

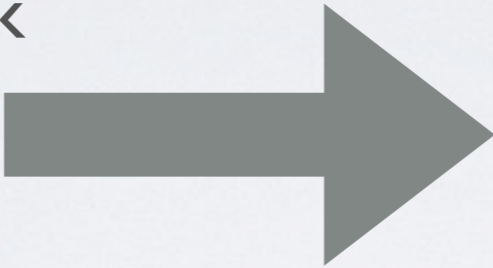


DEPARTMENT OF GENETICS

State of the Department
July 2017 - June 2018

DEMOGRAPHICS

87 Total Faculty

- 28 Tenured/tenure track
 - 32 Fixed-term
 - 11 Joint, 10 Secondary, 5 Adjunct, 1 Emeritus
- 

38% female and 62% male

3.3% African American

5.0% Hispanic

13.3% Asian

78.4% White

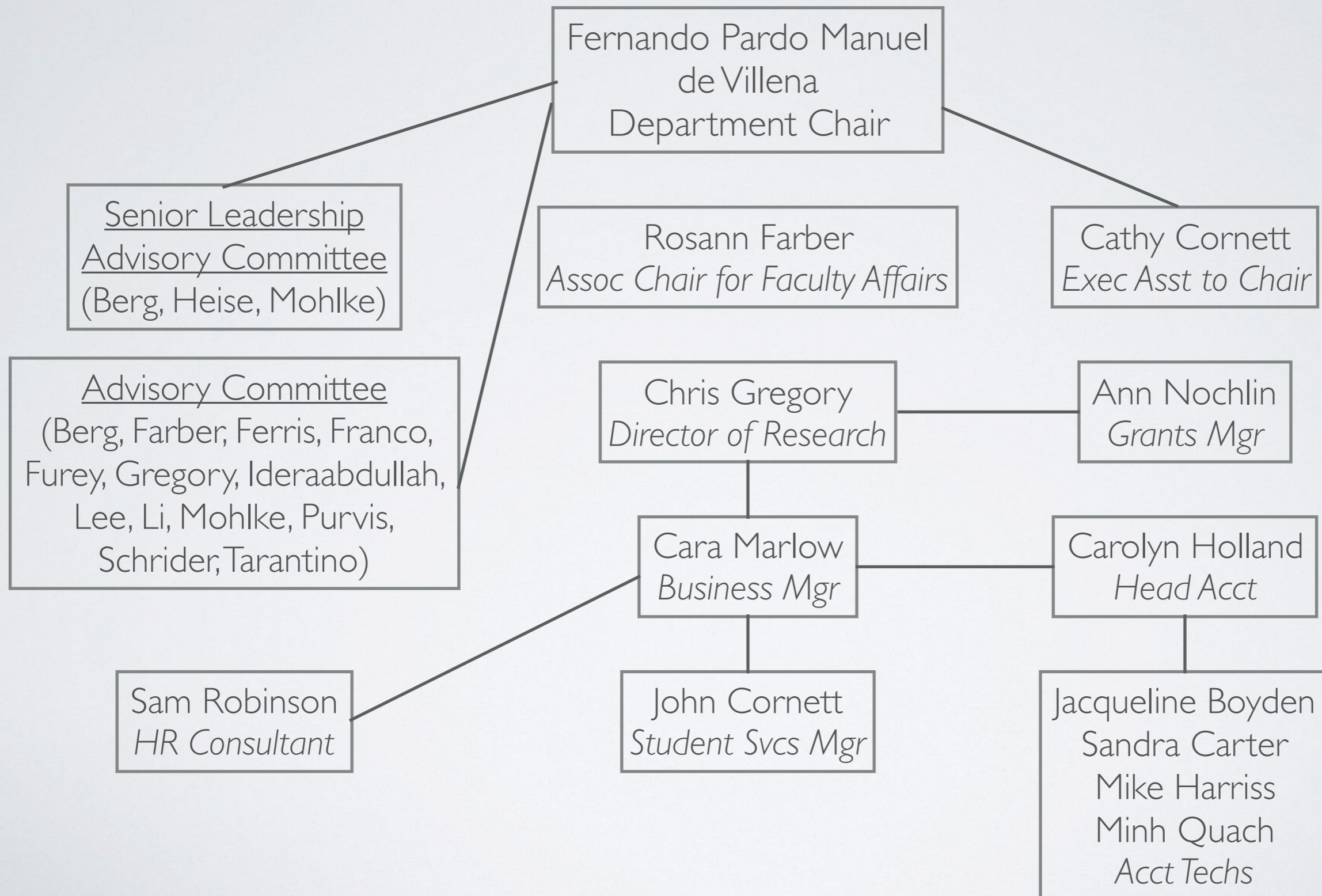
23 Postdoctoral Fellows

123 Graduate Students

52 Undergraduate Students

85 Technical / Research / Administrative Staff

DEPARTMENT OF GENETICS ADMIN ORG CHART



FACULTY ORGANIZED BY RESEARCH INTERESTS

	HUMANS				ANIMAL MODELS			MOLECULES/ CELLS/DATA/ METHODS		
	CLINICAL	CANCER	PSYCH	OTHER	INFEC/ IMMUNE	DISEASE	BASIC	STATS	GENOMICS	OTHER
