogenicity of 15-Valent Pneumococcal Conjugate Vaccine (PCV-15) Compared with PCV-13 in Healthy Older Adults Previously Vaccinated With 23-Valent Pneumococcal Polysaccharide Vaccine (PPV23)

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Background. Safety and immunogenicity of a new formulation of PCV-15 (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19F, 19A, 22F*, 23F, 33F*) was evaluated in adults ≥65 years of age previously vaccinated with PPV23.

Methods. Study subjects who received PPV23 at least 1 year prior to study entry received a single dose of either PCV-15 or PCV-13 (125/arm) and were followed for safety for 14 days postvaccination. Serotype-specific Immunoglobulin G (IgG) geometric mean concentrations (GMCs) and opsonophagocytic activity (OPA) geometric mean titers (GMTs) were measured immediately prior and 30 days postvaccination. NCT02573081

Results. Safety profiles were comparable between PCV-15 and PCV-13 recipients. Following vaccination, serotype- specific antibody responses for the 13 shared serotypes were generally comparable between recipients of PCV- 15 and PCV-13 for IgG GMCs and geometric mean fold rises (GMFRs), OPA GMTs and GMFRs, and percentages of subjects with ≥4-fold-rise from baseline. Recipients of PCV-15 had numerically higher IgG GMCs and OPA GMTs than PCV-13 recipients for two serotypes unique to PCV-15 (22F, 33F).

Conclusion. PCV-15 was generally well tolerated when given as a single dose to adults ≥65 years of age previously vaccinated with PPV23. Following vaccination, serotype-specific IgG GMCs and OPA GMTs were comparable between recipients of PCV-15 and PCV-13 for 13 shared serotypes.

*Not shared serotypes with PCV-13

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1973. A Meta-Analysis of the Effectiveness of LAIV4 and IIV against Influenza A/H3N2 Strains in Children 2–18 Years of Age During the 2016–2017 Season

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Background. The effectiveness of the quadrivalent live attenuated influenza vaccine (LAIV4) and inactivated influenza vaccines (IIV) has been evaluated in recent seasons using a number of different study designs (e.g., randomized controlled studies [RCT], cohort studies and test-negative case–control [TNCC] studies). Effectiveness estimates from these studies have, in general, had very broad confidence intervals reflecting the small numbers of cases reported. We conducted a meta-analysis to more precisely estimate the effectiveness of both vaccine types for the 2016–2017 season.

Methods. LAIV4 and IIV efficacy and effectiveness studies conducted over the 2016–2017 influenza season were identified from the published literature and through personal communication with the study investigators. Effectiveness estimates from all available study designs were included in the meta-analysis to maximize use of all available data and because all studies included methods to minimize bias. The analysis provided average estimates of the LAIV4 and IIV efficacy across countries. A sensitivity analysis limited to TNCC studies was also conducted. Only effectiveness results for A/H3N2 strains were combined as circulation of other strains was minimal. The meta-analyses used a random effects model. Heterogeneity testing was performed.

Results. Seven studies conducted in children in the United States, Japan, Finland, Germany, thr UK, and Canada were identified including four TNCC studies, one cohort study and one RCT (Figure 1). Individual effectiveness estimates ranged from 29% to 74% for LAIV4 and from 31% to 56% for IIV. Heterogeneity testing for H3N2 strains was not statistically significant. The consolidated effectiveness estimate across studies for LAIV4 was 44% (95% CI: 24, 58) and for IIV was 45% (95% CI: 29, 58). Estimates for the sensitivity analysis limited to TNCC studies were 61% (95% CI: 40, 74) and 43% (95% CI: 32, 52) for LAIV4 and IIV, respectively.

Conclusion. Despite variability in estimates across studies, both LAIV4 and IIV showed moderate and comparable effectiveness in children for circulating H3N2 strains during the 2016–2017 influenza season.