

State of the Department of Psychiatry

October 7, 2021

Jill A. RachBeisel, MD

Dr. Irving J. Taylor Professor and Chair



Today's Agenda



In Memoriam & Staff Recognitions

New Faculty & Promotions

Financial Summary

Diversity, Research, Education, & Clinical
Highlights

Community Engagement

Invited presentations

Drs. Belcher and Gould on Ketamine

Drs. Weintraub and Greenblatt on HARP

Dr. Kochunov on data-informed, personalized medicine

Forward Motion: FY22 Priorities

Business Administration Teams

Thank you to our Central and Business Administration teams for your steadfast support and seamless operations!

A special thanks to:

- Lis Baker
- Gary Benson
- Ashley Boeree-Kline
- David Castine
- Lisa Cleary
- Arthur Crow
- David Flax
- Nanci Henningsen
- Andre Jackson
- Nicholas Meyer
- Charlene Mercer
- Winny Mwaura
- Afshan Qureshi
- Karen Robinson
- Liz Tafida
- Mia Thompson
- Scott Windmiller

In Memoriam



**Silas Nickson
Mwaura Wandui**

RECOGNITION: ABOVE & BEYOND



DANAE DI ROCCO, MD



RACHAEL FUNK, LCSW-C
Program Manager for PACT, CSP



CRYSTAL HAN, MD
C&A Psychiatry Fellow, PGY5



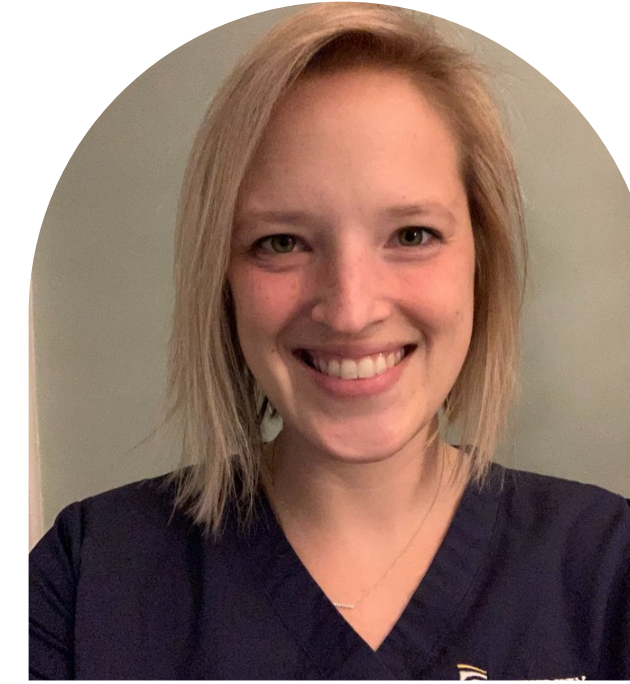
SYLVIA MCCREE-HUNTLEY, EDD
Director, Development & Training



VICTORIA PARSONS, LMSW
Clinical Social Worker/Therapist,
Fayette Clinic



ANDRE' THOMPSON, MSW, CDC-AD
Social Work Care Manager, DART



PAMELA WALKER, OTR/L
Manager of Psychiatric
Occupational Therapy

WELCOME, NEW FACULTY!



KIM GORDON-ACHEBE, MD
Child & Adolescent



SOYOUNG LEE, MD
Geriatrics



STEPHANIE HARE, PhD
MPRC



MARK KVARTA, MD, PhD
MPRC



DAVID MANCINI, MD
CL



SAMANTHA REAVES, PhD
Child & Adolescent



BESHAUN DAVIS, PhD
DPSR



JULIE FIELDS, MD
Midtown



BENJAMIN ISRAEL, MD
CL



**AVINASH
RAMPRASHAD, MD**
Division of Addiction
Research & Treatment



**ALDEN
LITTLEWOOD, MD**
Midtown



JYOTI KANWAR, MBBS
Midtown



ANTONIA GIRARD, PSYD
Child & Adolescent

FACULTY PROMOTIONS



JILL RACHBEISEL, MD
Dr. Irving J. Taylor Professor
and Chair



ANIQUE FORRESTER, MD
Chief of Diversity



SARAH EDWARDS, DO
Division Director, C&A



SETH AMENT, PHD
Associate Professor, Tenure



SESHAGIRI DODDI, MBBS
Clinical Associate Professor,
Non-Tenure



JAMIE FIELDS, DO
Assistant Professor,
Non-Tenure



PATRICK JUNG, MD
Assistant Professor, Non-Tenure
Medical Director, Telemental Health
Program



**JULIE KREYENBUHL,
PHARM, PHD**
Tenured Professor



CHRISTOPHER MILLER, MD
Associate Professor,
Non-Tenure



ERIC WEINTRAUB, MD
Professor, Non-Tenure



EMERSON WICKWIRE, PHD
Professor, Non-Tenure



FINANCIAL OVERVIEW

All Funds Financials	Total Department			
	FY21 Act*	FY21 Bud	\$ Var	% Var
Patient Revenue Net of Assessments	2,447,521	2,547,653	(100,132)	(4%)
Total Other Department Revenue	56,433,568	55,735,971	697,597	1%
Total Revenue	58,881,089	58,283,624	597,465	1%
Faculty Salary/Fringe	18,627,543	21,477,920	2,850,377	13%
Non Faculty Salary/Fringe	24,391,242	19,777,565	(4,613,677)	(23%)
Other Operating Expenses	14,952,776	16,963,707	2,010,931	12%
Total Operating Expenses	57,971,561	58,219,192	247,631	0.4%
Net Operating Income	909,528	64,432	845,096	1312%
Net Operating Margin	37%	2.5%		1369%

- FY21 total operating budget: \$58M, including \$34M for grants/service contracts, \$8.4M for UMMC Physician Services, & \$6.9M for SOM
- Generated \$2.8M through practice plan, & completed fiscal year 6.7% behind budget for charges & 8.1% ahead of budget for collections
- PA cash balance increased 37.2% & reserves increased 23.2% as compared to prior year



