

LOS ANGELES POLICE COMMISSION

BOARD OF POLICE COMMISSIONERS

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VICE PRESIDENT

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MARK P. SMITH
INSPECTOR GENERAL

EXECUTIVE OFFICE
POLICE ADMINISTRATION BUILDING
100 WEST FIRST STREET, SUITE 134
LOS ANGELES, CA 90012-4112

(213) 236-1400 PHONE
(213) 236-1410 FAX
(213) 236-1440 TDD

June 8, 2021

BPC #21-102

The Honorable Eric Garcetti
Mayor, City of Los Angeles
City Hall, Room 303
Los Angeles, CA 90012

The Honorable City Council
City of Los Angeles, Room 395
c/o City Clerk's Office

Attention: Heleen Ramirez

Dear Honorable Mayor:

RE: GRANT APPLICATION AND AWARD ACCEPTANCE FOR THE FISCAL YEAR 2021-
2022 CHP CANNABIS TAX FUND GRANT PROGRAM-TOXICOLOGY LABORATORY

At the regular meeting of the Board of Police Commissioners held Tuesday, June 8, 2021 the Board APPROVED the Department's report relative to the above matter.

This matter is being forwarded to you for review and approval.

Respectfully,

BOARD OF POLICE COMMISSIONERS

A handwritten signature in blue ink that reads "Maria Silva".

MARIA SILVA
Commission Executive Assistant

Attachment

c: Chief of Police

LOS ANGELES POLICE COMMISSION

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The Honorable Eric Garcetti
Mayor, City of Los Angeles
City Hall, Room 303
Los Angeles, CA 90012

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City of Los Angeles, Room 395
c/o City Clerk's Office

Dear Honorable Members:

RE: GRANT APPLICATION AND AWARD ACCEPTANCE FOR THE FISCAL YEAR 2021-
2022 CHP CANNABIS TAX FUND GRANT PROGRAM-TOXICOLOGY LABORATORY

At the regular meeting of the Board of Police Commissioners held Tuesday, June 8, 2021 the Board APPROVED the Department's report relative to the above matter.

This matter is being forwarded to you for review and approval.

Respectfully,

BOARD OF POLICE COMMISSIONERS

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MARIA SILVA
Commission Executive Assistant

Attachment

c: Chief of Police

INTRADEPARTMENTAL CORRESPONDENCE **RECEIVED**

JUN 02 2021

POLICE COMMISSION

Submitted 6/2/21

June 1, 2021
1.14

TO: The Honorable Board of Police Commissioners

FROM: Chief of Police

SUBJECT: TRANSMITTAL OF THE GRANT APPLICATION AND AWARD ACCEPTANCE FOR THE 2021/2022 CHP CANNABIS TAX FUND GRANT PROGRAM – TOXICOLOGY LABORATORY

RECOMMENDED ACTIONS

1. That the Board of Police Commissioners (Board) REVIEW and APPROVE this report.
2. That the Board TRANSMIT the attached grant application and award for the Fiscal Year (FY) 2021/2022 Cannabis Tax Fund Grant Program – Toxicology Laboratory pursuant to Administrative Code Section 14.6(a), to the Mayor, Office of the City Administrative Officer (CAO), Chief Legislative Analyst, and to the City Clerk for committee and City Council consideration.
3. That the Board REQUEST the Mayor and City Council to:
 - A. AUTHORIZE the Chief of Police or his designee to retroactively apply for and ACCEPT the FY 2021/2022 Cannabis Tax Fund Grant Program – Toxicology Laboratory award in the amount of \$362,680 from the State of California, Department of California Highway Patrol for the period of July 1, 2021 through June 30, 2023;
 - B. AUTHORIZE the Chief of Police or his designee to execute an Award Agreement with the Department of California Highway Patrol, subject to the City Attorney’s approval as to form;
 - C. AUTHORIZE the Los Angeles Police Department (LAPD) to spend up to \$362,680 in accordance with the grant award agreement;
 - D. AUTHORIZE the Controller to set up a grant receivable and appropriate \$362,680 to appropriation account number to be determined in Fund No. 339, Department No. 70, for the disbursement of the FY 2021/2022 Cannabis Tax Fund Grant Program – Toxicology Laboratory funds;

- E. AUTHORIZE the LAPD to submit grant reimbursement requests to the grantor and deposit grant receipts in Fund No. 339, Department No. 70;
- F. AUTHORIZE the Controller to increase appropriations as needed from Fund No. 339, Department No. 70, FY 2021/2022 Cannabis Tax Fund Grant Program – Toxicology Laboratory appropriation, account number to be determined, to Fund No. 100, Department No. 70, account numbers and amounts as follows:

Account No. 001090, Civilian Overtime, \$7,680.00

- G. AUTHORIZE the LAPD to prepare the Controller instructions for any technical adjustments, subject to the approval of the CAO, and INSTRUCT the Controller to implement the instructions.

