

# ***Symposium 11: Obtaining Board Certification & Training Program Accreditation with the American Board of Clinical Pharmacology (ABCP)***



**Craig W. Hendrix, MD, DABCP, FCP**  
**Johns Hopkins University**  
**Chairman ABCP**

**Lionel D. Lewis, MA.,MB.BCh.,MD, DABCP**  
**Dartmouth University**  
**Executive Director ABCP**



**ACCP**

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# *What is the New Collaboration with ACCP all about?*

Craig W. Hendrix, MD, DABCP, FCP  
Johns Hopkins University  
Chairman ABCP



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





# History

- **Distant:** ABCP began with ACCP, ASCPT, ASPET associations
- **Recent:**
  - ABCP desired to rejuvenate its missions through targeted collaborations
    - Larger (membership and resourced) organization
    - Similar commitment to clinical pharmacology excellence and impact
    - Similar professional composition & clinical focus
    - Engage in collaborative projects of mutual interest where capacity and skills are complementary
  - Discussions in past year between ACCP & ABCP leadership
    - Reporting back to the Board of each organization



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## Goals

- ACCP & ABCP desire to collaborate to identify, plan and conduct mutually beneficial educational/academic programs, courses and activities intended to benefit both organizations and their respective communities
- ACCP & ABCP agree to the following elements of this MOA and to work cooperatively and in good faith to achieve the same



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY®  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## ***Specific Collaborations***

- ACCP to provide space for the ABCP's Board of Directors at ACCP's Annual Meetings
- Collaborate to create educational content to benefit the clinical pharmacology community
- Collaborate in conduct of a review course to be held (initially) every other year at the ACCP Annual Meeting (begin 2024)
- Other functions as the parties may mutually agree upon



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY

***2023 ACCP Annual Meeting***

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





## ***Relationship of the Parties***

- ACCP & ABCP no power or authority to bind or incur obligations on behalf of the other
- MOA does not create or imply any partnership, agency, employment relationship or joint venture
- Additional elements on confidentiality, proprietary information, indemnification, & non-infringement



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# ***What are the Functions of ABCP & Benefits of Becoming an ABCP Diplomate?***

**Lionel D. Lewis, MA.,MB.BCh.,MD, DABCP**  
**Executive Director ABCP**



**ACCP**

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY®  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*



# Outline



- Background of the ABCP
- Primary functions/objectives of ABCP
  - Evaluate the training credentials, the scientific research and teaching accomplishments of individuals.
  - Prepare and administer examinations for individual certification in clinical and applied pharmacology.
  - Register and accredit fellowship training programs in clinical pharmacology.
- Benefits of becoming a diplomate of ABCP
- Questions/Discussion



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## Background to the ABCP



- Incorporated in 1976; certification began in 1991
- Chartered members of ABCP (ASCPT-ACCP-ASPET)
- Clinical Pharmacologist (CP) & Applied Pharmacologist (AP)
- Categorization – based on medical board certification criteria



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY®  
Advancing Clinical Care through Pharmacology

*2023 ACCP Annual Meeting*

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*



# ABCP Primary Functions/Objectives



- Evaluate the training credentials, the scientific research and teaching accomplishments of individuals.



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



## Evaluate Individuals Training-Expertise in Clin. Pharm



- Written application;-training/research and work in Clinical Pharmacology
- Include curriculum vitae
- Representative publications
- Evaluated by ABCP subcommittee of Diplomates
- Approval to sit ABCP exam (AP or CP)



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



# ABCP Functions/Objectives of ABCP



- Prepare and administer examinations for individual certification in clinical and applied pharmacology.



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY

Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



## ABCP Examination-structure



- Administered at multiple testing sites throughout US
- Computerized and offered annually (to be sat) between July 1<sup>st</sup>-Aug 31<sup>st</sup>
- MCQs – 3 hours duration ~ 150 questions – all only one correct answer
- Applied Pharmacology exam
- Clinical Pharmacology exam



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## ABCP examination; AP Approx. % Areas of Testing

### Both CP and AP Exam Components

#### % of Questions

General Principles	10
Biostatistics	5
Pharmacokinetics	10
Pharmacodynamics	5
Pharmacogenetics	5
Drugs in organ failure	10
Drugs in the elderly	10
Drugs in pregnancy	5
Adverse drug reactions	5
Drug interactions	5
Therapeutic Drug Monitoring	5
Toxicology	10
Systematic Clin Pharm	10
Other	5

