

**UNIVERSITY OF CALIFORNIA, DAVIS
AUDIT AND MANAGEMENT ADVISORY SERVICES**

**UC Davis Health
Department of Pathology & Laboratory Medicine
Audit & Management Advisory Services Project #22-13**

May 2022

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**Department of Pathology Review.
AMAS Project #22-13**

MANAGEMENT SUMMARY

Background

As part of the fiscal year (FY) 2022 audit plan, Audit and Management Advisory Services (AMAS) reviewed the UC Davis School of Medicine’s Department of Pathology & Laboratory Medicine (Pathology).

Pathology has two clinical divisions – Anatomic Pathology and Clinical Pathology – that provide services in eleven subspecialties. Forty-one department faculty provide training to medical residents and fellows, conduct research, and provide specialized clinical services. Pathology currently has five fellows and thirteen resident physicians. Three residents graduated in Spring 2021.

Purpose and Scope

The Pathology Department provides Clinical Services, academic instruction, residency programming, and research. The Department also administers UC Davis Medical Center’s Clinical Laboratories.¹ This audit focused on activities related to the School of Medicine.

Our purpose was to assess internal controls over business operations and administrative processes and to review financial performance over the past five fiscal years ending June 30, 2021.

To accomplish these objectives, we reviewed trends in key financial data. We conducted interviews, and performed walkthroughs and tests of internal controls and processes. We collected feedback from stakeholders in UCD Health Academic Personnel, Contracts & Grants Accounting, and the Sponsored Programs Office. We reviewed relevant UC and UC Davis policy and procedures. We examined applicable UC Davis general ledger information, personnel data, and internal documentation.

Conclusion

We thank Pathology for agreeing to create an enforcement process for staff and faculty in compliance with training requirements.

We identified no other reportable deficiencies within the scope of controls reviewed.

The body of this report includes four sections: Significant Accomplishments; Risks and Challenges, Financial Highlights; and Observations, Recommendations, and Management Corrective Actions. Appendix A details five years of financial results for the Department.

¹ UC Davis Medical Center is the enterprise arm of UC Davis Health, offering primary, specialty, and inpatient care.

Significant Accomplishments:

COVID-19 Pandemic Response: The Department of Pathology and Laboratory Medicine has made instrumental contributions to testing, treatment, and in both the local and national public health response since the onset of the pandemic.

UC Davis Health was able to offer its first in-house COVID-19 test just 19 days after laboratories received FDA authorization to develop testing. Between March of 2020 and the end of March 2021, UC Davis Health ran more than 100,000 COVID-19 clinical tests.

Pathology collaborated with UC Davis Employee Health to assist in COVID testing for UCD employees to help sustain the return of employees to the workplace. Pathology implemented a rapid antigen test that released test results within two hours. This allowed employees that tested negative to return to work by noon of the day they tested negative.

Risks and Challenges:

Revenue Allocation model: Beginning in FY 2022, UC Davis Health is changing the model it uses to allocate revenues and costs to many of its clinics and departments. The goal of this 'Funds Flow' model is to create a more transparent system that rewards productivity.

The Department of Pathology will be subject to this change and thus will be funded differently than it has in the past. Pathology needs to be vigilant with the requirements of the new model in order to receive correct allocations and to adapt its financial forecasting. The Department has expressed its awareness and attention to adapt to these changes.

Self-Supporting Funds: The Department of Pathology currently has two recharge activities that are operating in a deficit. The Center for Genomic Pathology Laboratory (Fund 60280) and the Pathology Biorepository (Fund 60286.)

Net Income & Fund Ending Balance by FY					
<i>\$ in thousands</i>					
	FY 17	FY 18	FY 19	FY 20	FY 21
Center for Genomic Pathology Laboratory					
Net Income	\$ (91.5)	\$ 61.5	\$ (69.0)	\$ (119.4)	\$ (35.4)
Ending Balance	\$ (56.8)	\$ 4.7	\$ (64.3)	\$ (183.7)	\$ (219.1)
Biorepository					
Net Income	\$ (60.7)	\$ 44.9	\$ (23.3)	\$ (115.7)	\$ (175.0)
Ending Balance	\$ (60.7)	\$ (15.8)	\$ (39.1)	\$ (154.8)	\$ (329.8)

The Center for Genomic Pathology Laboratory provides expert histology and pathology services to both UC Davis and external customers. Genomics finished 2018 with a \$4,700 surplus. By FYE 2021, a deficit of \$219,122 has amassed. Pathology has submitted the required documents to campus budget to initiate the rate review process.

The mission of the Biorepository is to procure, prepare, and preserve cancer-related human tissue specimens and biological materials to collaborators. It has maintained a deficit balance the previous five years, and has operated with an operating loss the previous three years

ending FY 2021. Pathology is preparing for a rate review by consulting with a Biorepository professional to identify improvements and operational efficiencies.

