



DEPARTMENT OF GENETICS

State of the Department
July 2016 - June 2017

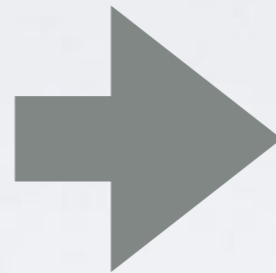
MISSION STATEMENT

The mission of the department is to provide basic and applied genetic/genomic research, education and training at the interface between biology, chemistry, physics, computer science, mathematics, the social sciences, public health and medicine in order to have a profound effect on how medicine will be practiced in the future.

DEMOGRAPHICS

86 Total Faculty

- 26 Tenured/tenure track
- 34 Fixed-term
- 10 Joint, 10 Secondary, 6 Adjunct



33% female and 67% male

1.1% African American

3.4% Hispanic

16% Asian

79.5% White

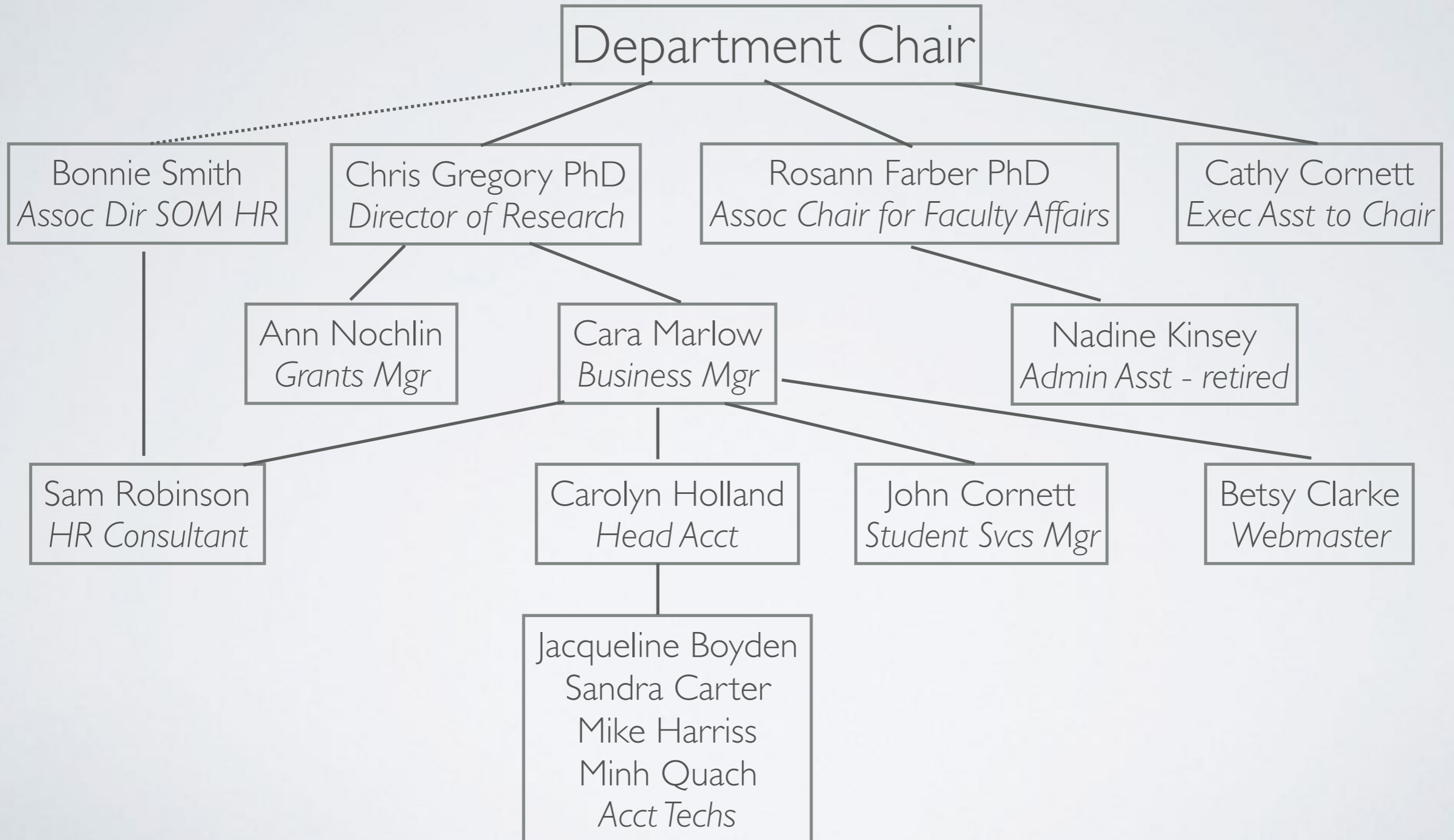
25 Postdoctoral Fellows

142 Graduate Students

52 Undergraduate Students

97 Technical / Research / Administrative Staff

DEPARTMENT OF GENETICS ADMIN ORG CHART



FACULTY CHANGES IN FY17