### AP Exam Components

#### % of Questions

Biostatistics & Regulatory	10
Clinical Trial Design	5
Comparative pharmacology	5
Advanced General Principles	15
Advanced Pharmacokinetics	10
Advanced Pharmacodynamics	10
Advanced Metabolism	10
Advanced Receptors	5
Pharmacogenetics	10
Bioanalytical Assays	5
Drug Interactions	10
ADRs	5



**ACCP**  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# ABCP examination; CP Approx. % Areas of Testing



<u>Both CP and AP Exam Components</u>	<u>% of Questions</u>	<u>CP Exam (Case Based) Components</u>	<u>% of Questions</u>
General Principles	10	General Principles	10
Biostatistics	5	<b>System Pharmacology</b>	
Pharmacokinetics	10	Cardiovascular	10
Pharmacodynamics	5	Respiratory	10
Pharmacogenetics	5	GI Tract	10
Drugs in organ failure	10	Neurological	10
Drugs in the elderly	10	Renal	10
Drugs in pregnancy	5	Hepatic	10
Adverse drug reactions	5	Musculoskeletal	10
Drug interactions	5	Endocrine	10
Therapeutic Drug Monitoring	5	Anesthesia	3
Toxicology	10	Pediatric	5
Systematic Clin Pharm	10	Other	2
Other	5		



**ACCP**  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care Through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*



# Primary Functions/Objectives of ABCP



- Register and accredit fellowship training programs in clinical pharmacology.



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## Accreditation of Clin. Pharm. Training Programs



- Detailed written application
  - See website for template
- Site visit (virtual or in person)
- Defined criteria; ... many programs are very different
- Currently 15 accredited programs and one registered program in USA
- Programs reapply for reaccreditation status by ABCP every 5 years



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



# Outline



- Benefits of becoming a diplomate of ABCP



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



# Becoming a Diplomate of ABCP & Its Benefits



## Recognition of Expertise

- Academic (& peer) recognition of expertise in the discipline
- Institutional recognition of board certification
- National (US and beyond) Clinical Pharmacology Societal recognition
- Employment and career advancement opportunities



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



# Diplomate of the ABCP (DABCP)



## The Diploma

- Numbered and individualized  
Current n = 476 DABCP (342 CP & 134 AP)
- Individual diplomates identified/listed on [abcp.net](http://abcp.net) website

Wachsman	Matthew	M.D., Ph.D.	1996	CP
Waldman	Scott Arthur	M.D., Ph.D.	1994	CP
Walson	Philip D.	M.D.	1991	CP
Wang	Theodore	M.D.	1991	CP
Wang	Zaiqi	M.D., Ph.D.	2001	CP
Warad	Deepti M.	M.D.	2020	CP
Ward	Robert M.	M.D.	2005	CP
Wardell	William M.	M.D., Ph.D.	1991	CP
Wason	Suman	M.D., M.B.A.	1993	CP
Watson	Alan J.	M.D.	1992	CP
Watt	Kevin M.	M.D., Ph.D.	2020	CP
Weidner	Donald J.	M.D., Ph.D.	Charter	CP
Wei	Xizoxiong	M.D., Ph.D.	2003	AP
Weinshilboum	Richard M.	M.D.	Charter	CP
Weld	Ethel Derby	M.D.	2016	CP
Weintraub	Michael	M.D.	1991	CP
Whelton	Andrew	M.D.	Charter	CP

- No maintenance of certification required
- Diplomates entitled to use the certification .....DABCP



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care Through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





# Becoming a Diplomate of ABCP & Its Benefits

## Career Advancement

- Leadership in Clinical Pharmacology National Societies
- Leadership in Clin. Pharm. Fellowship Training Programs
- Elected to serve the national (US) ABCP Board
- Represent the discipline on peer review grant panels
- Representative as an Editorial board member of Clin. Pharm. scientific journals
- Become an Editor (tenured/guest editor) of highly respected Clin. Pharm. scientific journals



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"







## Becoming a Diplomate of ABCP: The Benefits

### **Facilitates career advancement/networking/collaborations**

- National society leadership (ASCPT-ACCP-APSET-others)
- Elected to peer review on journal editorial boards/scientific panels/committees (institutional/national-NIH/FDA /international)
- Collaborations on projects with national (e.g. NCTN etc) groups
- Participation/collaborations on/with International groups (e.g. IUPHAR,BPS/ASCEPT )