TENURED/ TENURE TRACK	Evans Berg Powell	Ting Perou Pylayeva- Gupta Franco Tzagartaou	Sullivan Wilhelmsen Stein Won	Mohlke	Heise Miller Whitmire	Magnuson Koller Tarantino Bultman	Pardo Manuel de Villena Ahmed Ideraabdullah	Liu Zou Li Valdar Love Jiang	Furey McKay Purvis Schrider	Farber
FIXED- TERM	Finch Foreman Garbarini Goldstein Lee Messmore O'Daniel Skrzynia	He Hoadley Parker	Crowley Farrell Giusti Simon Szatkiewicz		Ferris	Ciavatta Gracz Jang Mu Raab Shpargel Smith Starmer	Wang			Cowley Gregory Kelkar Mieczkowski

FACULTY CHANGES IN FY18

JOINED or (PROMOTED)	DEPARTED or RETIRED
Dan Schrider, PhD	Daniel Pomp, PhD - Ret/Emeritus
Shenghui He, PhD	Aravind Asokan, PhD
Ashlynn Messmore, MS	Alejandro Colaneri, PhD
Jeremy Wang, PhD	Chris Barker, PhD - Ret
Ageliki Tsagaratou, PhD	Xianyong Yin, PhD
Hyejung Won, PhD	Justin Wilson, PhD
Samir Kelada, PhD (Assoc Prof, 9/1/18)	
Katherine Hoadley, PhD (Asst. Prof.*)	
Bradford Powell, MD, PhD (Asst. Prof.*)	