JOINED or (PROMOTED)	DEPARTED
Hector Franco, PhD	Ethan Lange, PhD
Michael Love, PhD	Leslie Lange, PhD
Yuchao Jiang, PhD	Wei Sun, PhD
Zeynap Yilmaz, PhD	Mengjie Chen, PhD
Kimberly Robasky, PhD	Kristin Long, PhD
Jeremy Simon, PhD	Yunjung Kim, PhD
Joel Parker, PhD (Res Assoc Prof)	Lucy Williams, PhD
Jin Szatkiewicz, PhD (Res Assoc Prof)	Praveen Sethupathy, PhD

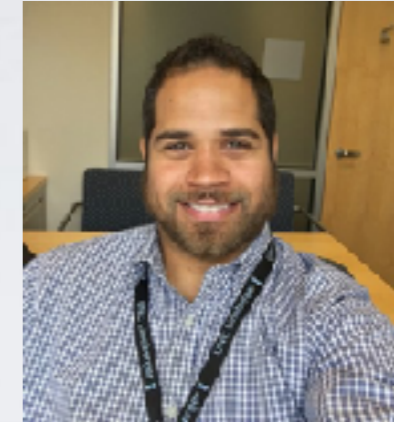
FACULTY AWARDS AND RECOGNITION



Jenny Ting, PhD
2017 Hyman L. Battle
Distinguished Cancer
Research Award



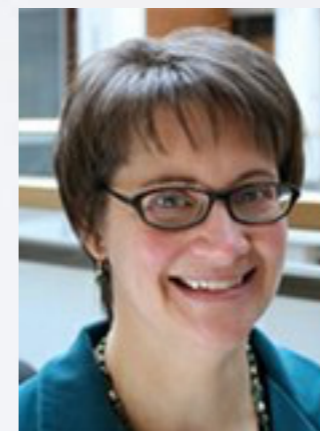
Daniel Pomp, PhD
Appointed to Science
Advisory Board - Locus
Biosciences.
Elected to CED Board
of Directors



Hector Franco, PhD
2017 UNC Simmons
Scholar



Chuck Perou, PhD
Brinker Award for
Scientific Distinction
in Basic Science



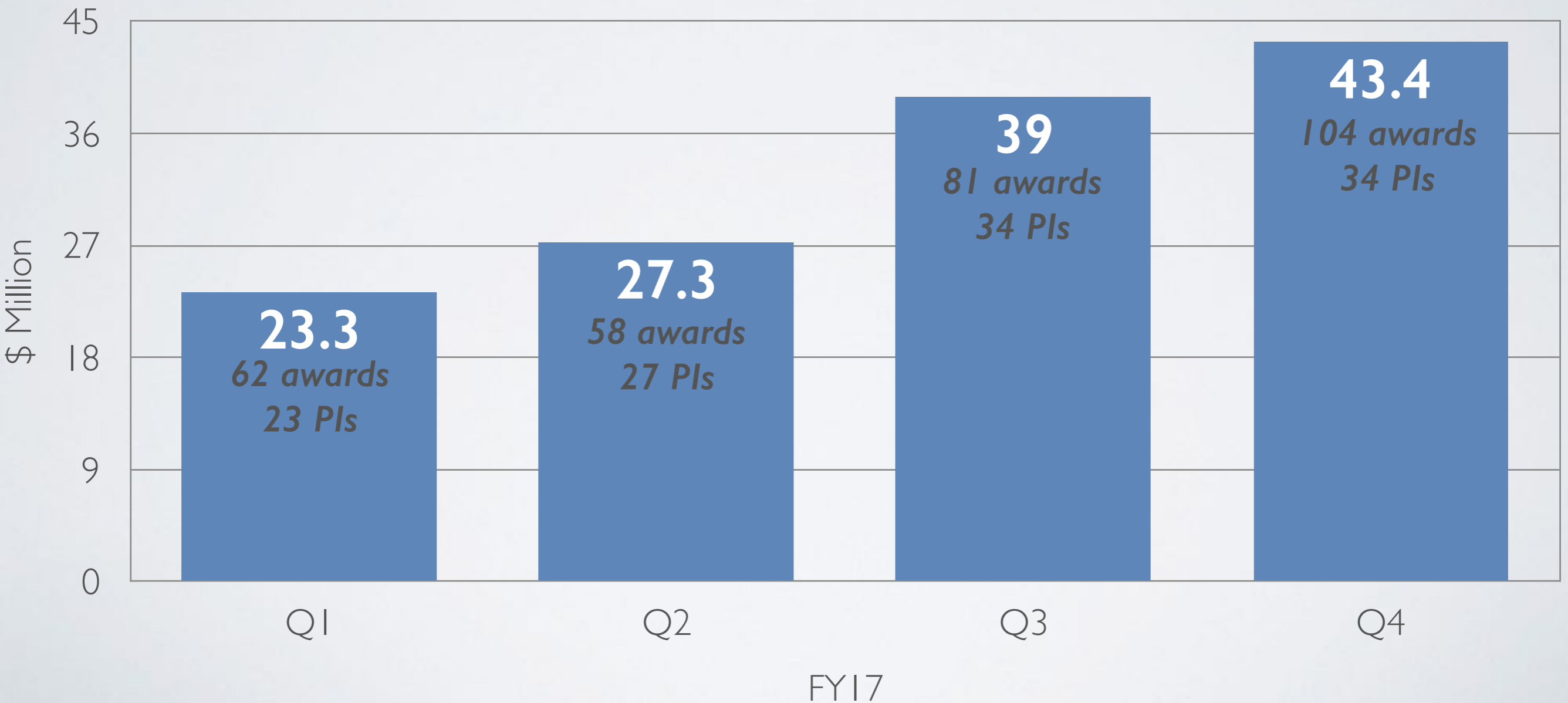
Karen Mohlke, PhD
Oliver Smithies
Investigator