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY

*2023 ACCP Annual Meeting*

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# *How does a Clinical Pharmacology Training Program Earn Accreditation?*

Craig W. Hendrix, MD, DABCP, FCP  
Chairman ABCP



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY®  
Advancing Clinical Care through Pharmacology

*2023 ACCP Annual Meeting*

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# ***Program Requirements***

- Section I: Program Identification and Participating Hospitals
- Section II: Organizational Structure of Program
- Section III: Program Leadership Credentials
- Section IV: Credentials of Other Faculty in The Program
- Section V: Narrative Description of the Fellowship Program



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

***2023 ACCP Annual Meeting***

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*







## III: Program Leadership

- Academic appointment type (full, part, adjunct)
- Rank or title
- Time Commitment (table)
- Current appointment
- Prior appointments/titles
- Training pedigree
- Organizations, Societies, Honors
- Board Certifications/Fellowships
- Clinical Pharmacology Fellowship/Board Certification

Activity	Percent of time	Activity	Percent of time
Administration of Program	10	Conferences	10
Teaching rounds	20	Supervision of research activities	50
Supervision of ambulatory care	5	Other (please describe)	
Supervision of consultations	5		



ACCP  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## ***V: Narrative – Organization/Structure***

- Is the Director of the Clinical Pharmacology Unit also the Director of the Fellowship Program? If not, explain the administrative relationship between these persons.
- How are the Director of the Clinical Pharmacology Unit and the Director of the Fellowship Program appointed and for what duration?
- Describe the specific duties and functions of all instructors who are participating in teaching in the fellowship program. How do they relate to the program director?
- How are the components of the fellowship training program at the affiliated and/or integrated institutions related administratively to the leadership of the program?



ACCP  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





## ***V: Narrative – Required Experience***

- Goals for the Training Program in Clinical Pharmacology
- Training Timelines
- Major Training Elements
  - Courses
  - Conferences
  - Rotations
- Clinical Research



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## ***V: Narrative - Affiliations***

- Most programs depend upon collaborations across multiple Schools (e.g., Medicine, Pharmacy) and Hospitals/Clinics
- What are the pertinent features of the integrated or affiliated institutional agreements as related to clinical pharmacology?
- What advantages result from the existing integrations or affiliations?



**ACCP**

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





## ***V: Narrative - General***

- Describe the progressive levels of responsibility in clinical consultations.
- How is basic pharmacology teaching incorporated into the program?
- Describe research space & facilities
  - Role of basic & clinical research programs in training?
  - How are the fellows involved in the research programs?
  - Trainee publications
- How are teaching of socio-economic, ethnic, and gender factors incorporated into the curriculum?
- Describe career counseling and placement aspects of your program.



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## ***V: Narrative – Recruitment & Retention***

- What percent of fellows completed two years? third year?
- Detail fellows professional school, residency, fellowships
- If you have fellows who graduated from a foreign medical school
  - How are their unique educational requirements being met?
  - Have curriculum elements been specifically designed for this purpose?



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





## ***V: Narrative - Assessment***

- By what methods do you assess the teaching effectiveness of the clinical pharmacology faculty?
- By what methods do you evaluate performance and individual development of clinical pharmacology fellows? How are fellows informed of the results of the evaluations?
- What areas within your clinical pharmacology training programs warrant strengthening to enhance the education of fellows?



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





# ***Accreditation Process***

- Structured accreditation application is submitted to the ABCP for review, \$3K application fee to cover administrative costs of ABCP and site visit expenses.
- Site visit Required at initial application, typically one day, one or two Board members
- Duration of 5 years with re-accreditation application due during the 5th year; site visit after initial accreditation is at discretion of the Board based on time since last visit, significant program or program leadership change, concern about program quality based upon review of the written application



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"