* ongoing

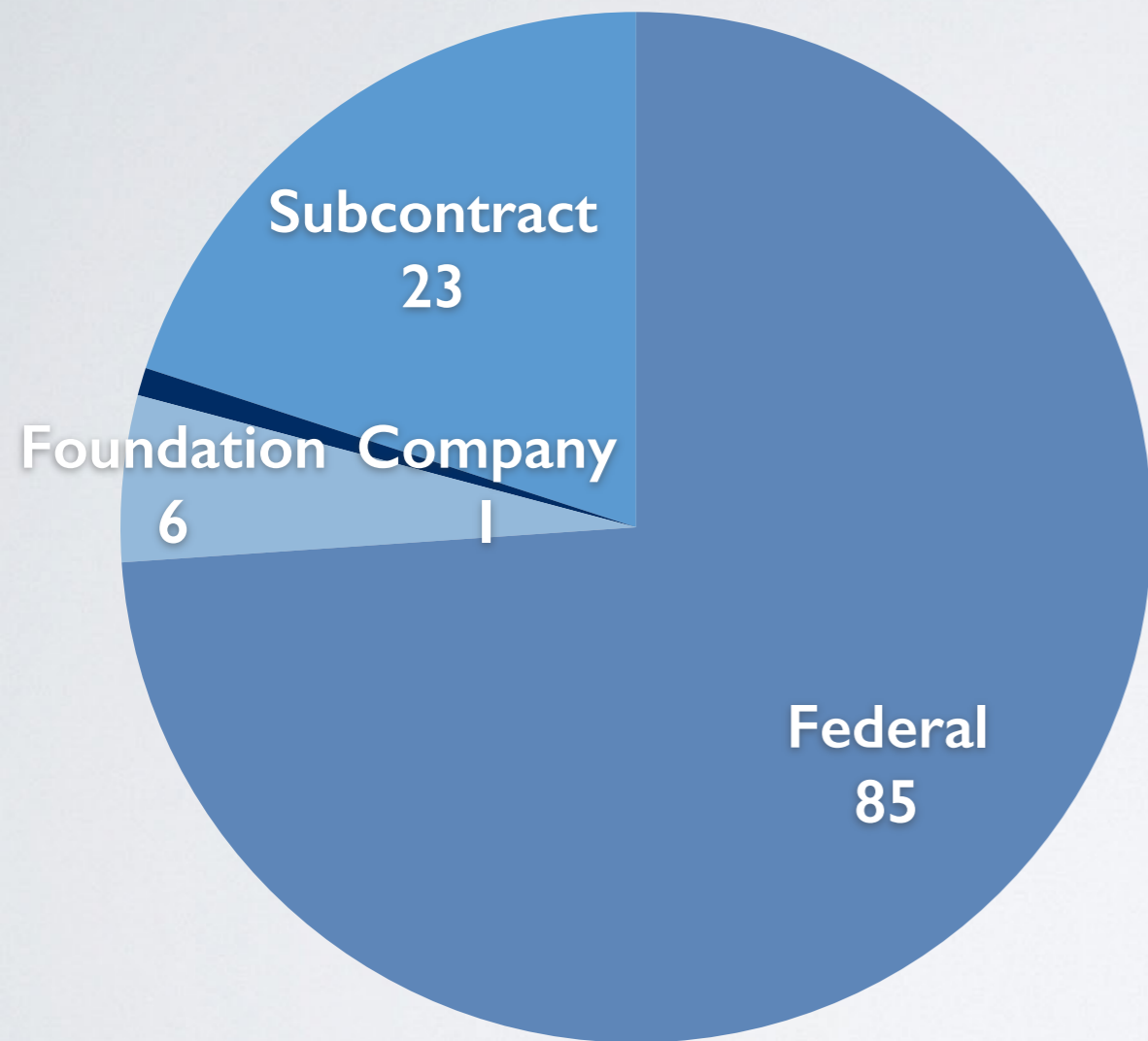
PRODUCTIVITY AND FUNDING

DEPARTMENT OF GENETICS PI'S

FISCAL YEAR	FY15	FY16	FY17	FY18
Applications Submitted	159	162	156	156
Applications Funded	86	102	104	114
Total Awarded	\$34.96M	\$39.78M	\$43.47M	\$42.1M
Genetics Admin	\$22.1M	\$28.4M	\$26.1M	\$27.5M
Average Total Award	\$406K	\$390K	\$418K	\$369K
Median Total Award	\$357K	\$409K	\$234K	\$146K

Ranked #5 nationally compared to all universities (Baylor, Stanford, Wash U, Mt. Sinai) for 2017

