

As we have proceeded with testing in the past week, one growing area of concern has been the biosketch portion of the grant images we've been producing. The original intent was this:

### The Vision

1. The PI would enter his/her degrees into the Commons PPF
2. The Key Personnel would do the same
3. The applicant would submit the additional portions of the Biosketch pages as attachments:
  - One with section A (Positions/Honors) and section B (Publications) combined, and
  - One with section C (Research Support) by itself

We envisioned that neither of these attachments would contain any of the boilerplate headings (like "BIOGRAPHICAL SKETCH") or the instructions that come after that heading ... since that is information that our grant image generator would produce automatically. For the same reasons, the same thinking would apply to the Education/Training block, since it was envisioned that we would automatically generate that portion based on the information we had available in the Commons (see steps 1 and 2 above). And finally, it was also envisioned that the attachments would not contain any of the standard header/footer information that appears on every page of the application (the "Principal Investigator:" label at the top, and the form/page identifications at the bottom of each page).

4. The grant image generator (our software) would then combine the following elements for each key person to produce his/her biosketch pages:
  - a) The standard "Principal Investigator/Program Director (Last, first, middle)" header which appears at the top of every application page.
  - b) The "BIOGRAPHICAL SKETCH" boilerplate including the "Provide the following information for the key personnel ..." language.
  - c) Name and position title, as entered in the datastream, but presented in the standard boilerplate form.
  - d) Education/Training block, as drawn from the Commons PPF information, and presented in the standard boilerplate form.
  - e) Positions/Honors/Publications attachment, inserted exactly as it was submitted to us, with no modifications.
  - f) Research Support attachment, exactly as it was submitted to us, no modifications.
  - g) Standard form/page identification footers, which appear at the bottom of every application page.

Due to some technical limitations at this time, the attachments would each appear at the start of a new page ... but essentially WE would be producing all the boilerplate text and presenting the information that could be drawn from either the Commons or a datastream location.

## The Problem

Unfortunately, we did not get this vision across to our partners effectively enough, and we are seeing a variety of incoming attachment formats. Some Positions/Honors/Publications attachments reproduce the Biosketch heading, complete with instructions, name, and position title exactly as it appears on the page that comes with the published 398 kit. Included also in many cases are the Education/Training sections, which again are most often in the exact typographic format of the published biosketch form page.

The problem is that when this is combined with our own software which is trying to do the same thing, we end up with a grant image that looks like it is putting the same information out (with the second attempt looking much better than the first). Where the standard header/footer text is concerned, the attachments that embed this text result in two headings (ours and the one embedded in the attachment) overwriting each other at the top of that generated page.

For those who did not put all this in the attachment, we do not see the repetition of boilerplate/ structured information, but we don't see much detail either, since for the most part, the Commons PPFs have not been created or updated to contain the information that is essential to producing this section in the grant image.

## The Solution

The most expedient way to solve this problem is to see if we can get the applications resubmitted to us (or at least the biosketches) all in the same format. Since getting the appropriate level of information into the Commons PPF seems to be problematic, we would like to see if we can get the first attachment (the one for sections A and B) to provide all the information from the "**BIOGRAPHICAL SKETCH**" heading down, with the "Name", "Position Title", and "Education/Training" blocks filled in. And this should only appear in the first biosketch attachment, not both. Including this in both attachments means that the information will appear twice in the generated grant image and may be a source of confusion when the application is reviewed, since it will look like a biosketch for another person is starting, when in fact it is simply section C for the same person.

We do NOT want the standard header/footer text on the attachments, due to the overwriting issues we've observed. The grant images that we produce will all generate this text anyway.

This is a short-term solution only. In order to get this first set of pilot applications looking good, it would be extremely helpful and appreciated if our SBIR partners can generate these pages in the proposed format, and with the information discussed above, filled in. A better solution will be put in place for subsequent iterations, as discussed below.

## The New Vision

After we've concluded the pilot, the schemas and software will be updated to collect the structured biosketch information in the datastream, abandoning the "import from Commons PPF" approach:

- Name (which we already collect in the datastream)
- Position Title (drawn from Commons PPF now, but will come from datastream)
- Education/Training (drawn from Commons PPF now, but will come from datastream)

With that new approach in place, it will not be necessary for the attachments to generate the boilerplate and page formatting which appears at the top of the biosketch. Our grant image generation shall produce the biosketch page with all the appropriate formatting, as the original vision intended. The only difference between this approach and the original vision is that the information necessary to fill in the structured top section will come from the datastream and *not* from the Commons PPF.

## Pilot Samples

Samples are provided on the following pages, showing how the how the first attachment should look during pilot, followed by an example of the second attachment.