PRODUCTIVITY AND FUNDING

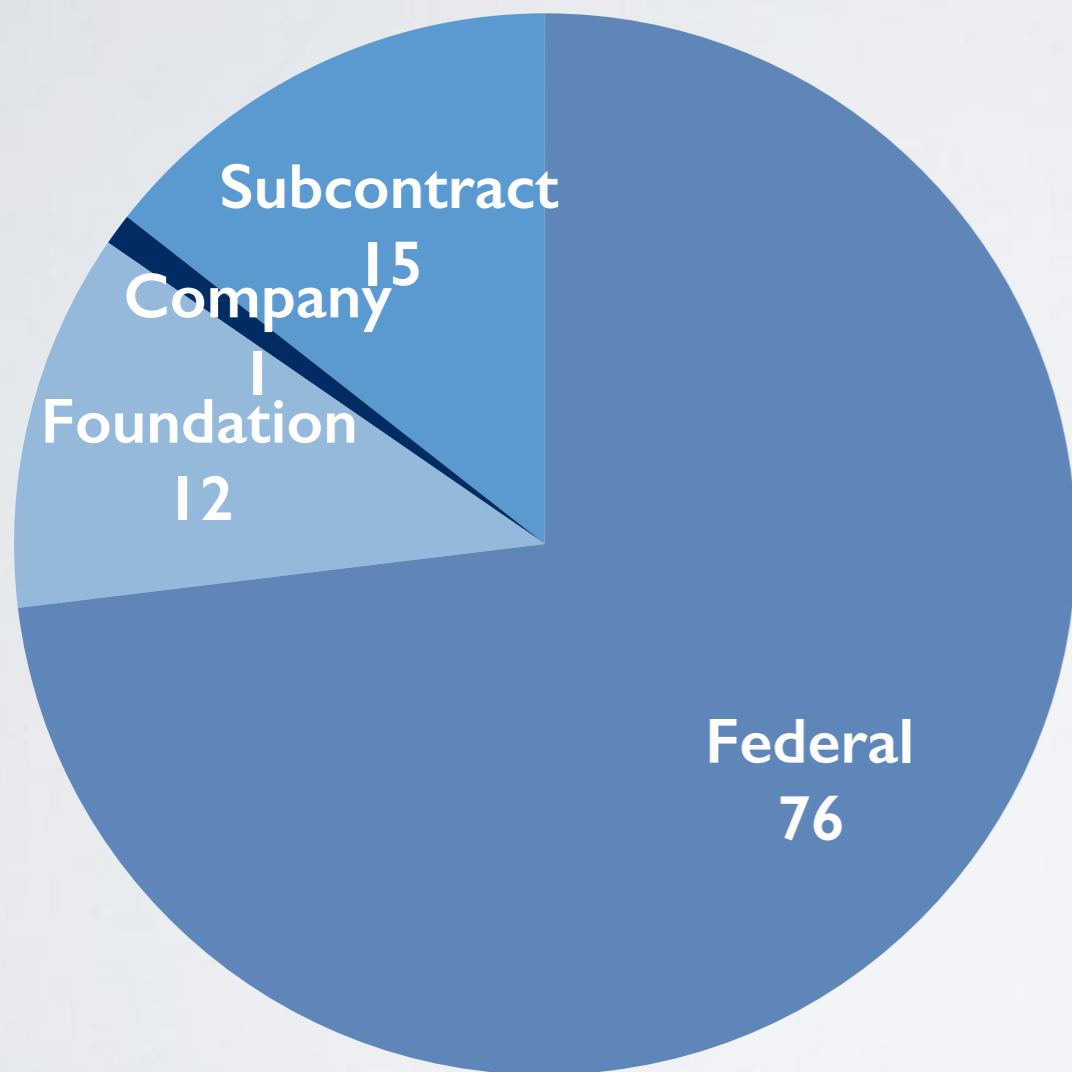
DEPARTMENT OF GENETICS PI'S

FISCAL YEAR	FY14	FY15	FY16	FY17
Applications Submitted	109	159	162	156
Applications Funded	80	86	102	104
Total Value Awarded	\$28.16M	\$34.96M	\$39.78M	\$43.47M