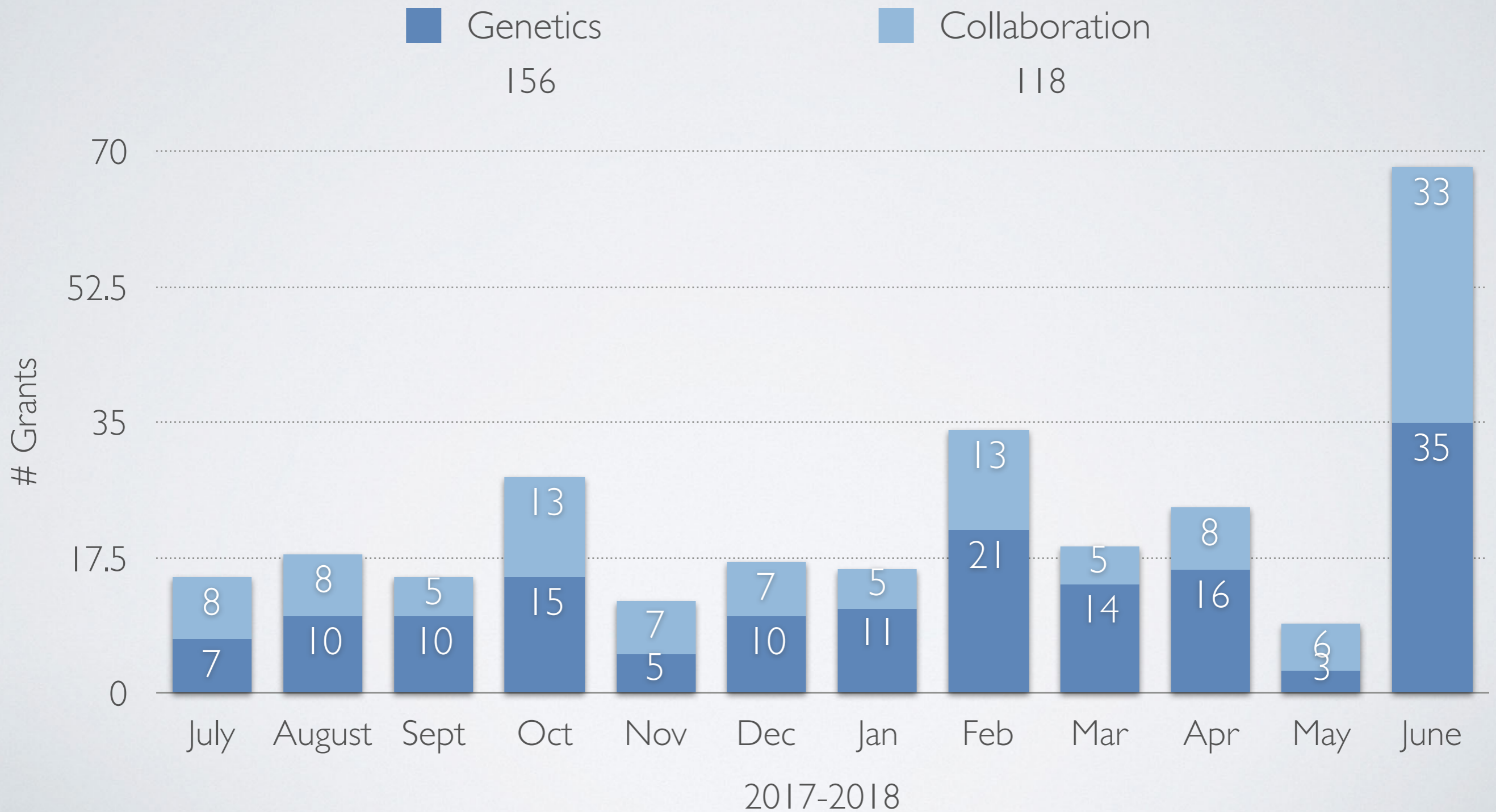
FY18 AWARDS BY FUNDING SOURCE - GENETICS PI'S



114 Awards in FY18
\$42.1M

AGENCY	# AWARDS
NCI	12
NHGRI	4
NHLBI	7
NIAID	12
NICHD	4
NIDDK	5
NIEHS	1
NIGMS	13
NIH Off Director	3
NIMH	18
NINDS	5
USDA	1