AFSHAN QURESHI, MBA

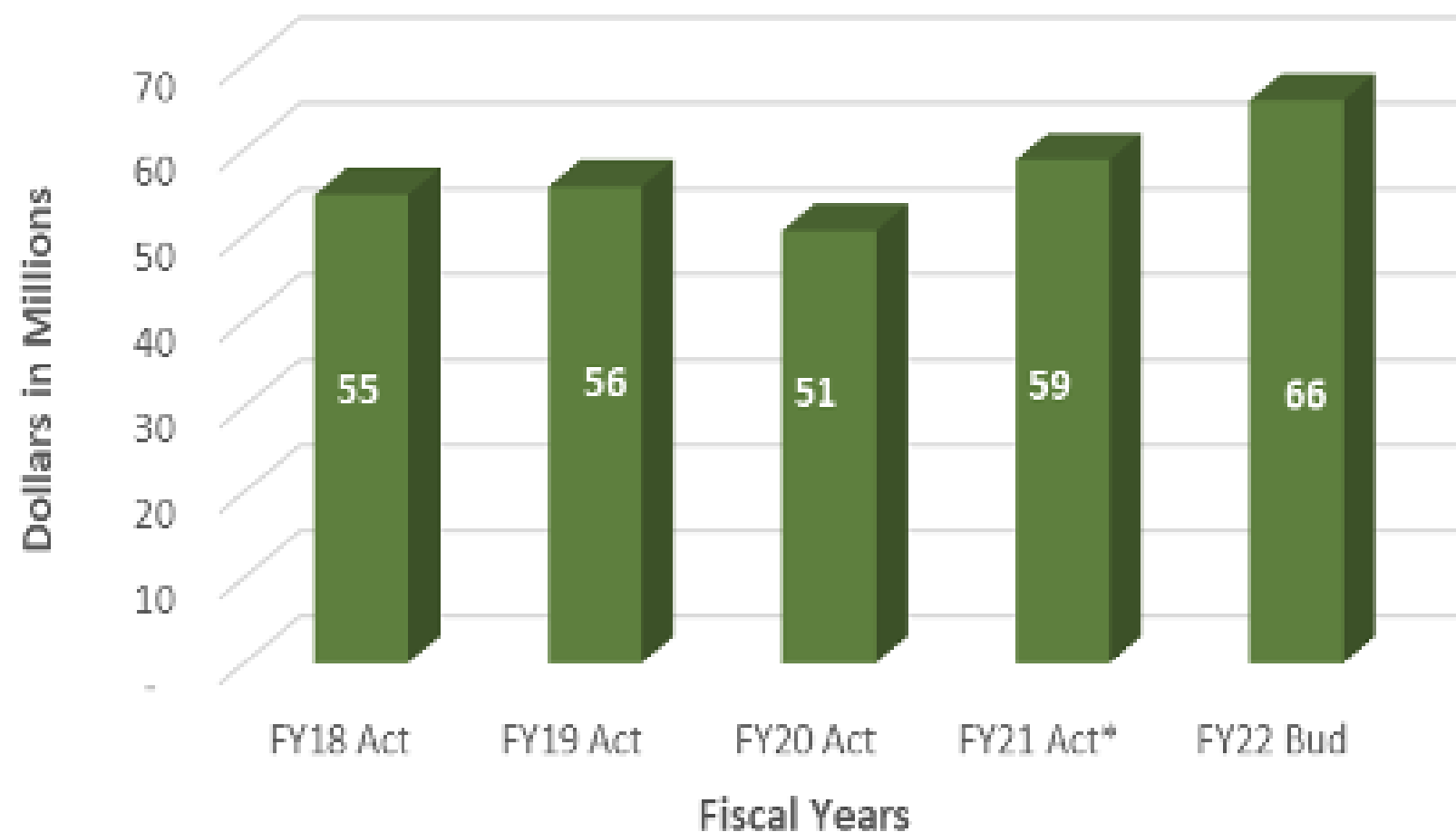


DAVID CASTINE, MSA



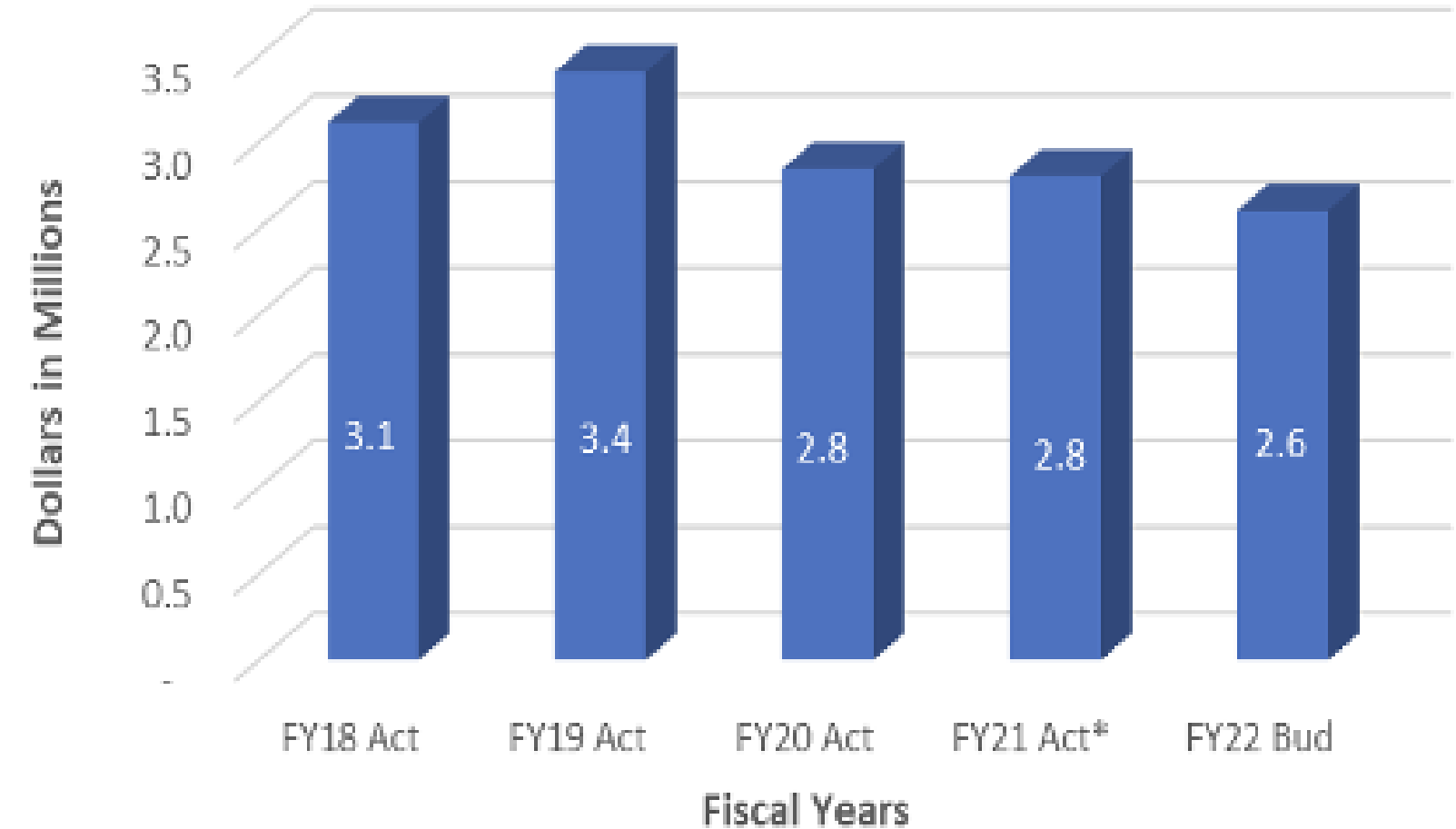
FINANCIAL OVERVIEW

Total Revenue



* FY21 actuals are preliminary and subject to change

IDX Cash Collections



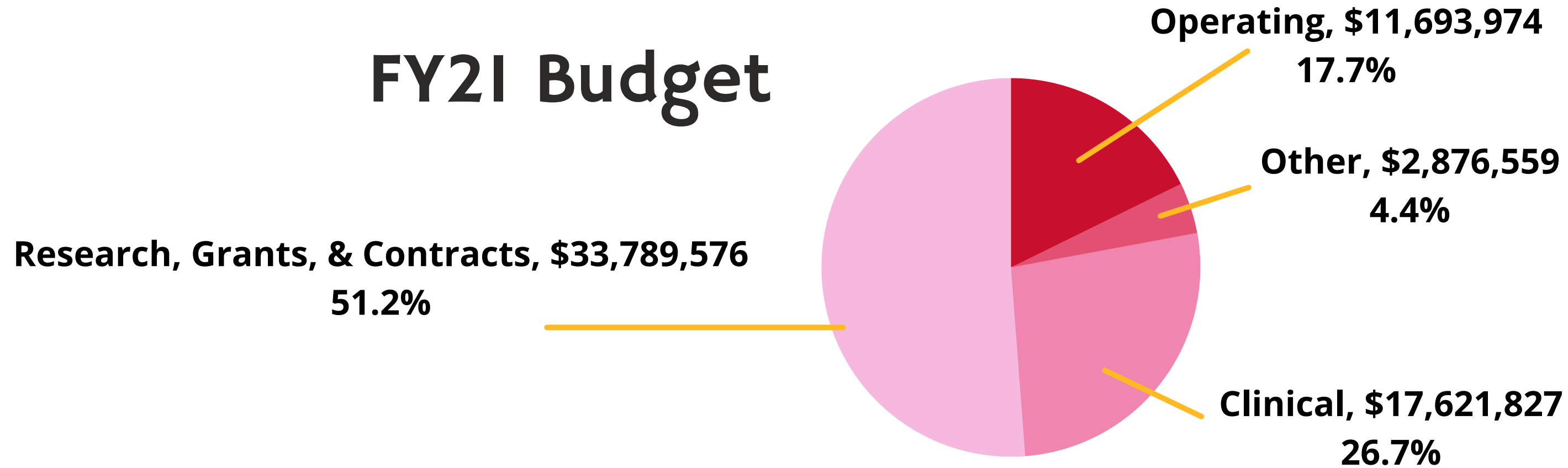
* FY21 actuals are preliminary and subject to change

- Total revenue increased from prior year by 16% & is 1% better than budget
- FY22 budget has a positive margin
- FY22 revenue expected to grow by 12%

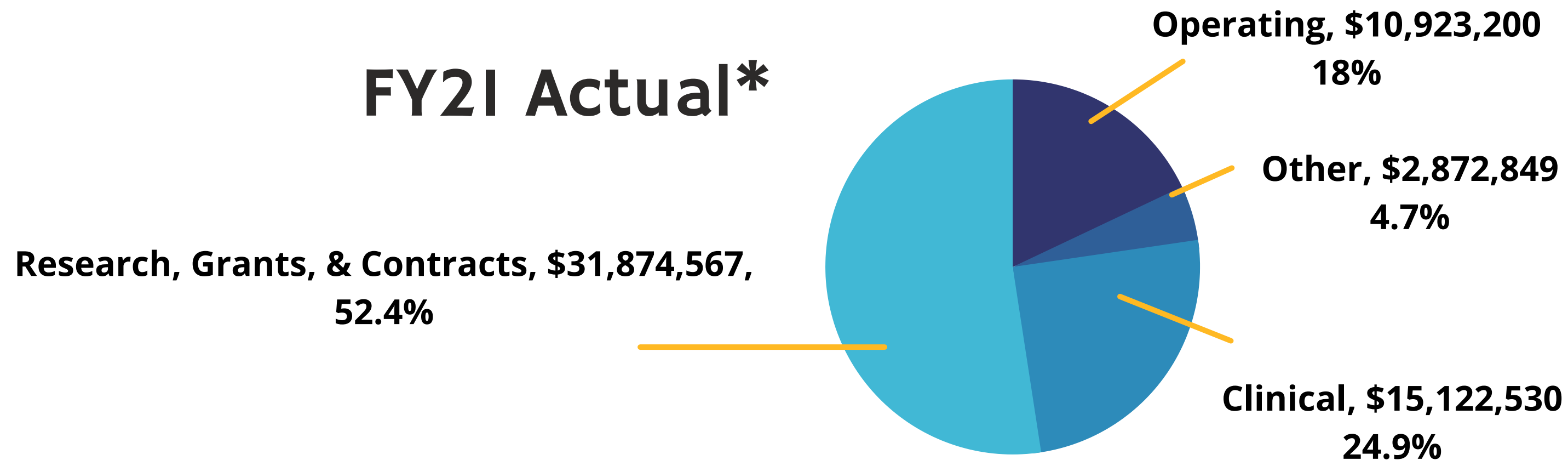


FINANCIAL OVERVIEW

FY21 Budget



FY21 Actual*



Diversity: Year of Assessment

- Dr. Anique Forrester promoted to Chief of Diversity
- Created guide for faculty hiring
- Established best practices to improve interview processes
- Hired 13 out of 14 minority faculty hires
- 5-part Grand Rounds series
- Teams channel & increasing membership