Average Award Value	\$352K	\$406K	\$390K	\$418K
Median Award Value	\$315K	\$357K	\$409K	\$234K

DEPARTMENT OF GENETICS TOTAL FUNDS UNDER MANAGEMENT BY QUARTER



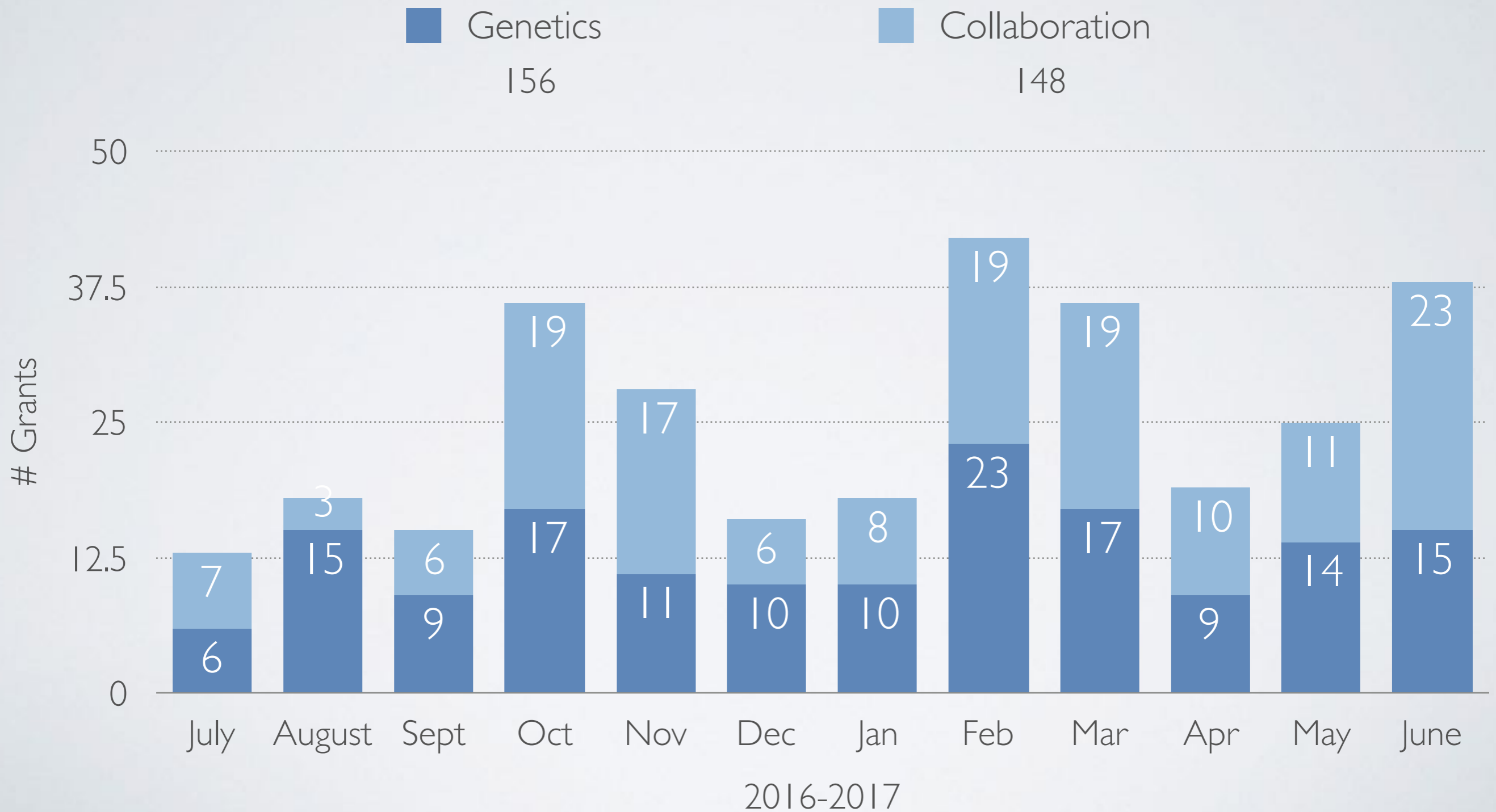
FY17 AWARDS BY FUNDING SOURCE - GENETICS PI'S