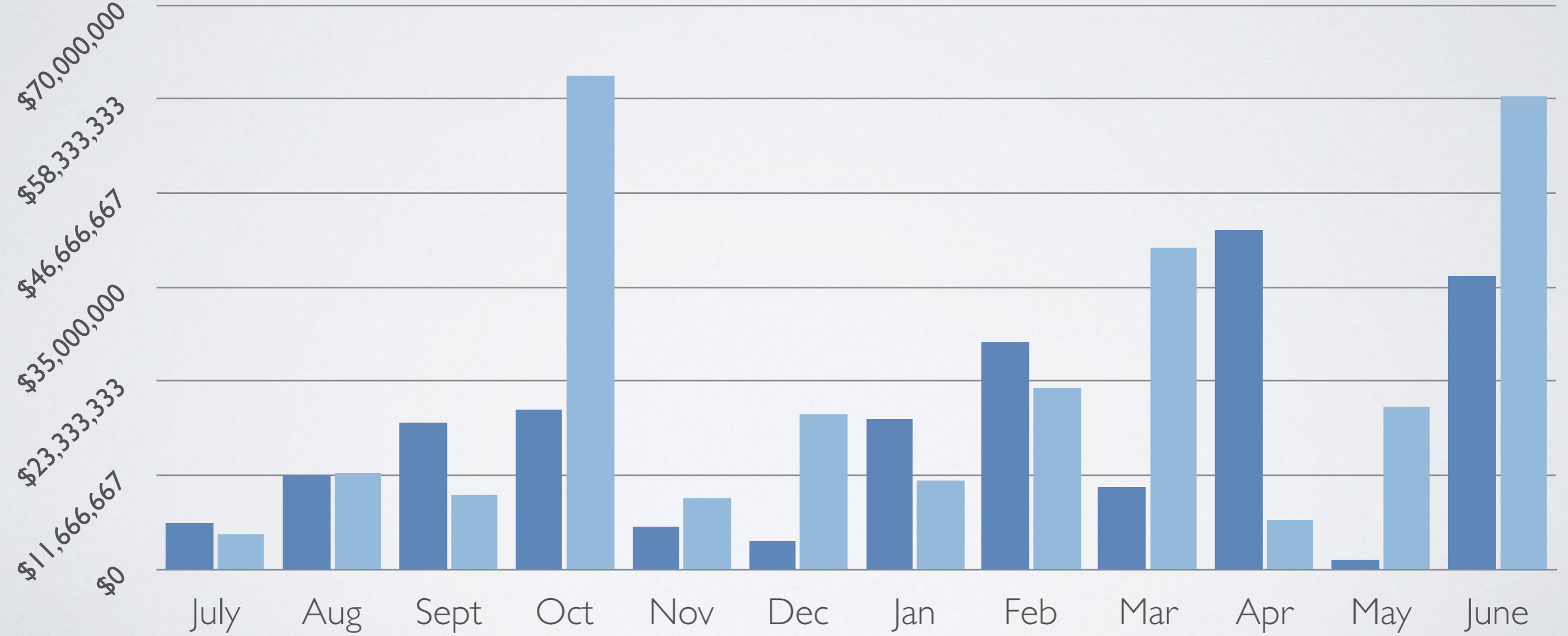
GRANT APPLICATIONS SUBMITTED PER MONTH BY GENETICS FACULTY



TOTAL FUND VALUE OF GRANT APPLICATIONS SUBMITTED PER MONTH

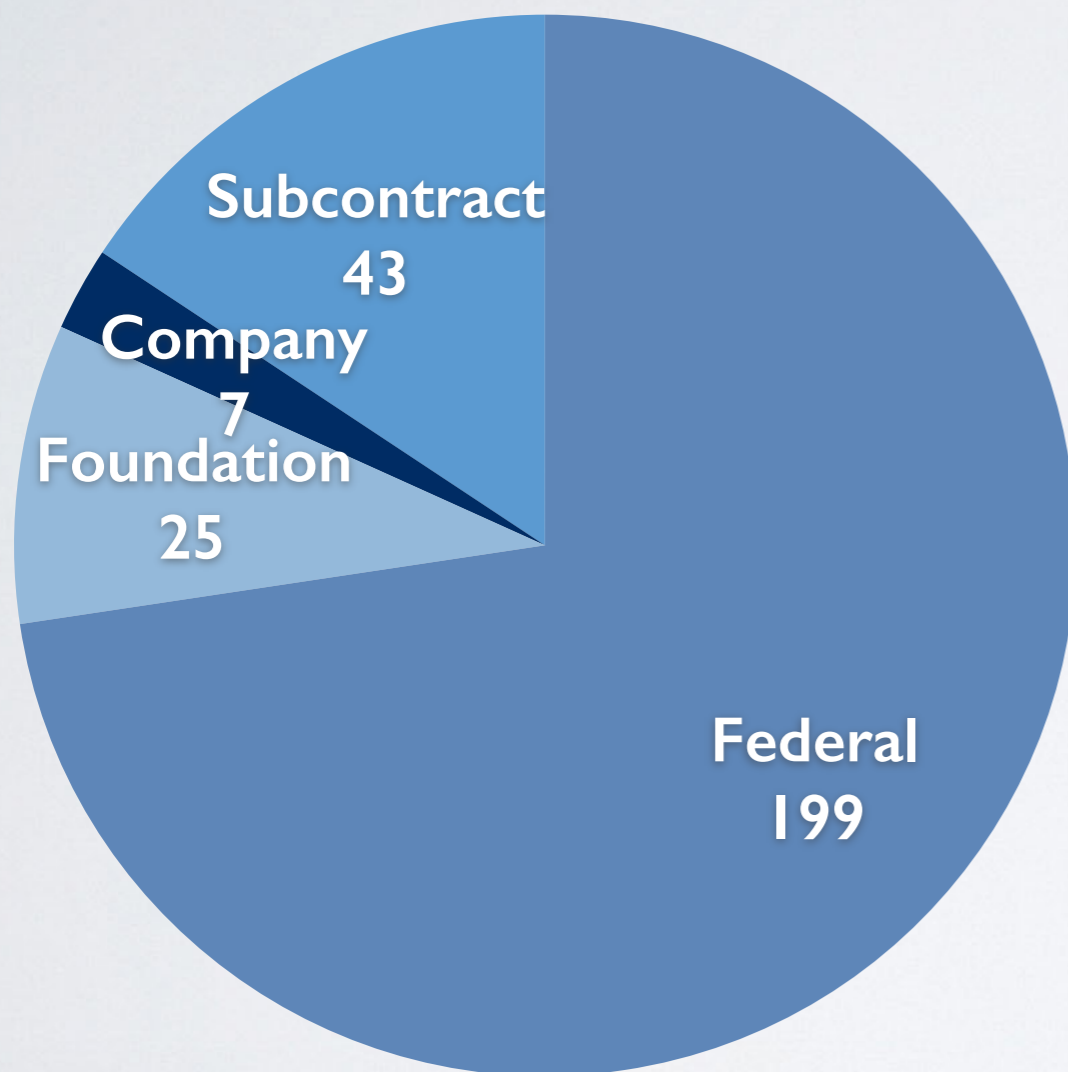
■ Genetics ■ Collaboration

\$471M in Total



2017-2018

DISTRIBUTION OF SUBMITTED GRANT APPLICATIONS - INCLUDES COLLABORATIONS



274 Applications
Submitted during FY18

AGENCY	# APPLICATIONS
DOD	9
NCI	5
NHGRI	5
NHLBI	6
NIA	1
NIAAA	1
NIAID	7
NIBIB	1
NICHD	3
NIDA	1
NIDCR	3
NIDDK	9
NIEHS	4
NIGMS	7
NIH	114
NIH Off Director	2
NIMH	15
NINDS	1
NIOSH	1
NSF	2
USDA	1

FY18 OPERATING BUDGET

\$30,400,000

Extramural Funding (90%)
Overhead (FY17 F&A) (4%)
State Funds (6%)

The department is fiscally sound, well-managed, and heavily dependent on extramural funding.

CLINICAL ACTIVITY (APR 2017-MAR 2018)

GENETIC COUNSELING

Seven Genetic Counselors (6.3 FTE)

Three Medical Geneticists (1.0 FTE)

- 1336 New patient encounters (billable visits)
 - *Hereditary Cancer - 794*
 - *General Adult - 157*
 - *Cardiology - 15*
 - *Hemophilia - 134*
 - *Hereditary Hemorrhagic Telangiectasia - 45*
 - *High Risk Gastrointestinal - 48*
 - *Ophthalmology - 49*
 - *Telemedicine - 94*