DISCUSSION

The Department of California Highway Patrol's (CHP) Cannabis Tax Fund Grant Program provides education, prevention, and enforcement of impaired driving laws related to driving under the influence of alcohol and other drugs, including cannabis. For FY 2021/2022, the CHP has selected to extend the funding opportunity to toxicology laboratories to improve and advance the standardization of practices in toxicology laboratories supporting and aiding in the enforcement of Driving Under the Influence (DUI)/Driving Under the Influence of Drugs (DUID) traffic laws related to alcohol and other drugs, including cannabis and cannabis products. The grant opportunity focuses on eliminating backlog in the analysis of forensic science evidence, including toxicology/forensic alcohol and controlled substances/drug chemistry for driving under the influence and/or driving under the influence of drugs prosecution, reducing turnaround time for sample testing, purchasing and/or upgrading high-tech equipment to improve testing capabilities, and reducing or eliminating the need for outsource testing by private laboratories.

The Forensic Science Division was awarded \$362,680 to implement the Cannabinoid Confirmation Test Improvement Program. The program proposes to improve testing capabilities and capacity for cannabinoid confirmation test method by using grant funds to purchase and validate an ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLC/MS/MS). This program will (1) increase FSD's monthly capacity for cannabinoid confirmation tests by 66%; (2) reduce the turn-around time for cannabinoid confirmation test by 57%; (3) include OH-THC (a psychoactive delta-9-THC metabolite) in the cannabinoid confirmation testing scope; and (4) reduce the amount of blood specimen required to confirm THC, OH-THC, and Carboxy-THC while maintaining the limits of quantitation published by the National Safety Council.

The Honorable Board of Police Commissioners

Page 3

1.14

If you have any questions regarding this transmittal, please contact Senior Management Analyst Stella Larracas, Officer in Charge, Grants Section, at (213) 486-0380.

Respectfully,



MICHEL R. MOORE
Chief of Police

**BOARD OF
POLICE COMMISSIONERS**
Approved *June 8, 2021*
Secretary *Maria Silva*

Attachments

INTRADEPARTMENTAL CORRESPONDENCE

May 19, 2021

1.14

TO: Chief of Police

FROM: Director, Office of Constitutional Policing and Policy

SUBJECT: TRANSMITTAL OF THE GRANT APPLICATION AND AWARD
ACCEPTANCE FOR THE 2021/2022 CHP CANNABIS TAX FUND
GRANT PROGRAM – TOXICOLOGY LABORATORY

Attached for your approval and signature is an Intradepartmental Correspondence to the Board of Police Commissioners, requesting approval to transmit the attached Grant Application and Award for the Fiscal Year (FY) 2021/2022 Cannabis Tax Fund Grant Program – Toxicology Laboratory, pursuant to Administrative Code Section 14.6(a), to the Mayor, Office of the City Administrative Officer, Office of the Chief Legislative Analyst and to the City Clerk for Committee and City Council consideration. The Los Angeles Police Department is requesting authorization to accept the grant funding in the amount of \$362,680 from the State of California for the period of July 1, 2021 through June 30, 2023.

The Forensic Science Division was awarded \$362,680 to implement the Cannabinoid Confirmation Test Improvement Program. The program proposes to improve testing capabilities and capacity for cannabinoid confirmation test method by using grant funds to purchase and validate an ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLC/MS/MS). This program will (1) increase FSD's monthly capacity for cannabinoid confirmation tests by 66%; (2) reduce the turn-around time for cannabinoid confirmation test from by 57%; (3) include OH-THC (a psychoactive delta-9-THC metabolite) in the cannabinoid confirmation testing scope; and (4) reduce the amount of blood specimen required to confirm THC, OH-THC, and Carboxy-THC while maintaining the limits of quantitation published by the National Safety Council.

If you have any questions, please contact Senior Management Analyst Stella Larracas, Officer in Charge, Grants Section, at (213) 486-0380.



LIZABETH RHODES, Director
Office of Constitutional Policing and Policy

Attachments

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

601 North 7th Street
Sacramento, CA 95811
916-843-3330
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)



May 9, 2021

File No.: 060.15426.A14139

Vanessa Gould
Los Angeles Police Department
100 West First Street, Ste 1061
Los Angeles, CA 90012

Dear Vanessa Gould:

On behalf of the California Highway Patrol (CHP), Cannabis Tax Fund Grant Program, it is my pleasure to inform you the Los Angeles Police Department has been conditionally approved for grant funding in the amount of \$362,680.00. The purpose of this grant funding is to help your agency reduce and mitigate the impacts of impaired driving in your community.