104 Awards in FY17
\$43.4M

AGENCY	# AWARDS
DOD	1
NCI	10
NHGRI	2
NHLBI	7
NIAID	13
NIAMSD	1
NICHD	3
NIDA	3
NIDDK	8
NIEHS	3
NIGMS	8
NIH Off Director	2
NIMH	13
NSF	2

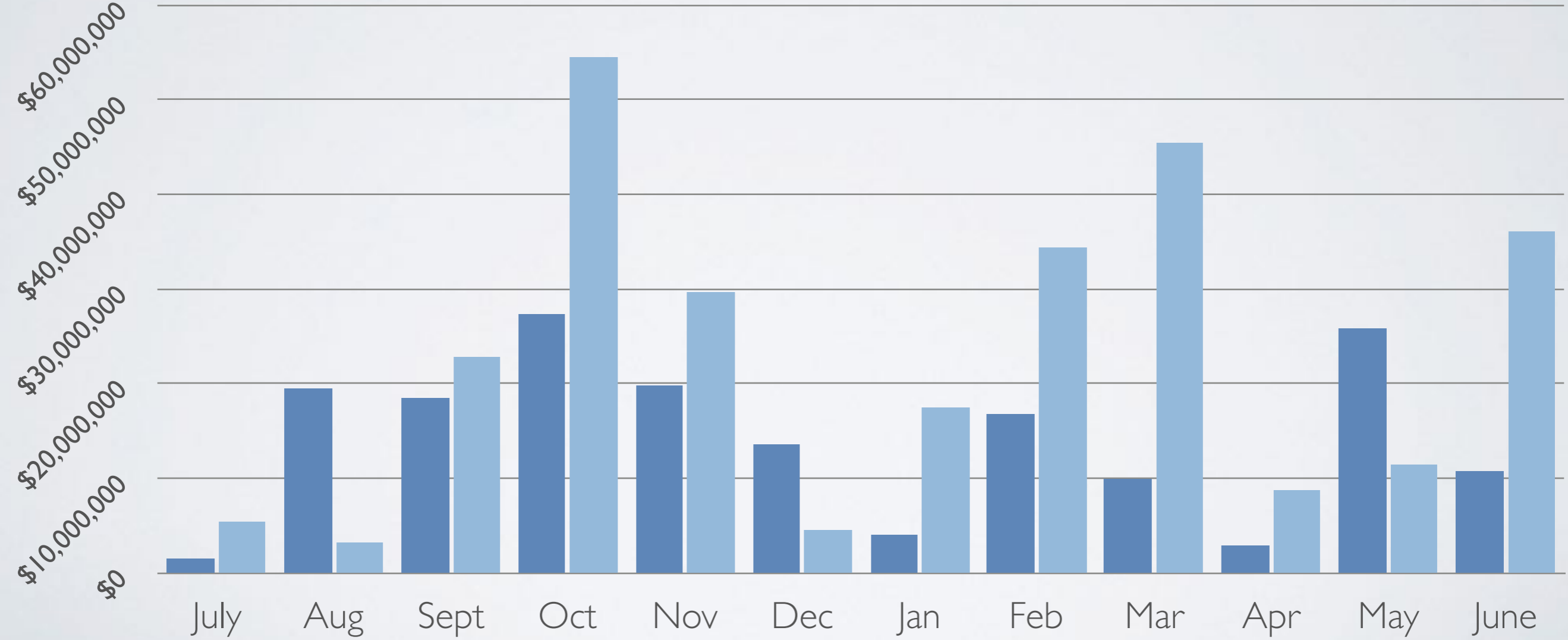
GRANT APPLICATIONS SUBMITTED PER MONTH BY GENETICS FACULTY



TOTAL FUND VALUE OF GRANT APPLICATIONS SUBMITTED PER MONTH

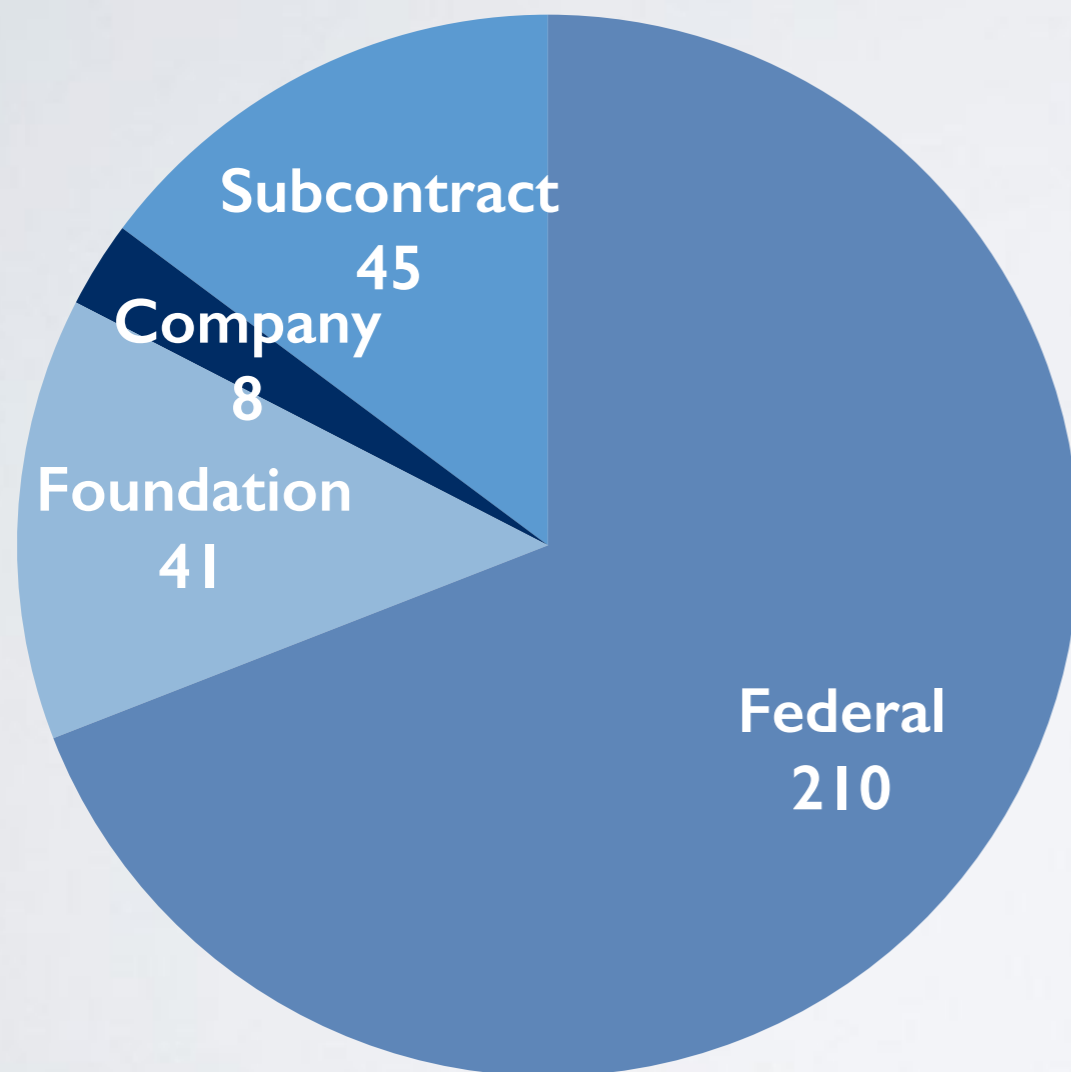
■ Genetics ■ Collaboration

\$444M in Total



2016-2017

DISTRIBUTION OF SUBMITTED GRANT APPLICATIONS - INCLUDES COLLABORATIONS



304 Applications Submitted during FY17

AGENCY	# APPLICATIONS
DOD	4
NCATS	1
NCI	5
NHGRI	5
NHLBI	11
NIA	1
NIAAA	1
NIAID	11
NIAMSD	1
NICHD	5
NIDA	3
NIDCR	2
NIDDK	15
NIH	117
NIHES	3
NIGMS	5
NIMH	9
NIMHD	2
NINDS	4
NIOSH	1
NSF	3
USDA	1

FY17 OPERATING BUDGET

\$29,903,548

Contracts and Grants (Federal)

Contracts and Grants (Private)

Gifts and Endowments

Overhead (FY16 F&A)

State Funds

The department is fiscally sound and well-managed.