DIVERSITY IMPLEMENTATION TEAM

Tiffany Beason, PhD

Dana Cunningham, PhD

Anique Forrester, MD

Kimberly Gordon-Achebe, MD

Laurel Kiser, PhD

Madeline Marks, PhD

Sylvia McCree-McHuntley, EdD

Brittany Patterson, PhD

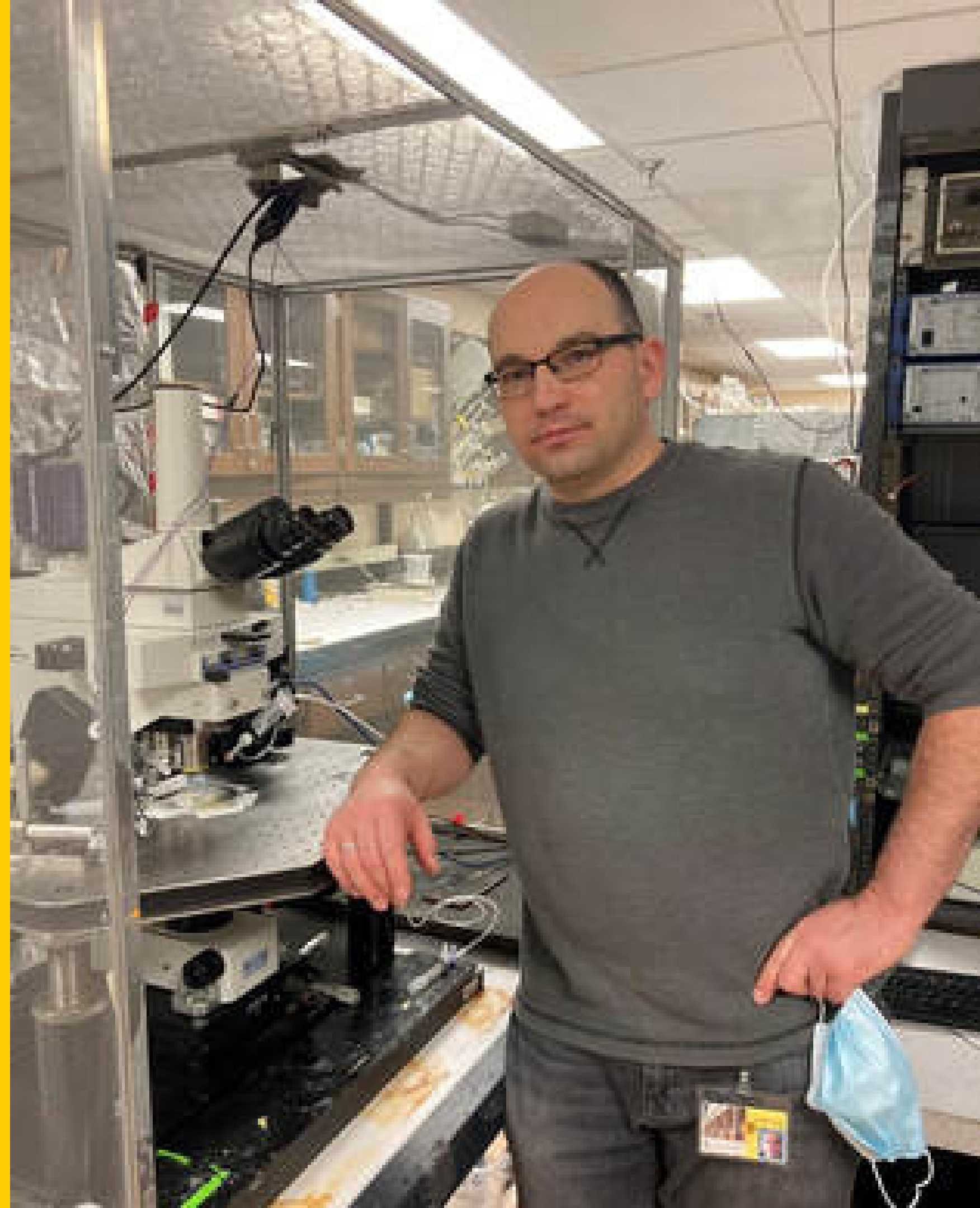
Andre' Thompson, MSW, CDC-AD

Pamela Walker, OTR/L

Research Highlights

Major contributors to our success include the Divisions & teams of:

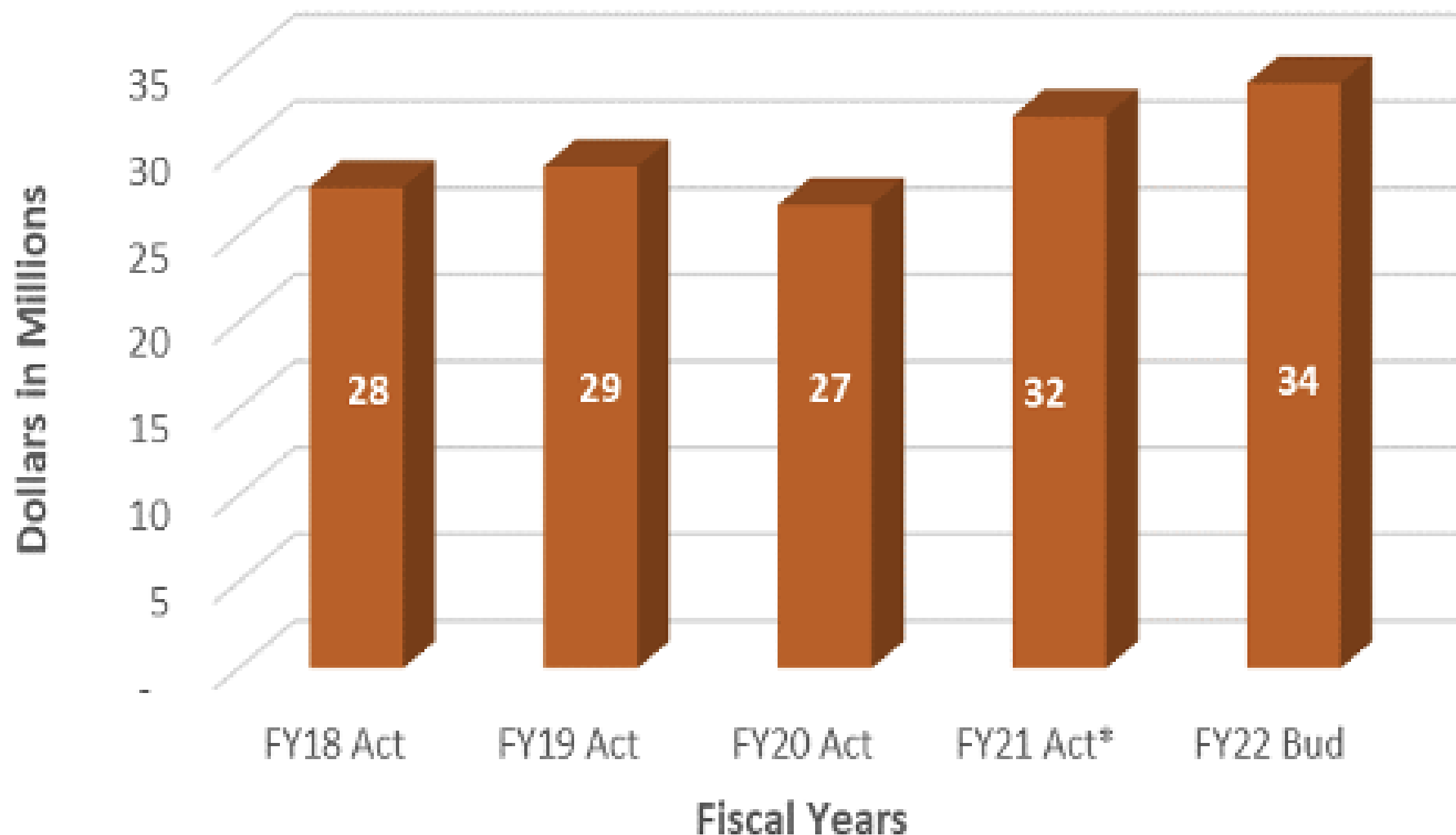
- Gloria Reeves, MD, Vice Chair
- Melanie Bennett, PhD
- Bob Buchanan, MD
- Richard Goldberg, PhD
- Todd Gould, MD





RESEARCH OVERVIEW

Grants & Contracts



* FY21 actuals are preliminary and subject to change

RESEARCH GRANTS

- \$19M; 58 active grants
- 18 active R01s
- 5 new R01s & 1 R01 Supplement
- 6% growth in research
- 18th on the Blue Ridge Report

COVID-RELATED GRANTS

- Submitted 24 COVID-related grants
- Projected \$15.5M
- 10 grants have been awarded

MPRC

- Submitted 29 grant & contact applications, including 15 NIH applications
- Awarded \$12M in grants



