U.S. Department of Health & Human Services

NIH Center for Scientific Review

ENQUIRE Cluster 10: Drug Synthesis, Discovery, Disposition, and Xenobiotics Study Sections

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ENQUIRE Cluster 10: Study Sections and Application Numbers per Council Round

Study Section	Panel Title	Ave (2019-2021)
CE	Cancer Etiology	60
DDNS	Drug Discovery for the Nervous System Study Section	61
DDR	Drug Discovery and Mechanisms of Antimicrobial Resistance	81
DMP	Drug Discovery and Molecular Pharmacology	90
DT	Developmental Therapeutics	105
GDD	Gene and Drug Delivery Systems	83
NANO	Nanotechnology Study Section	84
SBCA	Synthetic and Biological Chemistry A	69
SBCB	Synthetic and Biological Chemistry B	68
SIEE	Systemic Injury by Environmental Exposure	79
XNDA	Xenobiotic and Nutrient Disposition and Action	56
BST (55)	PAR Panel: High Throughput Screening	39
AIDC (82)	Drug Discovery and Mechanisms of Antimicrobial Resistance Overflow	147

Charge of the ENQUIRE Cluster 10 Workgroup

- A panel of 12 members was assembled including individuals with experience as a reviewer and/or applicant across multiple study sections in Cluster 10
- Members were given representative sets of application titles and abstracts from each study section, study section guidelines, and workload information
- The external workgroup was charged with examining existing study section organization and recommending changes to optimize study section size and function
- Changes could include modification of referral guidelines/boundaries, adding emerging fields, creating new study sections, disbanding study sections, or merging and redistributing topics

ENQUIRE Cluster 10 External Workgroup – December 13-14, 2021

Chairperson

Rodney Kip Guy	Chemistry, infectious diseases	University of Kentucky

Workgroup Members

Debra Auguste	Targeted therapeutic delivery	Northeastern University
Helen E. Blackwell	Bioorganic chemistry, synthesis	Univ of Wisconsin, Madison
Brian S J Blagg	Drug design, modeling	Univ of Notre Dame
Namandje Bumpus	Drug metabolism, toxicity	Johns Hopkins University
Michael S. Gilmore	Infectious diseases	Harvard Medical School
Tomas R Guilarte	Environmental Health Sciences	Florida International University
Mary Jackson	Anti-mycobacterial drugs	Colorado State University
Lali K Medina-Kauwe	Cell targeted nanotherapeutics	Cedars-Sinai Medical Center
Derek S Tan	Chemical biology, drug discovery	Memorial Sloan Kettering
Ratna K Vadlamudi	Cancer biology, nuclear receptors	UT Texas Health San Antonio
Dennis L Wright	Natural products, chemistry	University of Connecticut Storrs

CSRAC Observer

Tonya M Palermo	Seattle Children's Research Institute

Initial Observations from the External Working Group

Chemistry and Drug Discovery

- Tension between basic science vs applied/translational topics in the chemistry and drug discovery panels
- Very early screens to identify potential drug leads would be better served in the chemistry panels than in DDR/DMP
- No home for drug discovery studies that don't involve cancer, infectious diseases, or neuroscience
- Anti-infective resistance important component of drug efficacy/DDR

