Yale SCHOOL OF MEDICINE

Department of Pediatrics

13th Annual Pediatric Research Forum

GUIDELINES AND INSTRUCTIONS FOR ABSTRACT PREPARATION

***** Submission Deadline is March 1, 2025 at 5:00 pm *****

Please send abstracts via email to peds.research@yale.edu. Questions should be directed to Drs. Vince Faustino or Caty Buck; vince.faustino@yale.edu or catherine.buck@yale.edu

- Remember to include the following:

    1. Abstract (as an attachment)
    2. Name of Trainee
    3. Name and email of Mentor(s)
    4. Type of Trainee: Resident, Fellow, Postdoctoral Fellow/Associate, Postgraduate Fellow/ Associate, Medical Student or Graduate Student

- Abstracts will be evaluated based on the following:
    - Quality of scientific merit/ importance
    - Quality of research, design and data analysis
    - Quality of presentation

- Presentation Formats:
    - Oral presentations: 10-minute presentations and Q&A
    - Poster presentations

- The text of each abstract is limited to **350 words** (not including tables/figures).
- All authors will be required to complete conflict of interest disclosures.
- Abbreviations: Use only standard abbreviations. Special or unusual abbreviations should be placed in parentheses after the first appearance of the full word. Numerals rather than words may be used to indicate numbers.
- ***You may submit more than one abstract but only one abstract will be accepted for oral presentation or award***. If the topics of your other abstract are overlapping, you can combine into one poster if you choose as long as the layout of the poster remains within the poster guidelines.
- Works-in-progress are allowed.

FORMAT

- **Title:** Include authors and affiliations in the following format: first initial, last name; University, Medical School or Organization.
- **Background**
- **Methods**
- **Results:** Up to 3 images and tables are permitted.
- **Conclusions**

EXAMPLE 1

Pediatric Infectious Disease Journal. 23(2):127-131, February 2004

Case-control studies of the effectiveness of vaccines: validity and assessment of potential bias.

E.D. Shapiro, Yale University School of Medicine

Background Because case-control studies of the effectiveness of vaccines are nonexperimental, it is difficult to assure that bias does not affect the validity of the results.

Methods A case-control study of the effectiveness of vaccines against *Haemophilus influenzae* type b (Hib) was replicated with a "sham" study. Cases were children >=18 months of age with invasive infection caused by either Hib (original study) or *Streptococcus pneumoniae* (sham study) between January 1988 and December 1990. Controls were matched to the cases by both date and town of birth.

Results Overall 34% of the 29 cases with invasive Hib infections and 64% of matched controls had received Hib vaccine. The effectiveness of Hib vaccines against infection with Hib was 88% (95% confidence interval, 57 to 97%; P < 0.01). In the sham study 74% of the 62 cases with invasive pneumococcal infections and 74% of matched controls had received Hib vaccine. The effectiveness of Hib vaccines against pneumococcal infection was 0% (P = 0.9).

Conclusions With the use of a virtually identical study design, vaccines against Hib were shown to be highly effective in preventing invasive Hib infections but were not effective in preventing invasive infections due to *S. pneumoniae*. Case-control studies are a valid method of assessing the effectiveness of vaccines.

Word count 210

EXAMPLE 2

Survival of HCV in syringes: implication for HCV transmission among injection drug users E Paintsil, HH, C Peters, B Lindenbach, R Heimer. Yale University School of Medicine

Background: The transmission of Hepatitis C virus (HCV) and human immunodeficiency virus (HIV) among injection drug users (IDUs) is associated with the sharing of equipment used to prepare and administer drugs. The prevalence of HCV among IDUs exceeds that of HIV across all seroprevalence studies. We hypothesized that the high prevalence of HCV among IDUs may be due to the ability of the virus to remain viable in contaminated syringes for prolonged periods.

Methods: We developed a microculture assay using a genotype 2a reporter virus to examine the viability of HCV in microliter volumes of residual blood within contaminated syringes. Syringes were loaded with HCV-spiked blood to replicate the practice of "booting" by IDUs. We stimulated two scenarios of residual volumes after complete depression of the plunger; low (2 µl) and high (32 µl) with 1-cc insulin syringe (with permanently attached needle) and 1-cc tuberculin syringe (with detachable needle), respectively. Syringes were either immediately tested for viable virus or stored at room temperature, 37ºC, and 4ºC for up to 56 days before testing. Virus was recovered from

stored syringes and tested for infectivity in cell culture. Relative luciferase activity was a function of HCV infectivity

Results: We observed a biphasic rate of decay (t½ α = 0.4h and t½β = 28h) of the virus at room temperature. HCV infectivity was not detected in syringes loaded with 2 µl (i.e., insulin syringe) beyond day one at all storage temperatures except for the syringes stored at 4º that remained viable (5% of syringes) up to day 7. After 7 days of storage, the percentage of 32 µl syringes that were positive was 96 ± 7.5, 71± 23.1, and 52 ± 20 at 4º, room temperature, and 37º, respectively. For syringes loaded with 32 µl of HCV-spiked blood, viable virus was recovered up to day 56. In general, the infectivity of the recovered virus was inversely related to duration and temperature of storage.

Conclusions: The high prevalence of HCV among IDUs may be partly due to the resilience of the virus and the type of syringe (i.e., size and design) in circulation. Our findings may be used to guide prevention strategies.

Word count 350