Before you begin work on your project, there is additional paperwork that must be completed to finalize your grant agreement. Please provide an approved copy of a local governing body resolution authorizing your organization to receive this grant funding to the CHP's Impaired Driving Section, Cannabis Grants Unit, by email at CGUGrants@chp.ca.gov, as soon as possible. Refer to California Code of Regulations Title 13, Division 2, Chapter 13, Section 1890.13(g) for additional information.

The CHP looks forward to partnering with you and your agency on this project in an effort to make California's roadways a safer place to travel. If you have any questions, please feel free to contact the Cannabis Grants Unit staff at (916) 843-4360.

Sincerely,

A handwritten signature in cursive script that reads "K. M. Davis".

K. M. DAVIS, Chief
Enforcement and Planning Division





City of Los Angeles - Los Angeles Police Department

Prepared by Los Angeles Police Department
for California Highway Patrol (CHP) Toxicology Laboratory FY 2021/2022

Submitted by Barbra Montesquieu

Submitted on 02/22/2021 10:32 AM Pacific Standard Time



Opportunity Details

Opportunity Information

Title

Toxicology Laboratory FY 2021/2022

Description

Toxicology Laboratory grants provide assistance to California county, and/or city crime laboratories that service local governments to improve and advance the standardization of practices in toxicology laboratories supporting and aiding in the enforcement of Driving Under the Influence (DUI)/Driving Under the Influence of Drugs (DUID) traffic laws related to alcohol and other drugs, including cannabis and cannabis products.

Awarding Agency Name

California Highway Patrol

Agency Contact Phone

916-843-4376

Agency Contact Email

CGUGrants@chp.ca.gov

Opportunity Manager

Cannabis Grants Unit (CGU)

Opportunity Posted Date

1/7/2021

Assistance Listings Number

Public Link

<https://www.gotomygrants.com/Public/Opportunities/Details/36f09515-5b52-4701-9749-5db9be26d643>

Is Published

Yes

Funding Information

Funding Sources

State

Funding Source Description

With the passage of Proposition 64 in 2016, The Control, Regulate, and Tax Adult Use Marijuana Act (AUMU), California voters mandated the state to set aside funding for the CHP to provide grants to local governments and qualified non-profit organizations for the education, prevention, and enforcement of impaired driving laws pursuant to Section 34019 (f)(3)(B) Revenue and Taxation Code (RTC).

Funding Restrictions

State Agencies/Departments please refer to Section 34019 (f)(3)(b) RTC and California Code of Regulations, Title 13, Division 2, Chapter 12, for additional information.

Award Information

Award Period

07/01/2021 - 06/30/2023

Award Type

Competitive



Matching Requirement

No

Submission Information

Submission Window

01/07/2021 12:00 AM - 02/23/2021 5:00 PM

Submission Timeline Type

One-Time

Submission Timeline Additional Information

Applicants are advised not to wait until the deadline to ask submittal questions since the CHP Cannabis Grant Unit cannot guarantee immediate response and the online system will automatically close at 5:00 PM. Once an application has been submitted, no corrections or adjustments may be made.

Question Submission Information

Question Submission Email Address

CGUGrants@chp.ca.gov

Eligibility Information

Eligibility Type

Public

Additional Eligibility Information

California county and/or city crime laboratories conducting forensic toxicology testing related to DUI/DUID.

Additional Information

Additional Information URL

<https://www.chp.ca.gov/programs-services/programs/cannabis-tax-fund-grant-program-overview>



Project Information

Application Information

Application Name

City of Los Angeles - Los Angeles Police Department

Award Requested

\$362,680.00

Total Award Budget

\$362,680.00

Primary Contact Information

Name

Barbra Montesquieu

Email Address

n3202@lapd.online

Address

**100 West First Street, Ste1061
Los Angeles, CA 90012**

Phone Number

(213) 486-0380



Project Description

1. Agency Representatives

Agency Section/Unt (subdivision) to administer Grant:

Los Angeles Police Department - Forensic Science Division

Agency Representative

- **The Authorized Official is authorized to enter into an agreement with signing authority.**
- **The Authorized Financial Contact maintains financial records, documentation and recipient of warrant.**
- **The Administrative Contact is responsible for day-to-day administration.**

Note: Information requested is for application purposes only. Security Roles (titles) differ from those within the GMS.