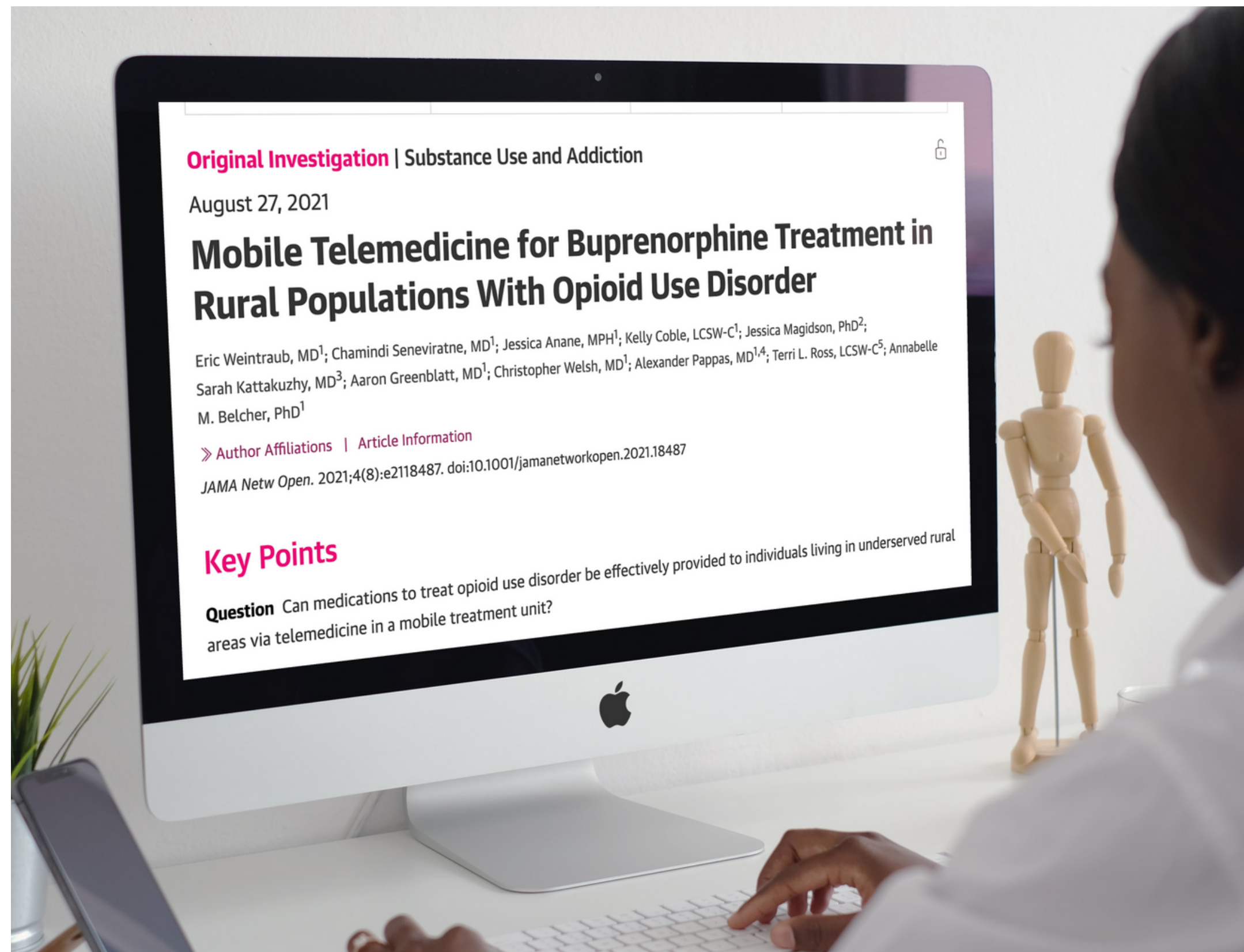
RESEARCH OVERVIEW

Publications

233 peer-reviewed
journal articles

8 book chapters

3 books

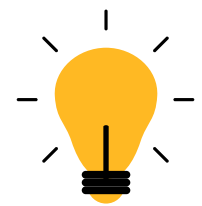


Education Highlights

Chief of Medical Education &
Director of Residency Training
Mark Ehrenreich, MD

- Residents received 17 national & local awards
- 99.4% ABPN test pass rate
- Published 26 papers
- Delivered 31 presentations





EDUCATION OVERVIEW: Highlights

- **Fellowships:** all 4 ACGME programs received continued accreditation
 - Addiction Medicine program -- initial accreditation with 2 Fellows
- **Virtual residency recruitment:** 17 PGY-1 & 1 PGY-2 residents
- **COVID:** maintained program by adjusting rotations through 8 hospitals
- **DEI:** Chief Resident of DEI, anti-racist book club
- **Medical Student Education:** created 2 online elective rotations, including on substance use treatment
- Added 3 clerkship sites
- Expanded sub-internship to Midtown



Clinical Highlights

Under the leadership of Jill RachBeisel, MD

- **Opened the Child & Adolescent Psychiatry Inpatient Unit**
 - Directed by Dr. Edwards
 - First of its kind within the state
 - Unique architectural design & clinical programming
 - \$9.5M hospital investment
 - 14,000 square feet, 16 beds
 - Services for youth ages 5-7
- \$18.1M from 29 service grants across all Divisions





CLINICAL OVERVIEW: Highlights

CONSULTATION LIASION

- Expanded its consultation and Integrated Care Initiative services to Shock Trauma
- Madeline Marks, PhD, coordinated efforts

COMMUNITY

- Provided access to vaccines & voter registration opportunities to individuals with SMI

MARYLAND CENTER OF EXCELLENCE ON PROBLEM GAMBLING

- Reached 3,000+ Maryland residents via presentations
- March Problem Gambling Awareness Month: 25,000+ emails sent

PA FACULTY PRACTICE & EMPLOYEE ASSISTANCE PROGRAM

- Served campus through COVID & every Monday - worked with COVID-19 Unified Command of UMMC
- Expanded Pharmacy Rehabilitation Service



CLINICAL OVERVIEW: Highlights

Midtown

- Est. telepsychiatry in ED
- Re-opened Adult Day Hospital
- Faculty implementing 2 research studies
 - Dr. Bennett - digital interventions to improve smoking cessation in persons with SMI
 - Dr. Kelly - Clozapine CHAMPION-ECHO

Telemental Health Program

- Launched its new website & social media





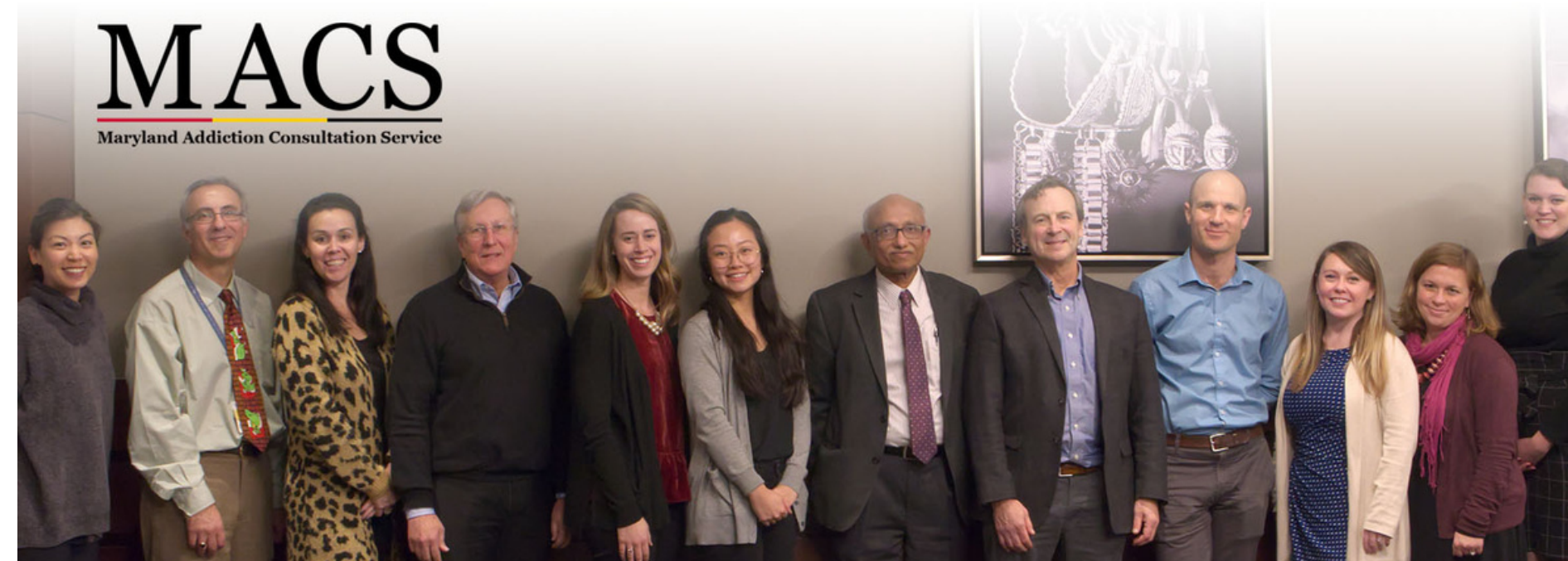
CLINICAL OVERVIEW: Highlights

Division of Addiction Research and Treatment

Maryland Addiction Consultation Service (MACS)

MACS for MOMS awarded \$957,678

- PI: Chris Welsh, MD
- To provide training & clinical support to providers caring for women with SUDs who are pregnant/postpartum



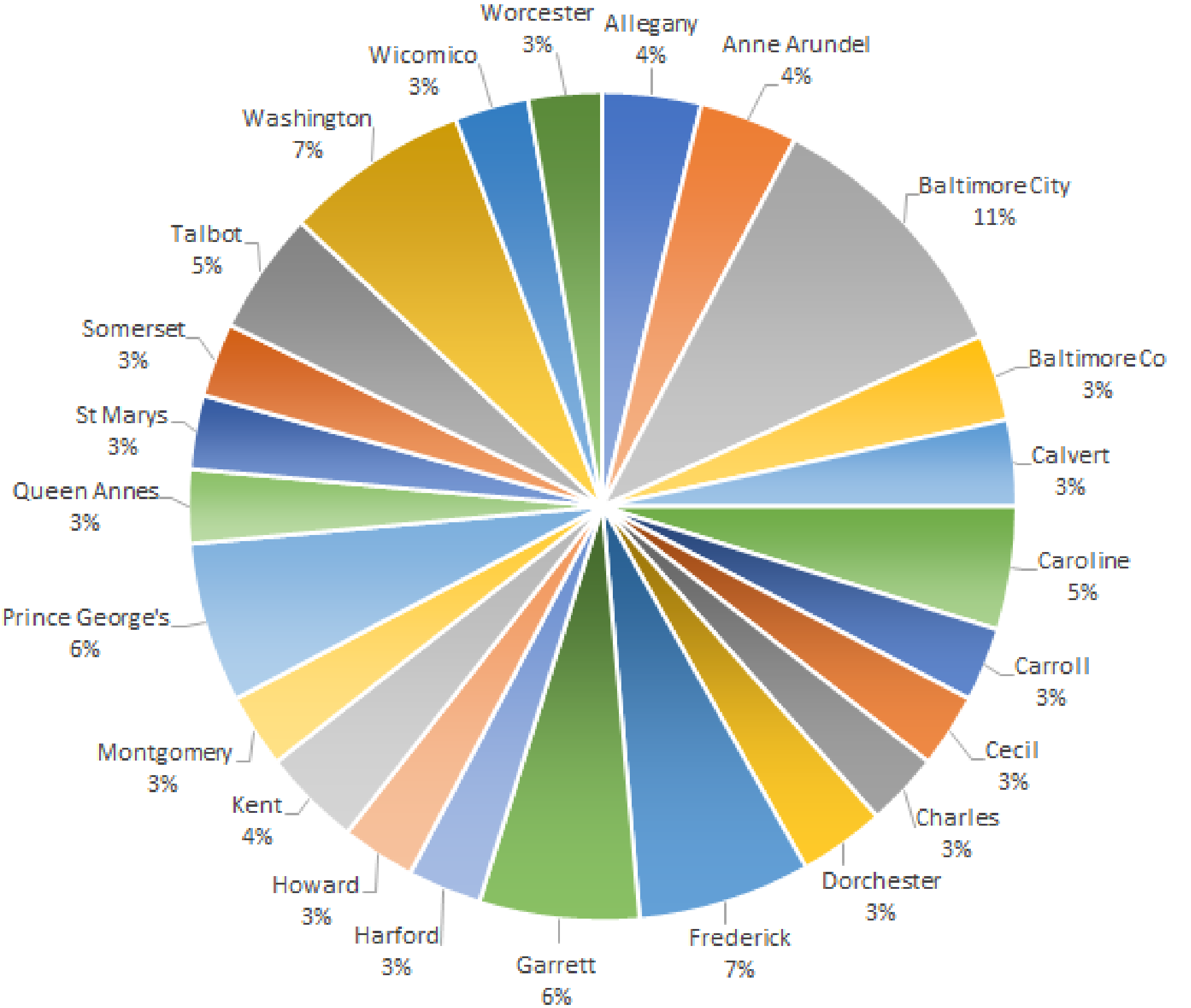
DC Addiction Consultation Service (DACCS) awarded \$2M