# ABCP Accredited Programs

Institution	Fellows	NIH T32 Funding	Medicine Focus	Pediatrics Focus	School of Medicine	School of Pharmacy
UNC-Duke	10	*	x	x	1	1
Vanderbilt	8	*	x		1	
Jefferson-CHOP	8	*	x	x	1	
UCSF	7	*	x	x	1	1
Chicago	7	*	x	x	1	
Utah	6			x	1	1
Indiana-Purdue	6	*	x		1	1
USUHS/WRAIR	4		x		1	
Mayo Clinic	4	*	x		1	
Johns Hopkins	4	*	x		1	
Children's Mercy	3	*		x	1	
Cincinnati Children's	2	*		x	1	
Ohio State	1		x			1
Dartmouth	1		x		1	
Baylor	1		x		1	
15 Programs	72	10	12	7	15	5



ACCP  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





# UNC-Duke

- School of Pharmacy-School of Medicine
- Broad research areas
- Strong Medicine & Pediatric clinical environment
- Degree programs closely affiliated or required
- Curriculum (courses, rotations, conferences/seminars)
- Fellow stats
  - Publications during fellowship 58/3 yr
  - Placement (academics, industry, FDA)



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





**UNC-Duke**

Figure 2	Year 1			Year 2		
Program Plan	Fall	Spring	Summer	Fall	Spring	Summer
Didactic Training	<ul style="list-style-type: none"><li>• NIH Principles of Clinical Pharmacology (required)</li><li>• NIH Principles of Pediatric Clinical Pharmacology (optional)</li></ul> <u>Core Coursework:</u> <ul style="list-style-type: none"><li>• Principles of PK/PD (853)</li><li>• Ethical Dilemmas in Research (801)</li><li>• Quantitative Methods in Clinical Research (831)</li></ul>		<u>Optional Workshops &amp; Short Courses:</u> <ul style="list-style-type: none"><li>• Pharmacometrics and PK Modeling (e.g., PBPK Modeling, NONMEM, PopPK, Simcyp, PK-Sim)</li><li>• Grant Writing, Scientific Writing</li></ul> <u>Elective Coursework:</u> <ul style="list-style-type: none"><li>• Drug Disposition &amp; Action</li><li>• Quantitative Pharmacology/Pharmacometrics &amp; Clinical Trial Design</li><li>• Individualized Therapy</li><li>• Drug-Induced Organ Toxicity</li></ul>			
Optional Rotations	<ul style="list-style-type: none"><li>• Duke Clinical Research Unit /Clinical Trials Rotation</li><li>• FDA Rotation: Pediatrics, Drug Safety, or Clinical Pharmacology</li></ul>					
Research Skills Development	Clinical Pharmacology Forum Includes: Grantsmanship Series; K Series; Clinical Trial Operations Series; group discussions; ethics and conflicts of interest; manuscript preparation and review; presentations skills			Clinical Pharmacology Forum		
Responsible Conduct of Research, IRB, P&T Training	Coursework at Duke/UNC (at least 8 hrs); Collaborative IRB Training Initiative; Clinical Pharmacology Forum; Informal Instruction in Lab/Fellowship Meetings; Participation in IRB Committee Meetings and Pharmacy & Therapeutics Committee Meeting					
Mentored Research	Clinical/translational research project, regular meetings with mentors (e.g., weekly lab meeting, one-on-one meetings, SOC meetings every 6 months)					
Seminars & Journal Clubs	Weekly Research Seminar Series (UNC and Duke) Journal Clubs (PK/PD, Pediatrics, Systems Toxicology & Hepatotoxicity)					