**Positions/Honors/Citations Attachment Sample:**

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow the sample format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
Carlucci, Joseph Louis		Professor of Microbiology	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Stanford University	Ph.D.	1964	Infectious Diseases
Harvard Medical School	M.D.	1972	Medicine/Parasitology

**A. Positions and Honors.**

**Positions and Employment**

1969-1971 Medical Residency, Internal Medicine, Harvard Medical School  
1971-1973 EIS Officer, Hospital Infection Section, Bacterial Diseases Branch, CDC, Atlanta, GA  
1973-1974 Instructor and Fellow in Medicine, Hematology, Massachusetts General Hospital, Boston, MA  
1974-1975 Instructor in Infectious Diseases, Massachusetts General Hospital, Boston, MA  
1978- Senior Associate in Infectious Diseases, Children's Hospital, Boston, MA  
1978-1984 Assistant Professor of Pediatrics, Harvard Medical School  
1985-1998 Chief, Hemostasis Laboratory, Children's Hospital, Boston, MA  
1993- Professor of Pediatrics, Harvard Medical School, Boston, MA  
1998- Professor, Dept. of Infectious Diseases, Harvard School of Public Health

**Other Experience and Professional Memberships**

1972-1973 Acting Chief, National Mucosal Infections Study  
1975-2000 Director of Infectious Diseases Laboratory  
1975-present Hospital Epidemiologist (Medical Director Infection Control 2000-present), Children's Hospital, Boston  
1981-1982 President, Society of Hospital Epidemiologists of America  
1988 Member, Society for Pediatric Research  
1989-present Medical Director Quality Assurance, Children's Hospital, Boston, MA  
1991-1993 Director, American Society for Microbiology, Division F  
1991-1997 Hospital Infection Control Practices Advisory Committee, Centers for Disease Control  
1998-present Vice-Chair for Health Outcomes, Dept. of Medicine, Children's Hospital  
1998-2001 Steering Committee, NACHRI/CDC Pediatric Prevention Network

**Honors**

1982 SERC Advanced Research Scholarship, Infectious Disease Society of America  
2001 Anthony Steinway Award for Excellence in Teaching (Children's Hospital)

**B. Selected peer-reviewed publications (in chronological order).**

(Publications selected from 133 peer-reviewed publications)

1. Luciani JM, Casper J, Goodman BF, Shaw CM, Carlucci JL. Prevention of respiratory virus infections through compliance with frequent hand-washing routines. N Engl J Med 1988 ;318:389-394.

2. Gussmann J, Pratt R, Sideway DG, Sinclair JM, Emmerson MF, Carlucci JL. Coagulase-negative staphylococcal bacteremia in the changing neonatal intensive care unit population. Is there an epidemic? *JAMA*. 1988;158:1548-1552.
3. Gussmann J, Carlucci JL, McGovern JE, Jr., Methodologic issues in nursing home epidemiology. *Rev Infect Dis* 1989;11:1119-1141.
4. Gussmann J, Emmerson MF, Smyth NE, Platt RI, Sidebottom DG, Carlucci JL. Early hospital release and antibiotic usage with nosocomial staphylococcal bacteremia in two neonatal intensive care unit populations. *Amer J Dis Child* 1991;149:325-339.
5. Murphy JA, Black RW, Schroeder LC, Weissman ST, Gussman JM, Carlucci JL, Short CJ. Quality of care for children with asthma: the role of social factors and practice setting. *Pediatrics* 1996;98:379-84.
6. Gussmann J, Carlucci JL, McGovern JE, Jr. Incidence of *Staphylococcus epidermidis* catheter-related bacteremia by infusions. *J Infect Dis* 1996;172:320-4.
7. Carlucci JL, Huskins WC. Control of nosocomial antimicrobial-resistant bacteria A strategic priority for hospitals worldwide. *Clin Infect Dis* 1997;S139-S145.
8. Corning WC, Saylor BM, O'Steen C, Gulapagos L, O'Reilly EJ, Carlucci JL. Hospital infection prevention and control: A model for improving the quality of hospital care in low income countries. *Infect Control Hosp Epi*. 1999;13:123-35.
9. Handler CJ, Marriott B, Clearwater PT, Carlucci JL. Quality of care at a children's hospital: the child's perspective. *Arch Pediatr Adolesc Med*. 1999;143:1120-7.
10. McKinney D, Poulet KL, Wong Y, Murphy V, Ulright M, Dorling G, Long JC, Carlucci JL, Piper GB. Protective vaccine for *Staphylococcus aureus*. *Science* 1999;214:1421-7.
11. Gulazzii L, Kispert ZT, Carlucci JL, Corning WC. Risk-adjusted mortality rates in surgery: a model for outcome measurement in hospitals developing new quality improvement programs. *J Hosp Infect* 2000;24:33-42.
12. Huebner J, Qui A, Krueger WA, Carlucci JL, Pier GB. Prophylactic and therapeutic efficacy of antibodies to a capsular polysaccharide shared among vancomycin-sensitive and resistant enterococci. *Infect Immun* 2000; 68:4631-6.
13. Levitan O, Sissy RB, Kenney J, Buchwald E, Maccharone AB, Carlucci JL. Enhancement of neonatal innate defense: Effects of adding a recombinant fragment of bactericidal protein on growth and tumor necrosis factor-inducing activity of gram-positive bacteria tested in vivo. *Immun* 2000;38:3120-25.
14. Garletti JS, Harrison MC, Collin PA, Miller CD, Otter D, Shaker C, Wren M, Carlucci JL, Makato DG. A randomized trial comparing iodine to a alcohol impregnated dressing for prevention of catheter infections in neonates. *Pediatrics*. 2001;127:1461-6.
15. Corning WC, Barillo K, Festival MR, Lingonberry S, Lumbar P, Peters A, Pursons M, Carlucci JL, Tella JE. A national survey of practice variation in the use of antibiotic prophylaxis in heart surgery. *J Hosp Infect*. 2001;33:121-5.
16. Hoboken S, Peterson D, Gravelly L, Carlucci JL. Compliance with hand hygiene practice in pediatric intensive care. *Pediatric Crit Care Med*. 2001;12:211-214.
17. Hasker S, Pittoui D, Gray L, Zaruccii A, Potter G, Seemore MH, Carlucci JL. Interventional study to evaluate the impact of an antibiotic-infused hand gel in improving hand hygiene compliance. *Pediatr Infect Dis J*. Accepted for publication.
18. Lander C, Summers R, Murray S, Hummer CJ, Carlucci JL. Pediatrics: Is hospital food more nutritional than mom's cooking? *Pediatrics* 2001;11: 140-145.