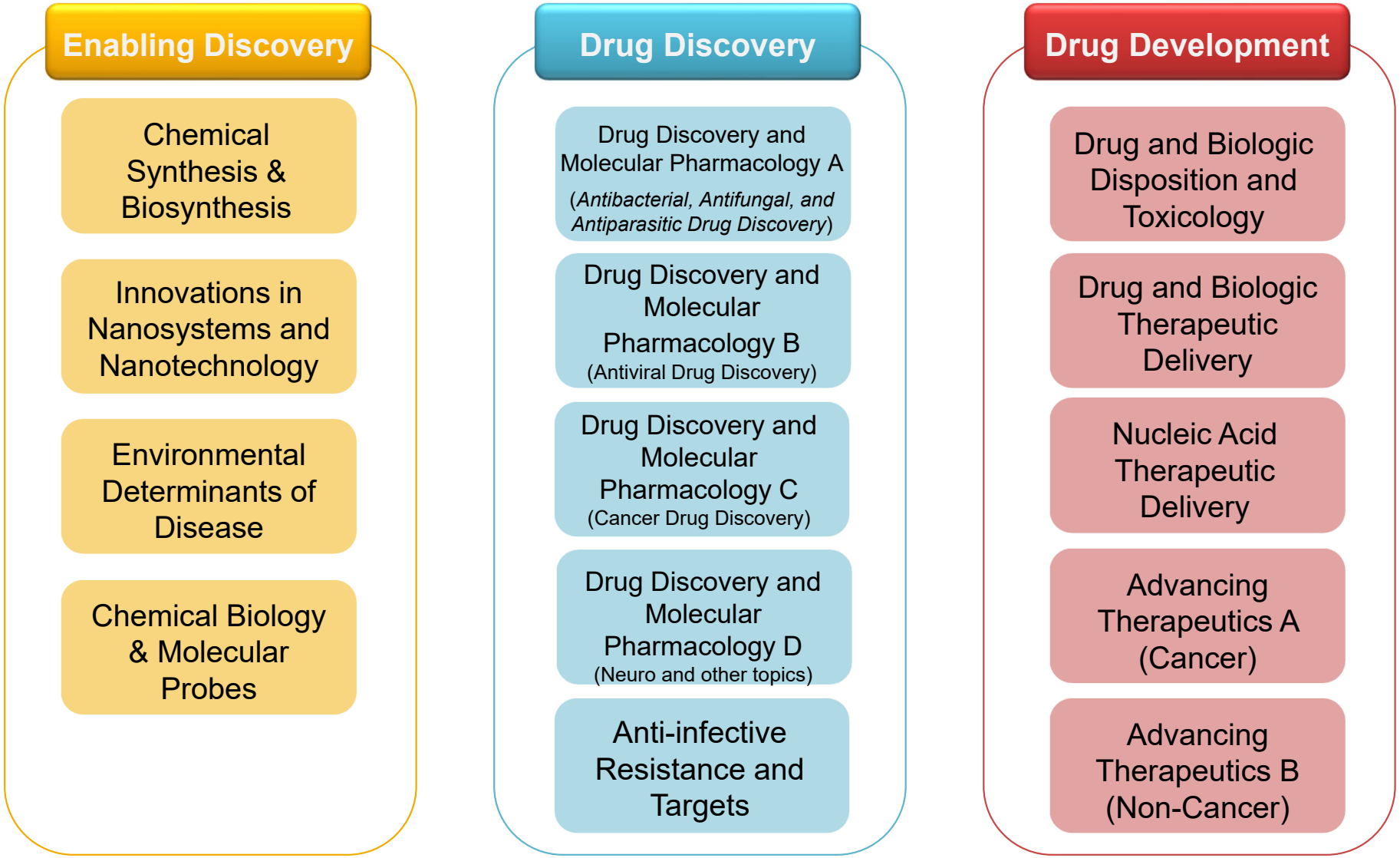
Drug Delivery & Therapeutics

- More support for late-stage drug development, pre-IND work is needed
- Biologics are not well served in existing study section structures
- mRNA based therapeutics will increase need for nucleic acid delivery studies
- Lack of a home for advanced therapeutics studies that don't involve cancer

Environmental Toxins

- Environmental neurotoxins currently reviewed in NAL may fit better with applications involving environmental toxins

Conceptually divide science into three phases along a drug discovery pipeline: Enabling Discovery, Drug Discovery and Drug Development



Enabling Discovery Phase

- Redistribute topics chemistry topics from two existing panels to create one panel focused on basic synthetic/biosynthetic methods **(Chemical Synthesis and Biosynthesis)** and a second panel directed towards applied chemistry, including chemical biology and medicinal chemistry **(Chemical Biology and Molecular Probes)**
- Redistribute drug delivery and nanoscience topics into three panels. One covering basic aspects of nanotechnology **(Innovations in Nanosystems and Nanotechnology)** and two applied panels focused on drug delivery within the Drug Development Phase
- Expand topics covered by existing panel SIEE to more broadly study etiology, outcomes, and mechanisms of environmentally-induced disease **(Environmental Determinants of Disease)**