Additional patient care efforts:

- **Phone counseling for results and follow-up - 726**
- **Patient summary letters - describes visit, provides assessment, test results and next steps - 1056 letters sent**
- **Patient consultations as needed**



CORES SUPPORTED BY GENETICS

Systems Genetics

Customers

Internal - 25
External - 26

3822 Mice
840 Genotypes

Revenue

UNC Cust - \$274K
External - \$301K
TOTAL: \$575K

Mutant Mouse Resource and Research Center

Customers

Domestic - 31
International - 27
Items Ordered - 64

Revenue

Domestic - \$52K
Intl - \$75K
TOTAL: \$127K

GRADUATE CURRICULA SUPPORTED BY DEPARTMENT

<u>CURRICULUM</u>	# STUDENTS 2018	# FACULTY 2018	NEW STUDENTS JOINED 2018	# GRADUATES 2017-2018
GENETICS & MOLECULAR BIOLOGY (GMB)	82	79	10	20 (PhD)
BIOINFORM & COMP BIOLOGY (BCB)	41 (31 PhD, 10 Cert)	66	11	8 (PhD)

SEMINARS SUPPORTED BY DEPARTMENT

GMB Seminars

Twice Weekly
Spring and Fall
Tues and Friday

BCB Seminars

Once Weekly
Fall
Mon Colloquium

Genetics Seminars

Once Weekly
Spring and Fall
Wed Colloquium

Annual Retreat - Genetics, GMB, BCB
New Student Talks - Full day symposium (May)
BCB Symposium - Full day in Fall