## Research Support Attachment Sample:

### **C. Research Support**

#### **Ongoing Research Support**

R01 HS35793 Carlucci (PI) 9/01/99-8/30/04

AHRQ

Reducing Antimicrobial Resistance in Low-Income Communities: A Randomized Trial.

This study is a randomized trial of interventions to reduce antimicrobial usage and resistance in low-income communities.

Role: PI

#### **Ongoing Research Support (cont.)**

2 R01 AI12345-05 Carlucci (PI) 4/01/01-3/31/06

NIH/NIAID

Bacteriology and Mycology Study of ICU Patients at Risk for Antimicrobial Resistant Bacterial Infections.

The study will perform clinical trials of interventions to reduce antimicrobial resistant infections.

Role: PI

R01- AI24680-04 Peterson (PI) 3/01/01-2/28/06

NIH/NIAID

Virulence and Immunity to Staphylococci.

This study investigates the production of polysaccharide by *Staphylococcus aureus* and its role in virulence as measured in animal models of infection and its ability to function as a target for protective antibody.

Role: Paid consultant.

2 R01 HL 00000-13 Anderson (PI) 3/01/01-2/28/06

NIH/NHLBI

Chloride and Sodium Transport in Airway Epithelial Cells

The major goals of this project are to define the biochemistry of chloride and sodium transport in airway epithelial cells and clone the gene(s) involved in transport.

Role: Co-Investigator

5 R01 HL 00000-07 Baker (PI) 4/1/01 – 3/31/04

NIH/NHLBI

Ion Transport in Lungs

The major goal of this project is to study chloride and sodium transport in normal and diseased lungs.

Role: Co-Investigator

1 R01 AI12826-01 Hoffman (PI) 9/28/01-9/27/03

NIH/NIAID

Intermountain Child Health Services Research Consortium

This consortium will seek to build pediatric health services research capacity and training in the Intermountain Region.

Role: Co-Investigator

#### **Completed Research Support**

5 RO1 AI10011-05 Herman (PI) 10/01/99 – 11/30/01

NIH/NIAID

Evaluating Quality Improvement Strategies (EQUIS)

The goal of this study was to evaluate quality improvement and collaborative learning to improve asthma care in office-based pediatrics.

Role: Co-Investigator

5 R01 AI098765 Spielman (PI)

7/01/96 -6/30/01

NIH/NIAID

Epidemiology of Emerging Infections #1 T32 AI07654

The goal of this project was to study emerging infections in high risk populations who are treated in emergency room situations.

Role: Co-Investigator