Financial Highlights:

From FY 2017 to FY 2021, Pathology was able to grow its sources 31% from \$28.1M to \$34.4M while total expenditures increased 14% to \$21.2M. Total funds available increased by \$3.7M (39%) to \$13.2M. Net funds available at year end was negative in 2017 and increased \$2.7M in 2021. The table below shows financial highlights for Pathology. Appendix A provides a five-year detailed analysis of fund sources and uses.

Pathology & Laboratory Medicine Financial Highlights				
\$ in millions	FY 2017	FY 2021	\$ Change	% Change
Total Funding Sources	28.1	34.4	6.3	22%
Total Expenditures	18.6	21.2	2.6	14%
Total Funds Available at Year End	9.5	13.2	3.7	39%
Less Extramural & FINA Funds	2.1	6.4	4.3	205%
Less Endowments & Restricted Gifts	0.8	1.0	0.2	25%
Total Unrestricted Funds Available	6.6	5.8	-0.8	-12%
Less Committed and Known Obligations	7.0	3.5	-3.5	-50%
Net Funds Available at Year End	(.4)	2.3	2.7	

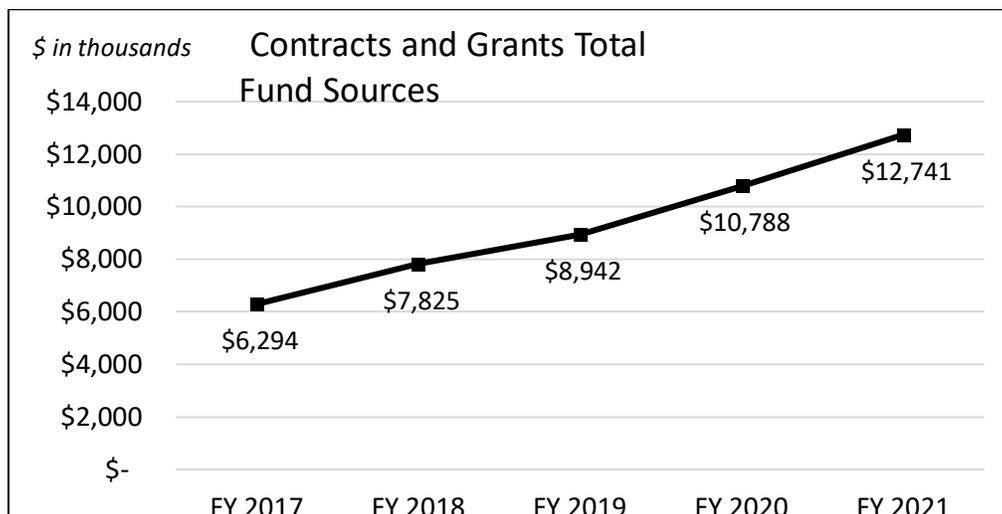
The majority of expenditures were for salaries and benefits for the five years reviewed. Salaries and benefits grew 9.9% from \$15.9M to \$17.6M from FY 2017 to FY 2021 and comprised of 83% of total department expenditures in FY 2021.

Pathology Fund Uses:	% of Total 2017	% of Total 2021	Change
Salaries & Benefits	85%	83%	-2%
Supplies & Services	12%	14%	2%
Travel & Entertainment	1%	0%	-1%
Equipment	2%	2%	0%
Subcontracts	0%	1%	1%

Contracts and Grant funds increased 102%, from \$6.3M to \$12.7M and represented 37% of all sources, a significant increase in its proportion to Department sources in FY 2017. Self-supporting funds include clinical income as well as three recharge funds administered by the department: Center for Genomic Pathology Laboratory, Proteomics Core Lab, and the Pathology Biorepository.

Pathology Fund Sources	% of Total 2017	% of Total 2021	Change
Self-Supporting Funds	65%	52%	-13%
Contracts & Grants	22%	37%	15%
Gift/Endowments	4%	4%	0%
General Funds	7%	5%	-2%
Indirects/Opportunity Funds	2%	2%	0%

The Department of Pathology has grown its research funding significantly since FY 2017, achieving \$11.9 M in awards in 2021.² Pathology was awarded 37th most in NIH research dollars among pathology departments in the nation, an improvement from #49 in 2020³. Pathology is managing 28 active awards⁴. Appendix B shows five years of sources and uses for Pathology Contract & Grant funds.



Observations, Recommendations, and Management Corrective Actions

A. Compliance with UC Davis Health Training Requirements

Pathology lacks a mechanism to enforce compliance with training requirements.