- PI: Eric Weintraub, MD
- To provide referral services to providers who treat individuals with SUDS & chronic pain



COMMUNITY OUTREACH: 30% of faculty involvement

Community Outreach by County



Heath And Recovery Practice (HARP)

University of Maryland Drug
Treatment Center
Division of Addiction Research and
Treatment

1001 West Pratt Street



Eric Weintraub, MD

Health and Recovery Practice (HARP)

Anthony Amoroso, MD

Associate Chief, Division of Infectious Disease
Chief, Clinical Care Programs for Institute of Human Virology, Director, Baltimore VA HIV and
Infectious Disease Clinic
Professor of Medicine

Eric Weintraub, MD

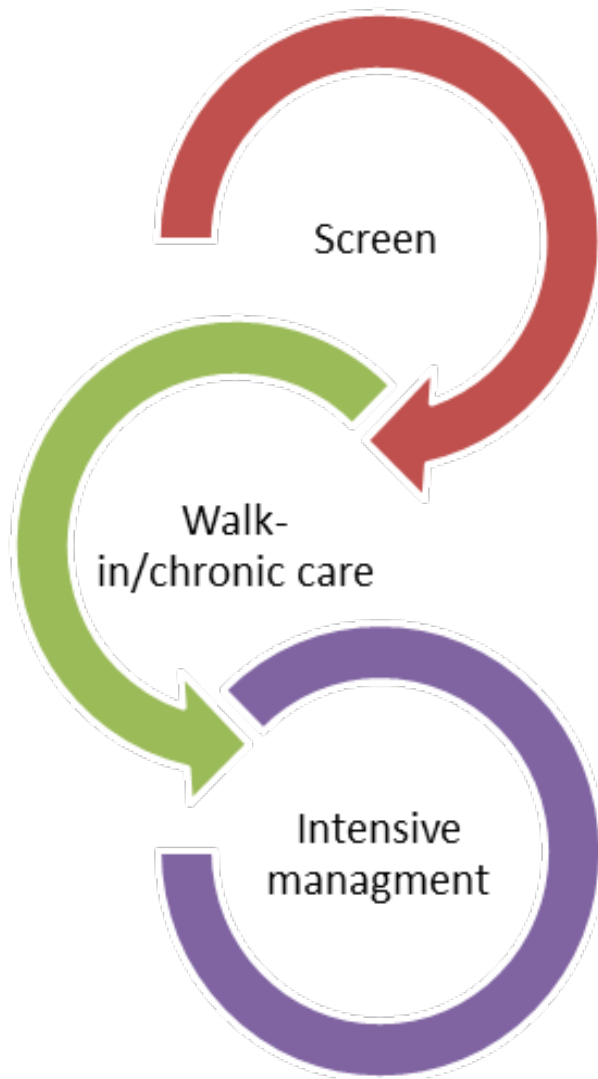
Division Head, Alcohol & Drug Abuse; Acting Division Head, Adult Psychiatry
Professor of Psychiatry Director Division of Alcohol and Drug Abuse Co-Director of Adult
Psychiatry, UMMC

October 7th, 2021



Background: Our “other” epidemic

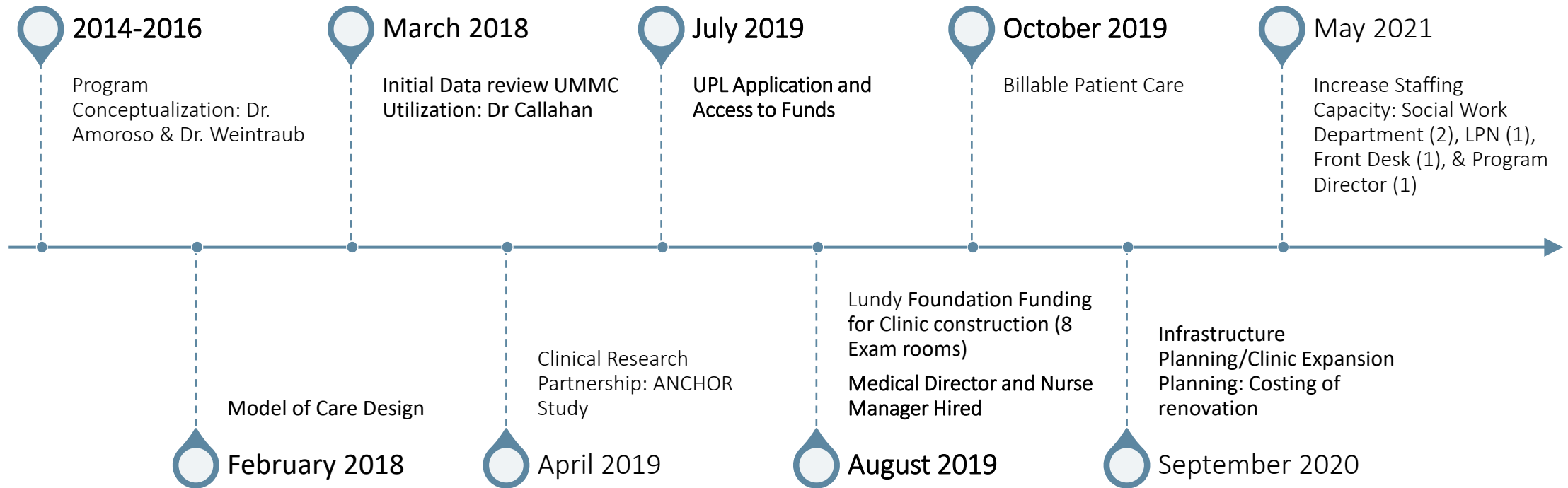
- Substance use and related morbidity and mortality is at an epidemic historic high both regionally and nationally. Nationally the cost for the opioid epidemic is upwards of \$1,021 billion and in Maryland over \$6.6 billion. ⁽¹⁾
- People with substance use issues have high incidence of chronic medical conditions needing ongoing medical care and psychiatric comorbidities ^(2,3,4)
- People with substance use disorders are marginalized from mainstream healthcare, including office-based primary care, leading to high ED and hospital utilization.
- High rate of utilization of emergency room services by this population in Baltimore, with lack of follow up, results in fragmented care and enormous costs to the patient and healthcare system ⁽⁵⁾
- Medication Based Treatment combines behavioral therapy with medication. It is highly effective but exists in a silo, disconnected with traditional locations of medical care.



Program Design

- Reverse colocation/integration of medical and substance abuse care to be delivered in a culturally competent and contextually relevant site within the premises of UMMC substance use treatment programs at 1001 W Pratt St.
- Delivery of both primary and preventive care as well as same-day appointments for acute issues.
- Intensive targeted medical care and case management, including post ER discharge care for the highest utilizing segment of the patient population.
- Subspecialty care for management of HIV and hepatitis C is built into this model due to high prevalence of these conditions in this population.
- Recovery services are essential components of the initiative

Project Timeline



Scope of HARP Services

Primary Care /Urgent Care

Provide comprehensive care and continuing care for persons with any undiagnosed sign, symptom, or health concern

Psychiatric Care

Provide outpatient evaluation of diseases related to mental health

Infectious Disease

Provide outpatient prevention and treatment of communicable diseases. Ensures proper disease prevention, diagnosis, treatment, and recovery.

Wound Care

Provide outpatient prevention and treatment of wounds. Ensures proper disease prevention, diagnosis, treatment, and recovery.