FY17 spending was ~\$200K below budget.

CLINICAL ACTIVITY FY17

GENETIC COUNSELING

Genetic Counselor and Physician (3.75 FTEs) Patient Care

- 1231 New patient encounters (billable visits)
 - *Hereditary Cancer and General Adult - 797*
 - *Breast Cancer - 132*
 - *Cardiology - 13*
 - *Hemophilia - 126*
 - *Hereditary Hemorrhagic Telangiectasia - 35*
 - *High Risk Gastrointestinal - 51*
 - *Ophthalmology - 43*
 - *Telemedicine - 34*

Additional patient care efforts:

- **Phone counseling for results and follow-up**
- **Patient summary letters - describes visit, provides assessment, test results and next steps - 972 letters sent**
- **Patient consultations as needed**



CORES SUPPORTED BY GENETICS

High Throughput Sequencing Facility

-99 Seq Customers
~1600 Sequence Runs

-63 Library Customers
~6800 Library Preps

Revenue

UNC Cust - \$3.1M
External - \$474K
TOTAL: \$3.617M

Human Pluripotent Stem Cell Core

Sixteen Customers

Revenue
\$162K

Systems Genetics

Customers
Internal - 29
External - 35

5551 Mice
3172 Genotypes

Revenue

UNC Cust - \$478K
External - \$310K
TOTAL: \$788K

Mutant Mouse Resource and Research Center

Customers
Domestic - 41
International - 34

Items Ordered - 215

Revenue

Domestic - \$110K
Intl - \$87K
TOTAL: \$197K

GRADUATE CURRICULA SUPPORTED BY DEPARTMENT

<u>CURRICULUM</u>	# STUDENTS 2017	# FACULTY 2017	NEW STUDENTS JOINED 2017	# GRADUATES 2016-2017
GENETICS & MOLECULAR BIOLOGY (GMB)	86	94	15	31 (27 PHD, 4 MS)
BIOINFORM & COMP BIOLOGY (BCB)	44 (36 PhD, 8 Cert)	58	9	10 (8 PHD, 2 Cert)