**ACCP**  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

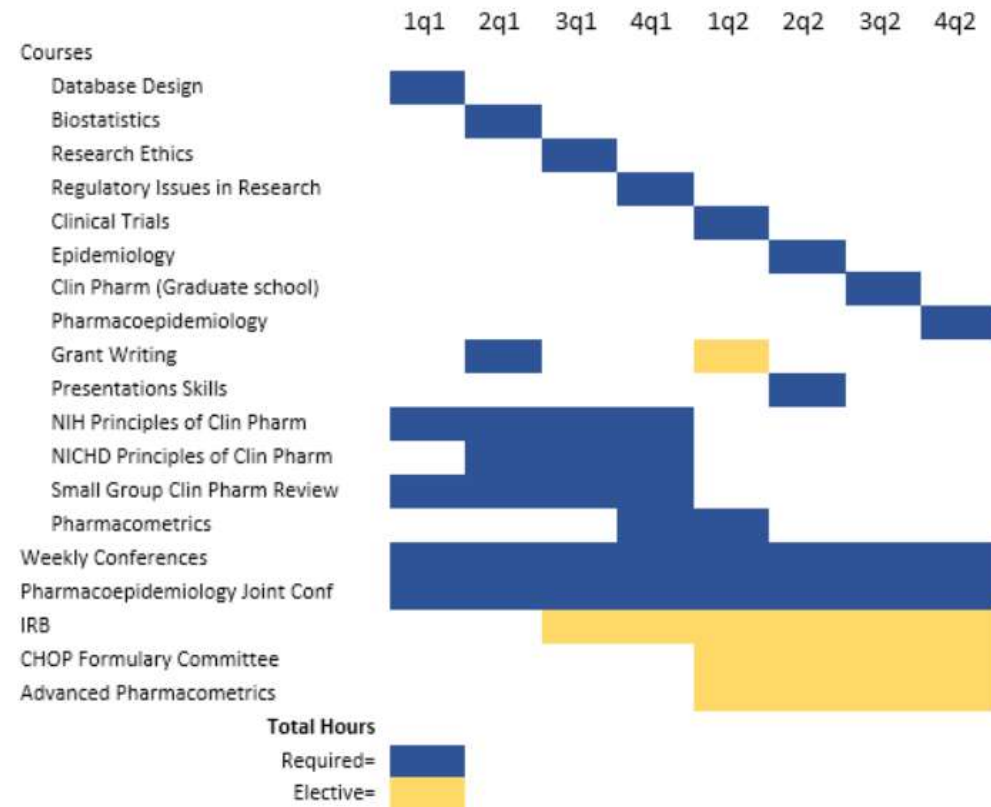
*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# Thomas Jefferson - CHOP

- Strong Med-Peds environment
- Degree programs closely affil/req'd
- Curriculum (courses, rotations, conferences/seminars)
- Laboratory component common
- Industry Linkages
- Fellow stats
  - Publications - 5/fellow
  - Placement - Acad=PHARMA, sign. FDA



ACCP  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





# *University of Utah*

- Research strengths – pediatrics, pharmacometrics, clinical trials center
- Clinical activity – consultation service, pediatric cases, 2 health systems
- Laboratories – 3 division-based plus toxicology (analytical) lab
- Curriculum (courses; P&T, IRB rotations, conferences, seminars, JC)
- Mentoring - layered senior & junior faculty
- Fellow Stats
  - Research very commonly combines clinical, laboratory, & in silico projects
  - Publications during fellowship – 57 during 5-yr period
  - ABCP certification – 6 of 8 (BE)



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY

*2023 ACCP Annual Meeting*

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*





# Johns Hopkins

- Hands-on clinical research focus
  - all trainees (MD, PhD, & PharmD)
- Anti-infective research focus
- Clinical activity (new) precision medicine service rotation
- Clinical Investigation PhD or MHS
- Fellow Stats
  - Publications – 5/fellow
  - Placement – 87% Assistant Prof
  - PhD, MHS nearly all

Category	Program Element
Courses	Principles of Clinical Pharmacology (20 hrs)
	Analytical Methods (PK/PD analysis) (24 hrs)
	Responsible Conduct of Research
	GTPCI Courses (most complete PhD or MHS)
Rotations	Analytical Laboratory (1 month)
	IRB Rotation (4 once-weekly meetings)
	P&T Rotation (3 once-monthly meetings)
Conferences	Journal Club (monthly)
	Research-in-Progress (bi-weekly)
	Research Conference (bi-weekly)
	Clinical Research Practicum (monthly)
	Career Talks (monthly)
Research	Clin Pharm & GTPCI Thesis Research



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"





# Question?

[abcp.net](http://abcp.net)



Lionel D. Lewis, MA., MB.BCh., MD, DABCP  
Dartmouth University

Craig W. Hendrix, MD, DABCP, FCP  
Johns Hopkins University

Wayne T. Nicholson, MD, PharmD, MSc., DABCP, BCPS  
Mayo Clinic College of Medicine and Science



ACCP

AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

2023 ACCP Annual Meeting

"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"



# American Board of Clinical Pharmacology (ABCP) Functions & Value of Becoming a Diplomate of ABCP



***Diolch am eich sylw  
Cwestionau os gwelwch yn dda ...***



ACCP  
AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY  
Advancing Clinical Care through Pharmacology

**2023 ACCP Annual Meeting**

*"Revolutionizing Clinical Pharmacology: Meeting the Challenge & Leading the Way"*