Social Work and Case Management

Provide social support to individuals including relationship building, life skills instruction, employment support, tangible support including food & financial assistance, & information & referral services

Nurse Care Coordination

Provide patients with chronic medical conditions and high healthcare utilization care coordination

Program Goals and Objectives

Goal 1: Harm Reduction targeted to most at-risk population and common comorbidities

- Comprehensive health screenings
- Management of chronic medical conditions
- Integrated pharmacy management and dispensing
- Community care coordination

Goal 2: Utilization Reduction targeted to the emergency room and inpatient hospital care

- Provide on-demand primary care and urgent care services
- Population and sub-population specific-targeted intensive medical care and case management to reduce ED and hospital utilization for the most resource-intensive patients
- Post-hospital and Emergency Department (ED) follow-up for individuals with complicated conditions that need detailed follow-up care
- Connect to Care program to facilitate enrollment into substance abuse and medical services
- Expansion of recovery services

Goal 3: Address the social determinants of health (SDOH)

- Integrated case management and social work
- Community engagement through a peer support worker program

HARP Early Impact (Year 1 & 2 UPL)

HEP C

- 117 people treated for Hepatitis C (would not have otherwise been treated):
 - 94 were cured
 - 9 failed treatment
 - 14 unknown SVR (completed treatment but no cure data; mostly these are lost to follow up)
- 4 on active treatment
- 21 currently being worked up for treatment

HIV

- 14 currently on HIV ARVs
 - 86% virally suppressed

HARP Early Impact (Year 1 & 2 UPL) Cont'd

Psychiatric Care

Over 25% of OTP clients have sought psychiatric care at HARP

Wound Care

25% of HARP's patient panel are seeking wound care treatment

Harm Reduction Services

- Syringe Access Partnership with Harm Reduction Coalition
 - Officially recognized as an Opioid Response Program by The Maryland Department of Health (8/2021)
 - 80,000+ syringes distributed
 - 4,500+ Naloxone treatments distributed
 - 338 COVID-19 vaccines administered
 - 60 flu vaccines* (2020-2021 season)

Ketamine Study

Gould Lab
Translational Laboratories

Division of Addiction Research &
Treatment



Todd Gould, MD



Annabelle (Mimi) Belcher,
PhD



Increasing Retention in Methadone Maintenance Treatment: Feasibility and Preliminary Efficacy of Adjunct Ketamine for the Treatment of Patients with Opioid Use Disorder and Comorbid Depression

Background: Ketamine Treatment for Depression/Depressive Disorder

Over two decades, controlled studies have described a rapid, robust, and sustained antidepressant response following infusions of sub-anesthetic doses of ketamine (or intranasal esketamine; Spravato ®)

The discovery of the rapid antidepressant efficacy of ketamine, as well as esketamine has resulted in a reconceptualization of how depression could be treated

Ketamine has been used clinically in the context of opioid agonist treatment, but studies investigating its use in patients enrolled in an opioid agonist treatment (methadone) program are lacking



Eric Weintraub, MD



Max Spaderna, MD



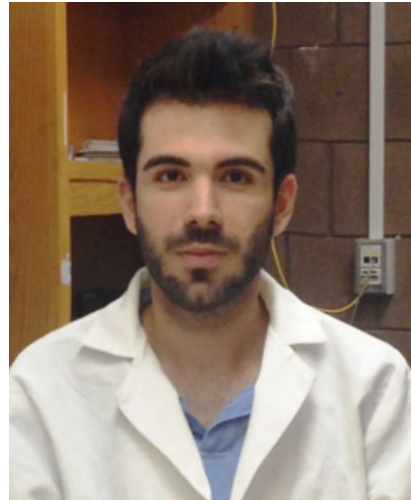
Aaron Greenblatt, MD



Annabelle Belcher, PhD



Todd Gould, MD



Panos Zanos, PhD



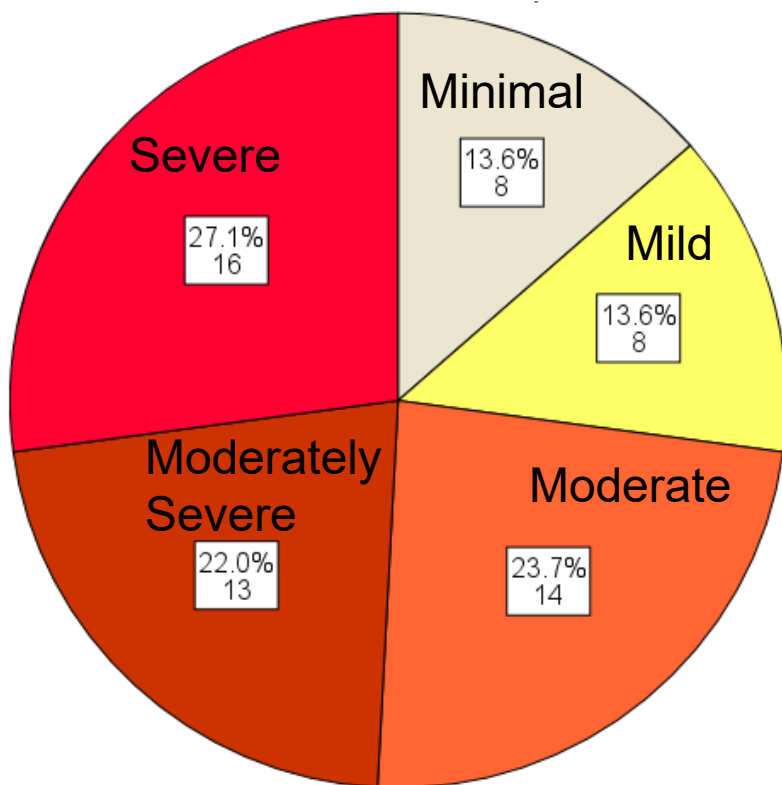
Sarah Clark, PhD



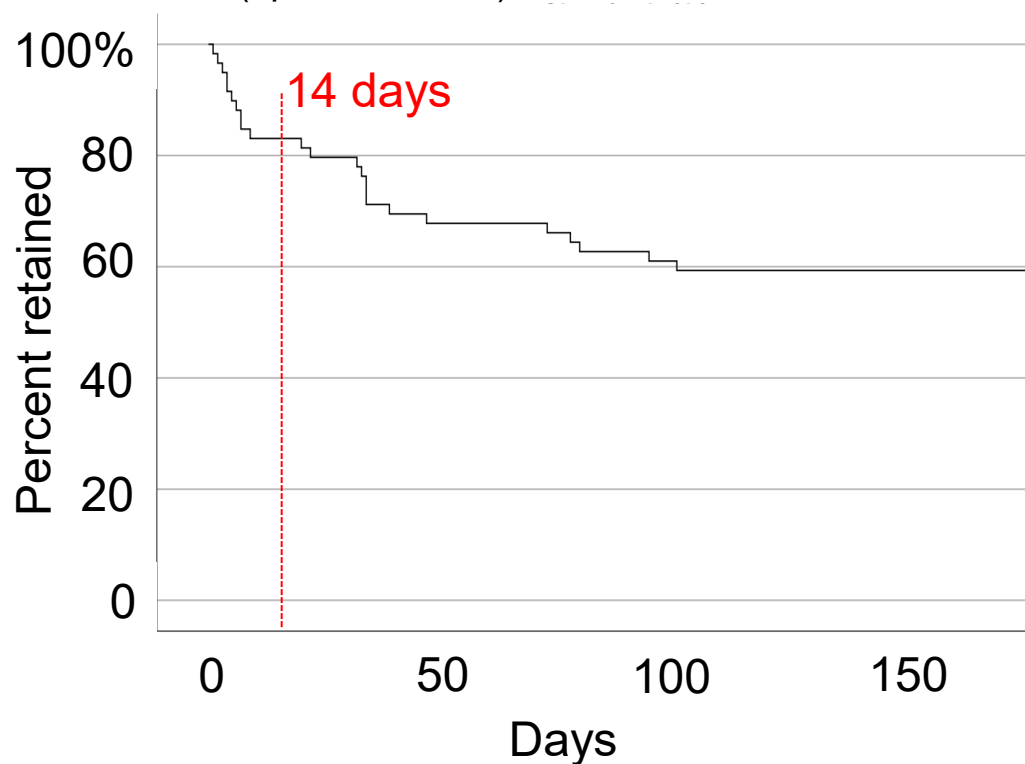
Greg Elmer, PhD

Methadone Maintenance Treatment for Opioid Use Disorder (OUD)

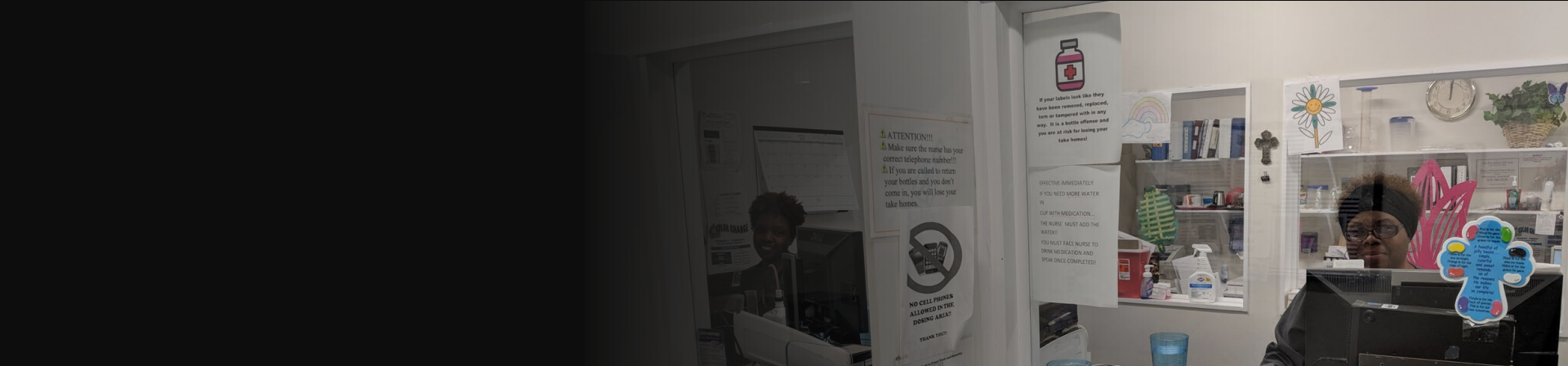
PHQ-9 Depression Symptom Scores



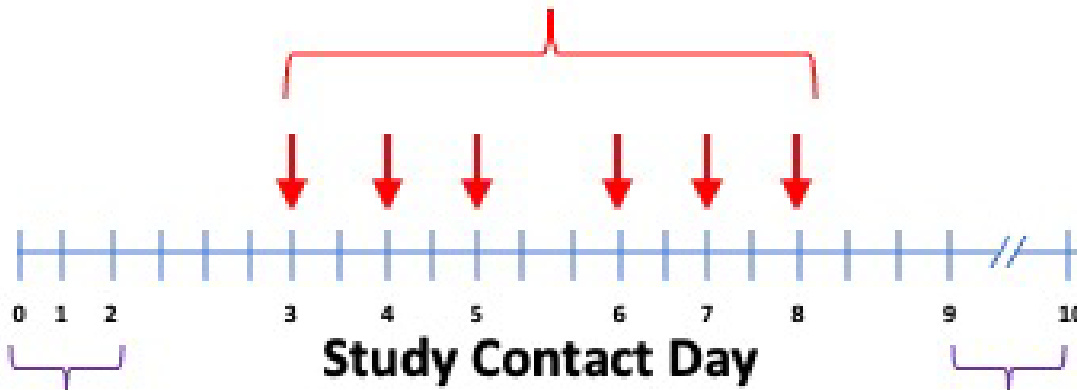
Retention in methadone treatment (up to 6 months)