SEMINARS SUPPORTED BY DEPARTMENT

GMB Seminars

Twice Weekly
Spring and Fall
Tues and Friday

BCB Seminars

Once Weekly
Fall
Mon Colloquium

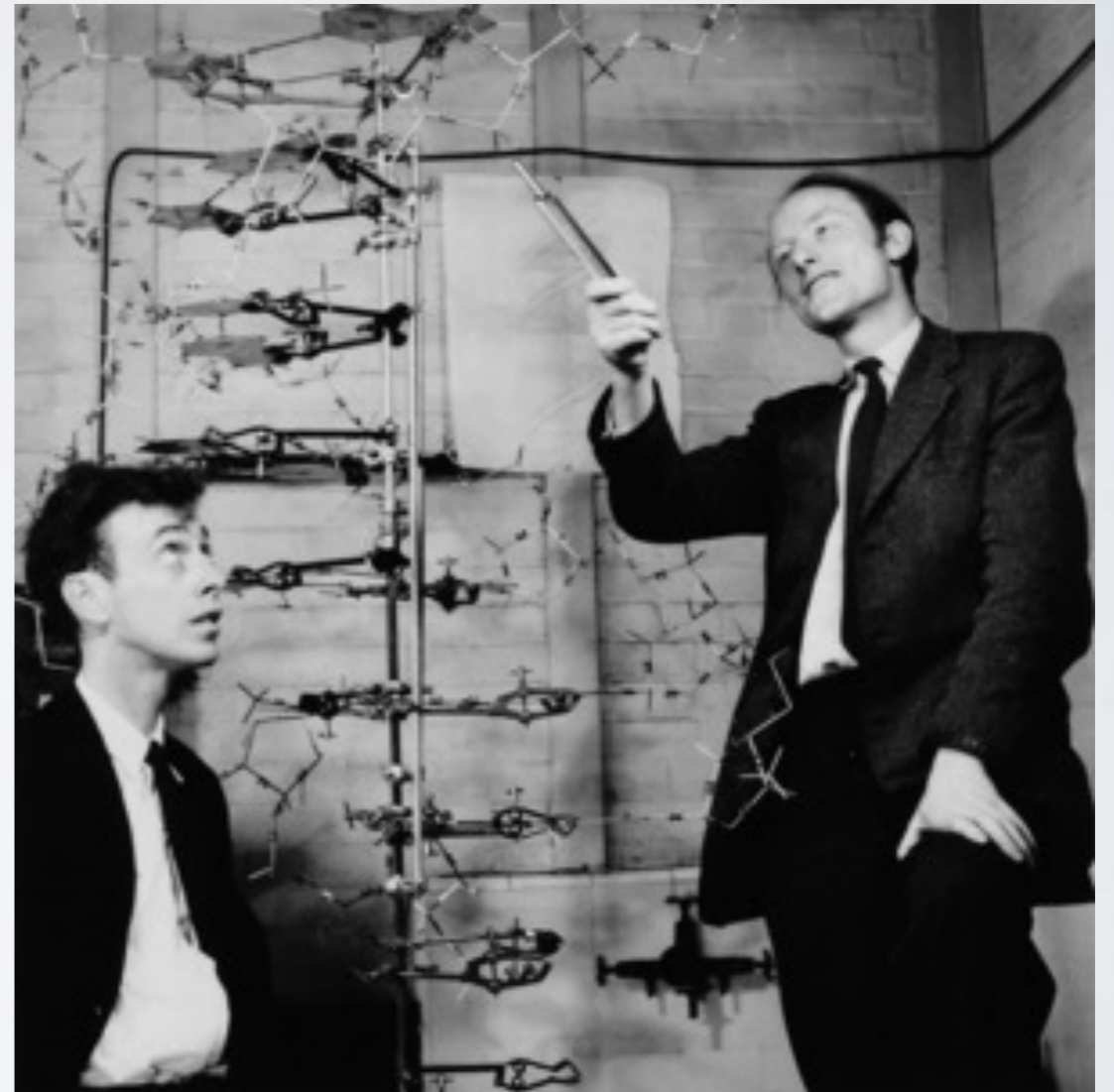
Genetics Seminars

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

REPORTS OF INVENTION (ROI) FILED WITH OFFICE OF COMMERCIALIZATION AND ECONOMIC DEVELOPMENT (OCED) - FY17

- Genetics Faculty as Lead Contributor - 7
- Genetics Faculty as Collaborator - 4



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	-
Glaxo Bldg	2255	-	2255
Carolina Crossing C	2000	1600	400
Taylor Hall	768	768	-
Bioinformatics	500	500	-
Med Biomol Res	312	312	-
TOTALS	42104	38324	3780

DEPARTMENT OF GENETICS RESEARCH DENSITY DOLLARS (RDD*)

- RDD for FY17, assumes 35,103 ft² and \$43.4M in funding = \$1,236/ft²
- RDD for FY15-FY17 rolling average of funding (\$39.4M) = \$1,122/ft²

Genetic Medicine Bldg (27,068 ft²), Burnett-Womack Bldg. (4000 ft²), Fordham Hall (3223 ft²), Bioinformatics Bldg. (500 ft²), MBRB (312 ft²).

* approximate values



NEW COMMITTEES AND POLICIES ADOPTED FY17

Committees

Advisory Committee - 14 members, monthly meeting

Space Committee - 5 members

Fixed-term Faculty Promotion Committee - 3 members, ad hoc

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

Policies

-Mentoring Policy

-“Pivot” Funds Policy/Program

-Grant Submission Initiation on Dept Website

-Specific Aims Club policy/process

-Space Policy

-Fixed-term Faculty Appointments Policy

PUBLICATIONS

JUL2016 - JUN2017

284 Papers Published

**96 papers (34%) with Genetics faculty as senior author
and/or corresponding author**

**129 papers (46%) with one or more collaborating UNC
departments**

**Average number of collaborating UNC departments per
paper = 2.44 (min-1, max-9)**

RELATIVE CITATION RATIO (RCR) FOR FY16 PUBLICATIONS

Papers Published n=286

Citations/Year

Max = 257.5

Mean = 5.74

SEM = 1.19

Median = 1.67

Relative Citation Ratio

Max = 123.41

Mean = 3.76

SEM = 0.9

Median = 1.4

**Weighted RCR
706.18**

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.