



The Role of the PPRU in Training in Clinical Pharmacology

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The Training Mission

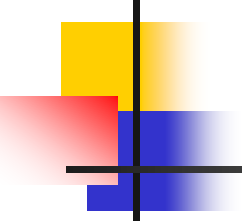
- A specific aim of each cycle of the PPRU
- **First cycle**
 - “Provide an environment in which pediatricians and others can **gain supervised experience** in pediatric clinical pharmacology”
 - Associate pharmacologist position – “on the job training”
- **Third cycle**
 - “To provide **training in clinical and developmental pharmacology**”
 - More formalized, developed and interactive over time
 - Across site mentoring and training opportunities



Broad in Scope

The Individuals

- Students
- Resident physicians
- Clinical pharmacists
- Nurses and research coordinators
- Graduate students
- Sub-specialty fellows and junior faculty
- Clinical pharmacology fellows



Summary of Trainees (1994 – present)

- Total – 97
- MD's – 60
- PharmD's – 17
- PhD's – 18
- MD/PhD's – 2



Federal Support – Training (2001-present)

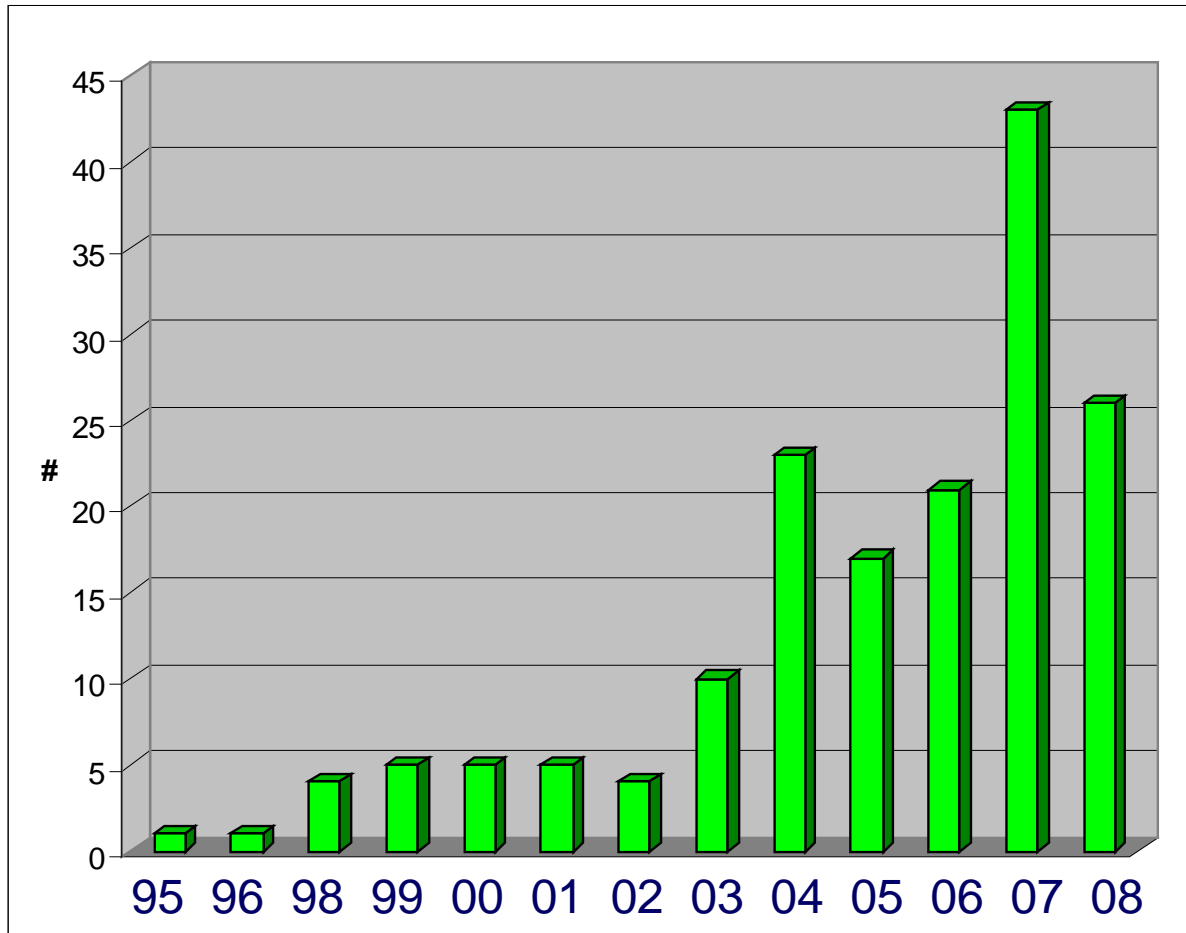
- For training: 6 fellows were recipients of Mentored Clinician Scientist Development Awards (MSCIDA)
 - Additional training awards: T32 (2), K21
- Post training/career development:
 - K08 award (1)
 - K23 award (1)
 - R21 award (1)
 - R03 award (1)
 - K12 award (1)



Broad in Scope The Science

- Pharmacokinetics
- Pharmacodynamics
- Pharmacogenomics
- Ontogeny
- Toxicology
- Drug delivery
- Genotype/phenotype association
- Modeling and simulation
- Drug Development
- Regulatory science
- Clinical trial design

Trainee Publications (168)*



**completed during or shortly after training program*



Trainee Accomplishments

- **Board Certification:** 8 are diplomats of American Board of Clinical Pharmacology
- **Leadership and Service in Professional Societies**
 - ASCPT
 - Workshop organizers, invited speakers, Co-chairs Pediatrics Subspecialty Group
 - American Academy of Pediatrics (AAP)
 - Member, Committee on Drugs
 - Member, Executive Committee, Section of Clinical Pharmacology and Therapeutics
- **Honors/Awards By Professional Organizations**
 - President's Award – ASCPT
 - Post-Doc Award – ACCP
 - New member award – ACCP
 - Society of Pediatric Research – Young Investigator Award



Career Progression Examples

Fellow in Clinical Pharmacology

Establishment of Clinical Pharmacology Program at a new institution,
successful recruitment of junior faculty

PI of PPRU

Fellow in Clinical Pharmacology

Associate Clinical Pharmacologist

Co-investigator

PI of PPRU, independently research program

Fellow in subspecialty combined with Clinical Pharmacology fellowship

Mentoring from multiple PPRU scientists

Recent K award recipient



Career Progression Examples

- Co-investigators in earlier cycles, now PI for their site
- Co-investigators, now leading major PPRU research initiatives



Development of Thought Leaders

- Editorial boards
- Associate editors
- Advisory roles to FDA and industry
- Advisory roles to other pediatric pharmacology networks (Europe, Canada)
- Members, NIH Study Sections and Special Emphasis Panels



Trainees – Career Selection

- Academics/Training – 82
- Academics/International – 6
- Industry – 4
- FDA – 2
- British Health Service – 1
- Private Practice - 3



The Future: Unmet Needs

- Pediatric clinical pharmacology remains a very small clinical subspecialty
- Clinical pharmacology is frequently combined with another subspecialty – “secondary”
- New drugs, continued “off label” use of existing drugs, and new technologies will require continued training opportunities for pediatric clinical pharmacologists
- BPCA 2007 - Training of Pediatric Pharmacologists - Investment in Tomorrow's Pediatric Researchers