N= 59 patients entering methadone treatment at UMATC between 8/21/19-2/11/20 (unpublished data, Belcher, Bennett)



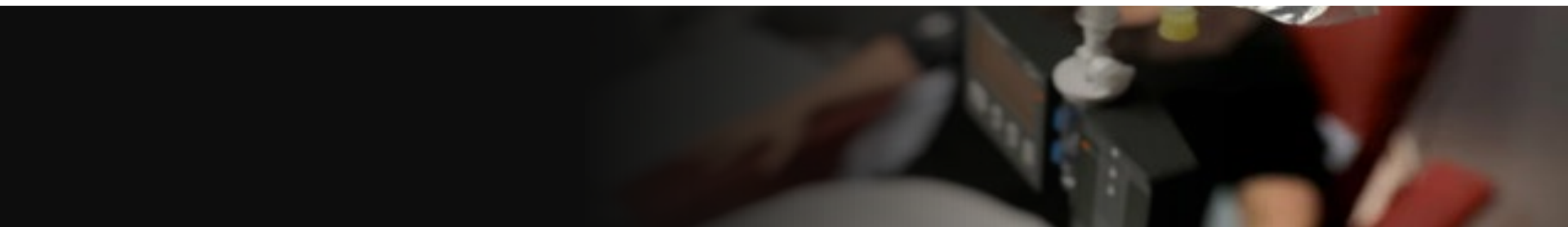
Ketamine infusions (0.5
mg/kg over 40 min x 6)



3- and 6-month Retention

Screening, Consent,
Baseline Assessments

3- and 10-day Post-
Regimen Assessments





Bethany DiPaula, PharmD



Carlos Zarate, MD



Aaron Greenblatt, MD



Mark Kvarta, MD, PhD



Eric Weintraub, MD



Max Spaderna, MD



Todd Gould, MD



Annabelle Belcher, PhD



Heather Fitzsimons, MS



Sarah Kattakuzhy, MD



Donny Gann, MSW



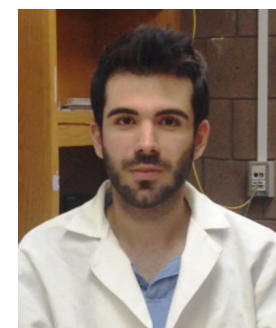
Melanie Bennett, PhD



Sarah Merritt, MD



Dan Roche, PhD



Panos Zanos, PhD

Translating Big Data to Personalized Medicine

Maryland Psychiatric Research Center
(MPRC)



Peter Kochunov, PhD

Translating Big Data Neuroimaging Findings In Neuro-Psychiatric Illnesses to Individual.

Toward Big Data Informed Personalized Medicine Decisions

Peter Kochunov



UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE



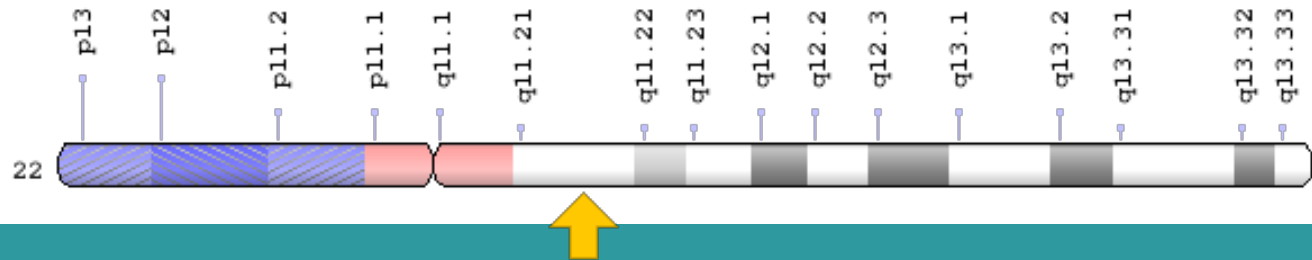
Critical Summary: State of Psychiatric Science

- Diagnosis is based on clinical feature: many are shared across disorders.
- Unexplainable heterogeneity in the individual presentations
 - Age and type of onset
 - Signs and symptoms
 - Course of illness and treatment response
- Most science is performed within Diagnostic Silos
- No objective postmortem or antemortem tests to rule out.
- Complex polygenic inheritance pattern: shared across disorders
- Complex genetic and environmental risk factors : shared across disorders
- Paucity of adequate animal models
- Can we translate Reproducible Big Data findings to improve the state of psychiatric science?

Reproducibility is the key to the translation

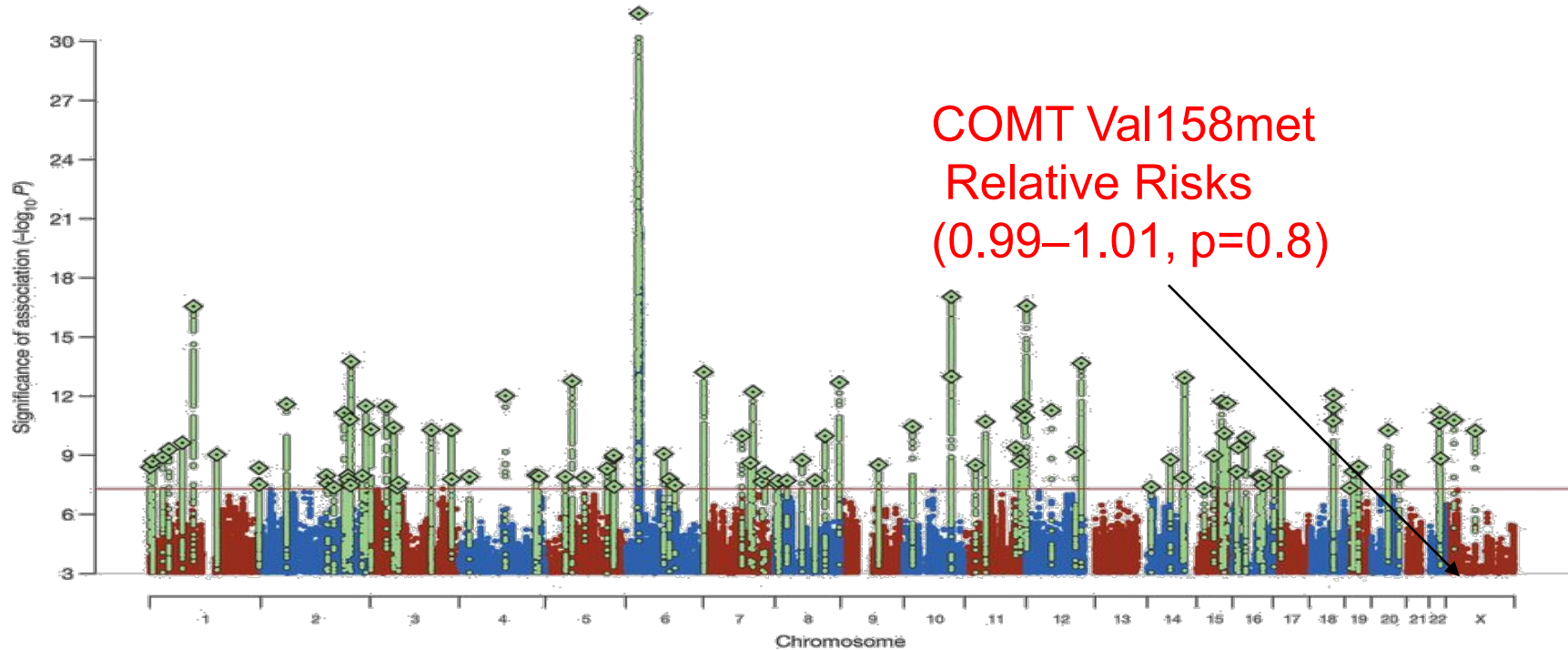
Example: Candidate Gene vs. PRS

- COMT was a hot target for schizophrenia research in 2000s.
- COMT is a protein that degrades catecholomins and maintains the homeostasis of dopamine
- Val158met variant is functional
- A 22q11 CNV/deletion
 - Raises the risk of schizophrenia-like symptoms ~30 times
- Over 700 publications on the topic of schizophrenia and bipolar disorder