The Learning and Development department at UC Davis provides mandatory training for all employees based on their role at the University. Training courses expand the knowledge

² The “Contracts and Grant Fund Sources” table is a financial accounting measure of inflows during the fiscal year. The total award amount for calendar year 2021 includes the total value of grants awarded to the department.

³ As measured by the Blue Ridge Medical Institute www.brimr.org

⁴ As of January 25, 2022.

and ability of the employee to operate a safe work environment, ensure data are properly used, and comply with external regulations. There are six mandatory trainings for UCD Health employees and faculty listed in the table below.

Compliance with course requirements is a requirement to be considered in “good standing” status as outlined in the School of Medicine Compensation Plan.⁵ Additionally, UC Davis and UC Davis Health staff employees must be current in mandatory training requirements to receive the appraisal rating of “Fully Achieved Expectations.” This is the minimum rating staff must receive to be eligible for salary increases.

The Training Status report from Staff Development and Professional Services as of January 27, 2022, shows 40 faculty members and staff with a total of 93 trainings overdue, 69 of which are mandatory trainings.

Training Name	Trainings Overdue
Mandatory Annual Training	3
Privacy and Security Training	28
UC Cyber Security Awareness Fundamentals	13
UC General Compliance Briefing: University of California Ethical Values and Conduct	9
UC Sexual Violence & Sexual Harassment Prevention Training for Supervisors & Faculty	4
Workplace Violence Prevention in Healthcare	12
Role-specific Trainings	24
Total Overdue Trainings	93

Recommendations

Pathology should implement a process to ensure that faculty and staff comply with University training requirements.

Pathology should consult with central Human Resources to determine the impact of non-compliance with mandatory training requirements on performance assessments.

Management Corrective Actions

- 1) By July 31, 2022, Pathology will identify all faculty and staff who are non-compliant with mandatory training requirements and direct supervisors to work with those employees to develop a plan for completion of the training.
- 2) By July 31, 2022, Pathology will implement a quarterly, documented process for review of the status of mandatory trainings, reminders to faculty and staff as necessary, and escalation to the Chair if timely action is not taken.
- 3) By July 31, 2022, Pathology will consult with Human Resources to determine any actions that must be taken to address instances where:

- 1) Supervisors erroneously certified that employees had completed mandatory training when preparing performance assessments, and

⁵ APM 670-10 Health Sciences Compensation Plan Good Standing Criteria

2) Employees who were non-compliant with mandatory training requirements received a rating of “fully achieved expectations” or better on their FY21 performance assessment.

Appendix A

Financial results for Department of Pathology & Laboratory Medicine as a whole from FY 2017 to FY 2021:

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
FUND SOURCES					
Self-Supporting Funds	18,214,380	17,881,157	16,390,555	16,815,412	17,900,463
Contracts & Grants	6,293,902	7,825,958	8,942,066	10,787,587	12,741,163
Gift/Endowments	1,072,124	1,075,185	1,135,616	1,202,679	1,283,529
General Funds	1,858,528	1,727,415	1,928,869	1,993,231	1,636,984
Indirects/Opportunity Funds	463,147	306,219	410,220	501,521	596,506
Student Fees	68,522	70,127	21,555	26,555	26,555
Reserves	133,249	124,074	168,817	170,908	169,569
Total Sources	28,103,852	29,010,135	28,997,698	31,497,891	34,354,768
EXPENDITURES					
Salaries & Benefits	(15,865,482)	(15,885,641)	(16,489,009)	(18,126,316)	(17,591,052)
Supplies & Services	(2,286,026)	(2,388,909)	(3,168,248)	(2,806,396)	(3,050,438)
Travel & Entertainment	(257,471)	(210,443)	(234,963)	(213,996)	(36,285)
Equipment	(158,981)	(58,363)	(157,507)	(106,551)	(321,929)
Subcontracts	(7,337)	(55,958)	(16,481)	(104,596)	(175,663)
Scholarships & Fellowships	(1,110)	(15,261)	-	-	-
Special Items	(298)	-	-	-	-
Total Expenditures	(18,576,705)	(18,614,575)	(20,066,207)	(21,357,856)	(21,175,368)
Total Funds Available	9,527,147	10,395,559	8,931,491	10,140,035	13,179,401
Less: C&G and FINA funds	2,149,850	3,088,914	2,845,482	4,416,879	6,398,425
Less: Endowments/Restricted Gifts	796,375	848,796	847,047	910,065	973,303
Unrestricted Funds Available at Year End	6,580,922	6,457,849	5,238,962	4,813,091	5,807,671
Less: COBL and KOBL	6,992,272	2,662,393	2,854,240	3,580,579	3,505,797
NET FUNDS AVAILABLE	(411,350)	3,795,456	2,384,722	1,232,513	2,301,875