Drug Discovery Phase

- Expand the number of drug discovery panels to accommodate high application loads in DDR and DMP, and create a general drug discovery panel for non-infectives, non-cancer topics **(Drug Discovery and Molecular Pharmacology A-D)**
    - DMPA – Antibacterial, Antifungal, and Antiparasitic Drug Discovery
    - DMPB – Antiviral Drug Discovery
    - DMPC – Cancer Drug Discovery
    - DMPD – Neuro and other systems
- Create a separate panel to focus on mechanisms and targets of anti-infective resistance **(Anti-infective Resistance and Targets)**
- Absorb BST(55) – High throughput screening applications into relevant drug discovery panels DMP(A-D)

Drug Development Phase

- Redistribute remaining drug delivery topics from existing drug delivery and nanoscience panels to two new panels **(Nucleic Acid Therapeutic Delivery, Drug and Biologic Therapeutic Delivery)**
- Topics currently reviewed in XNDA will be expanded to cover disposition and safety of therapeutic agents, including both small molecule and biologics, in any cell type, organ system, or anatomical compartment **(Drug and Biologic Disposition and Toxicology)**
- Topics currently reviewed by DT that broadly involve development of new therapeutic strategies for neoplastic diseases (solid tumors and leukemias) were mapped to **Advancing Therapeutics A.** Therapeutic strategies and late-stage preclinical studies for non-oncology areas will map to **Advancing Therapeutics B**

Cancer Etiology (CE) – Not part of the drug discovery pipeline-based schema

- The members recommended that topics currently reviewed in CE be absorbed into other basic cancer biology study sections that are currently being reorganized via ENQUIRE Cluster 5 which was presented for approval to the CSR Advisory Council at its last meeting
- CE will be dissolved, and the topics will be added to the new Cluster 5 panels' guidelines for implementation for the January 2023 council round

NIH Internal Workgroup Meetings (Feb-Mar 2022)

- Internal panels included CSR Division Directors, IRG Chiefs, and senior level individuals from involved IC's (NIGMS, NIAID, NINDS, NIEHS, NIDA, NCI)
- The internal panel was charged with examining recommendations from external workgroup for potential issues that could arise in the implementation of their recommendations, survey information collected from PO's and reviewers about the existing study sections, as well as notes from observers who site visited the study sections

NIH Internal Panel Recommendations

- Internal panel members expressed concurrence with the recommendations of the external workgroup regarding the reorganization with a few minor modifications
- Recommended using general study section names for the drug discovery DMP(A-D) and Advancing Therapeutics(A-B) panels instead of those initially proposed
- Some minor adjustments including changing review loci for some orphaned environmental studies reviewed elsewhere (EBIT) and providing input about referral overlap boundaries between chemistry and drug discovery panels

14 CSR Proposed Study Sections for 2023/05 if approved

- Chemical Synthesis and Biosynthesis (CSB)
- Innovations in Nanosystems and Nanotechnology (INN)
- Environmental Determinants of Disease (EDD)
- Chemical Biology and Molecular Probes (CBMP)
- Drug Discovery and Pharmacology A (DMPA) *Anti-bacterial, -fungal, -parasitic*
- Drug Discovery and Pharmacology B (DMPB) *Antiviral*
- Drug Discovery and Pharmacology C (DMPC) *Cancer*
- Drug Discovery and Pharmacology D (DMPD) *Neuro and other topics*
- Anti-Infective Resistance and Targets (ART)
- Drug and Biologic Disposition and Toxicology (DBDT)
- Drug and Biologic Therapeutic Delivery (DBTD)
- Nucleic Acid Therapeutic Delivery (NATD)
- Advancing Therapeutics A (ATA) *Cancer*
- Advancing Therapeutics B (ATB) *Non-Cancer*

Next steps…

- Refine draft guidelines and overlap statements – April/May 2022
- Mock sorts using historical application data – June/July 2022
- Post new guidelines to CSR Website – August 2022
- First applications arrive for new study sections – October/November 2022
- Current study section members reassigned to new panels – December 2022
- First meetings of new study sections – January/February 2023
- First advisory councils for applications reviewed by new study sections – May/June 2023

Questions or Comments?

Council Concurrence?