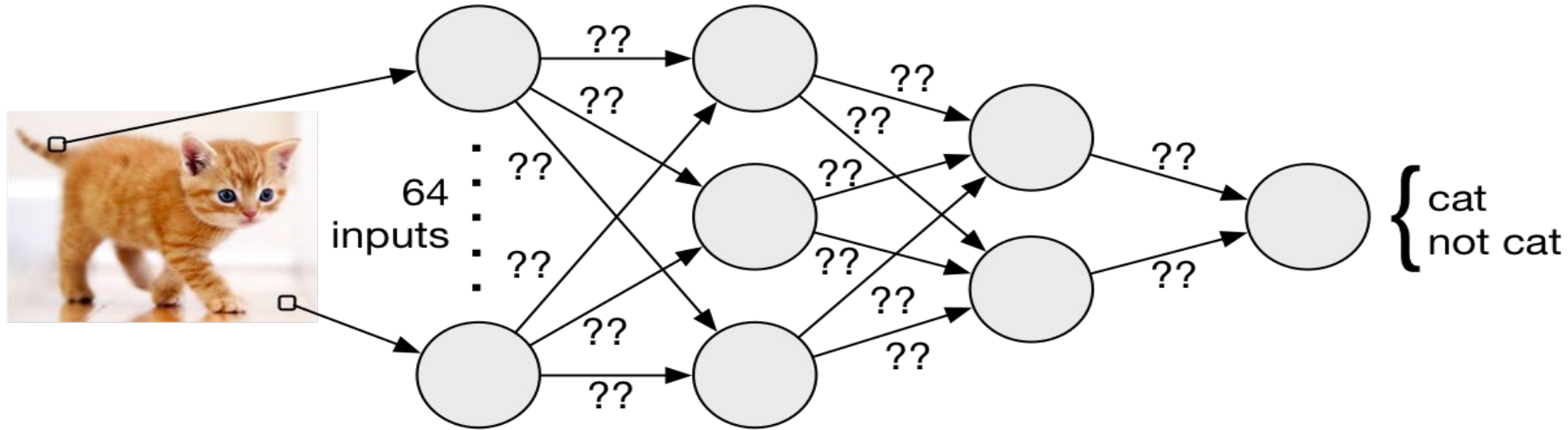
GWAS vs. Candidate Genes

- PGC findings in N=150K subjects in Schizophrenia



The Era of Big Data and Personalized Risks

A neural net can recognize a photo of a cat based on empirical knowledge through training

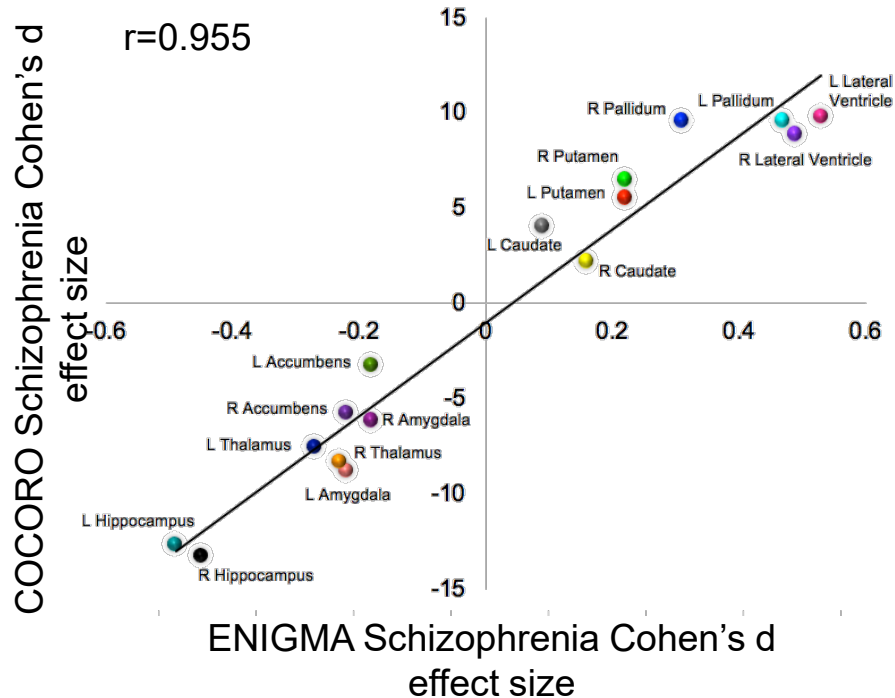
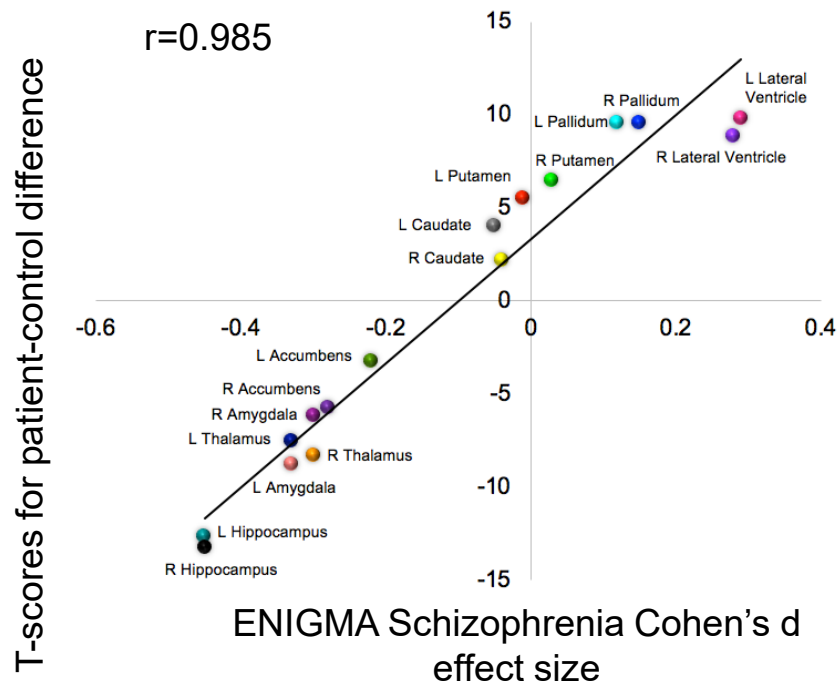


Can we develop approaches that link genome and imaging data with personalized risk?

Data-driven Individual Vulnerability Estimations

- Entry variable: Imaging scans of the brain
- Support variable: Patterns of brain deficits obtained from large and inclusive world-wide studies to remove variances associated with site, individual heterogeneity, treatment heterogeneity, localized differences, etc
- Output variable: Similarity to the expected patterns

Brain effects in Schizophrenia, MDD, BD and other illnesses from large N-studies are replicable in independent cohorts



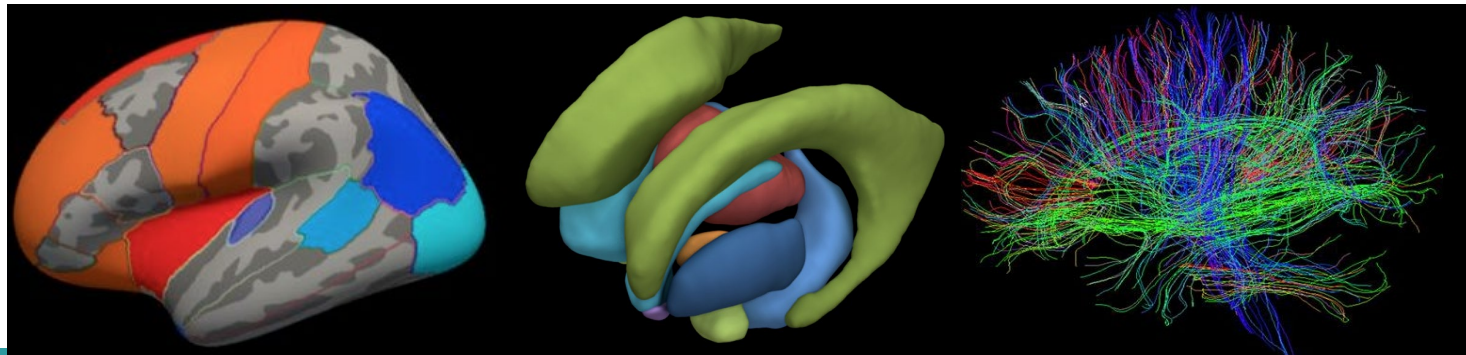
RO1 MH123163/EB015611 Projects

- Derive agreement indices between the regional brain patterns and Large-N indices from SSD/BD/MDD
- Compare linear vs Machine Learning/AI indices
- Provide these indices for Human Connectome Project

Cortical

Subcortical

DTI



Future Goals

- Research
- Education
- Clinical
- Departmental



RESEARCH: Ongoing & Future Goals

- Actively recruiting:
 - 1-2 translational clinical investigators
 - 1 basic science investigator
 - Maryland Psychiatric Research Center (MPRC) Director
- Formulating plans to relocate MPRC to the Downtown Campus (DTC)
 - Continuing growth in translational research programs: stress, mood, & addictions
 - Strengthen relationships with Substance Use in Pregnancy (SUP) programs in Anatomy & Neurobiology
 - Expanding collaborations: UMCP, UMBC, Dept. of Radiology, Dept. of Anatomy & Neurobiology
 - Moving to #17 on the Blue Ridge Report
 - Center for Advanced Research Training & Innovation (CARTI)



EDUCATION

- Continuing virtual recruitment across all programs
- Conducting groundwork to stand up a geriatric/neurocognitive fellowship
- Continue recruiting for our Physician Scientist Training Program (PSTP)



CLINICAL

- Actively recruiting:
 - 2 clinical faculty educators -12 West DTC unit
 - Medical Director - PA practice
- Conducting a practice redesign to improve PA Faculty support
- Designing & integrating research initiatives & practices into our clinical programs
- Continuing our partnership with GBRIS/State/HSCRC to enhance crisis response & care in mental health
- Slated for January: single point of entry for adult ambulatory programs
- Under consideration: mother/baby or mother/family wellness program





DEPARTMENTAL

- Establishing our new normal
- Defining ongoing DE&I priorities & action plans at every level
- Moving from "I" to "We"
 - Strengthening a culture of voice
 - Maximizing our Departmental Intelligence

Department of Psychiatry State of the Department

Thank you for a wonderful year!