Both programs will be submitting new T32 applications this year

REPORTS OF INVENTION FY18

- **Genetics Faculty as Lead Contributor - 7**

- **Genetics Faculty as Collaborator - 2**

- DNA-based predictors of complex cancer phenotypes
- Method for ocular gene transfer
- Gene therapy to inhibit TH17 cell function by delivering SKI expression
- Humanization of high affinity IgE receptor FCER1A
- Method to treat Angelman syndrome by targeting UBE3A-ATS
- Engineered assembly activating proteins
- Mouse lacking 15-hydroxy-prostaglandin dehydrogenase
- Humanized FCGR mice
- TET2 H1803R mice

DEPARTMENT OF GENETICS SPACE ALLOCATIONS (SQ FT)

BUILDING	TOTAL SPACE	OCCUPIED	AVAILABLE
Genetic Medicine	28900	27775	1125
Burnett-Womack	4146	4146	-
Fordham Hall	3223	3223	-
Carolina Crossing C	2000	1600	400
Taylor Hall	768	768	-
Bioinformatics	500	500	-
Med Biomol Res	312	312	-
TOTALS	39489	38324	1525

COMMITTEES AND POLICIES ADOPTED FY18

Committees

Advisory Committee - 14 members, monthly meeting

Fixed-term Faculty Mentoring Committees - annual meetings to discuss career development

Senior Leadership Advisory Committee

Faculty Performance Reviews - conducted in May-June

Specific Aims Club - *ad hoc*

Policies

COMPLETED

- Policies on Joint, Secondary and Adjunct Appointments
- Fixed-term Faculty Policies
- Faculty Performance Review Dashboard

TO BE COMPLETED IN FY19

- Variable Compensation revision
- Space Utilization Policy
- GMB Computational Space Remodel
- Strategic Plan for department
- New faculty recruitment strategy

DEPARTMENT DEVELOPMENT ACTIVITIES

- Fixed-term Faculty Mentoring - 20 committee meetings conducted in FY18
- Tenured/Tenure-track Faculty Performance Reviews - all completed in May/June
- Pivot Grants - three awarded
- Specific Aims Club - five reviewed
- Winter Retreat - SWOT analysis conducted to formulate 5-Year Strategic Plan
- “Science in the Courtroom” program - driven by Jim Evans (supported by Bryson funds)

GENETICS FACULTY SERVING ON STUDY SECTIONS/COUNCILS

Faculty Member	Study Section	Agency	Term
Scott Bultman	Study Section on Nutrition	American Cancer Society	2017-2021
Karen Mohlke	CIDR Access Comm & Genes, Health & Disease	NIH	July 2018-June 2022, Oct 2012-June 2018
Mark Heise	Virology B	NIH	Oct 2017-present
Lisa Tarantino	Behavioral Regulation of Learning and Ethology	NIH	2016-2020
Jenny Ting	Board of Scientific Counselors	NIAID	Current
Yun Li	Genomics, Comp Biology and Technology	NIH	Current
Fernando Pardo Manuel de Villena	Genetic Variation and Evolution	NIH	Current
Terry Magnuson	Council of Councils	NIH Office of Director	Current

PUBLICATIONS

JUL2017 - JUN2018

289 Papers Published

85 papers (29%) with Genetics faculty as senior author and/or corresponding author

118 papers (41%) with one or more collaborating UNC departments

**Average number of collaborating UNC departments per paper = 2.08
(min-1, max-6)**

Three Genetics faculty (Mohlke, Perou, Ting) recognized as Highly Cited Researchers by Thomson Reuters for 2017

RELATIVE CITATION RATIO (RCR) FOR FY17 PUBLICATIONS

Papers Published n=217

Citations/Year

Max = 64
Mean = 4.27
SEM = 0.45
Median = 2.33

Relative Citation Ratio

Max = 30.31
Mean = 2.49
SEM = 0.28
Median = 1.50

**Weighted RCR
373.42**

Citations/year - citations per full calendar year after publication. Values are for all papers in group.

RCR - citation-based measure of influence of one or more articles. Calculated as citations/year of each paper, normalized to citations per year received by NIH-funded papers in same field in same year.

Weighted RCR - sum of RCRs for articles in the group.