Authorized Official Name (First and Last):

Michel R. Moore

Authorized Official Title:

Chief of Police

Authorized Official Address (street, city, state, zip code):

100 West First Street, Ste 1061, Los Angeles CA 90012

Address for Payment Reimbursement (street, city, state, zip code):

LAPD, Fiscal Group, PO Box 30158 Rm 774 Attn: Grants, 200 North Main Street, Los Angeles CA 90030

Authorized Official Phone Number:

213-486-0380

Authorized Official Email Address:

grants@lapd.online

Authorized Financial Contact Name (First and Last):

Ms. Stella Larracas

Authorized Financial Contact Title:

Sr. Management Analyst II

Authorized Financial Contact Phone Number:

213-486-0380

Authorized Financial Contact Email Address:

n3371@lapd.online

Administrative Contact Name (First and Last):

Ms. Vanessa Gould

Administrative Contact Title:

Chief Forensic Chemist I

Administrative Contact Phone Number:

323-415-8115

Administrative Contact Email Address:

g9249@lapd.online



2. Senate/Assembly/Congressional/County Information

To determine the State Senate district(s) and State Assembly district(s), copy and paste the URL:
http://www.legislature.ca.gov/legislators_and_districts/districts/districts.html in your browser and search.

To determine the Congressional District(s), copy and paste the URL:
<https://www.govtrack.us/congress/members/CA> in your browser and search.

To make multiple selections, hold down the Ctrl key and click each one.

Select one or more of the State Senate districts where the proposed project activities will occur.

State Senate 18, State Senate 24, State Senate 25, State Senate 26, State Senate 27, State Senate 30, State Senate 33, State Senate 35

Select one or more of the California State Assembly districts where the proposed project activities will occur.

State Assembly 38, State Assembly 39, State Assembly 43, State Assembly 45, State Assembly 46, State Assembly 50, State Assembly 51, State Assembly 53, State Assembly 54, State Assembly 59, State Assembly 62, State Assembly 64, State Assembly 66, State Assembly 70

Select one or more of the California Congressional districts where the proposed project activities will occur.

California Congressional District 25, California Congressional District 28, California Congressional District 29, California Congressional District 30, California Congressional District 33, California Congressional District 34, California Congressional District 37, California Congressional District 40, California Congressional District 43, California Congressional District 44

Select one or more of the California Counties where the proposed project activities will occur.

Los Angeles

Population that your laboratory/agency serves.

4000000



3. Statistical Data

Please ensure the responses provided below are accurate and align with the statistical data provided within the application.

If a question is not applicable, please input "0" or "N/A"

Approximately how many qualified analysts are conducting Driving Under the Influence (DUI)/Driving Under the Influence of Drugs (DUID) testing at your laboratory?*

	Estimate per month	Average per year
Number of Analysts	15	15

Approximately how many cases does your laboratory analyze for drugs?*

	Estimate per month	Average per year
Number of cases	119	1424

Approximately how many cases are tested for alcohol?*

	Estimate per month	Average per year
Number of cases	83	992

Approximately how many cases are tested for both alcohol and drugs?*

	Estimate per month	Average per year
Number of cases	35	424

Estimated turn around time for case analysis.*

	DUI case	DUID case	DUI/DUID case
Average number of days	10	60	60

Estimated DUI case backlog?*

	Estimate per month	Average per year
Number of cases	17	209

Approximately how many times each year does your laboratory provide court testimony related to DUI?*

	DUI cases	DUID cases	DUI/DUID cases
Number per year	94	29	5

Does your agency track which samples have an associated DRE evaluation performed?

- Yes
 No

If yes to the above, what is the percentage?

Does your laboratory make an administrative decision to stop testing if a blood alcohol concentration (BAC) result is at or above a specific BAC?



- Yes
- No

If yes to the question above, what is that BAC concentration result concentration?

0.08; unless drug testing is requested on evidence package

Please list the top 10 drugs present in your laboratory current DUID case work (number 1-10; 1 = most prevalent). If unknown or not tracked, please provide any known information.

Top 10 Drugs (1= Most Prevalent)

- 1 Cannabinoids
- 2 Methamphetamine
- 3 Benzodiazepines
- 4 Cocaine Metabolite
- 5 Amphetamines
- 6 Opiates
- 7 Fentanyl
- 8 PCP
- 9 Oxycodone
- 10 Carisoprodol

What equipment does your laboratory use (make/model)? How many of each?

Below are the instrumentation for Toxicology Unit:

Quantity - Type- Make/Model

(3) GC/MS- Hewlett Packard 6890 (GC) 5973 (MSD)

(2) GC/MS- Agilent Technologies 7890A (GC) 5975C VL (MSD)

(2) GC/MS- Agilent Technologies 7890B (GC) 5977B (MSD)

(1) GC/MS- Agilent Technologies 6890N (GC) 5975 (MSD)

(1) LC/MS/MS- "Agilent Technologies (LC)AB Sciex (MS/MS)" "1200 Series (LC) 3200QTrap (MS/MS)"

(1) Alcohol FID- "Shimadzu (HS 1/GC 1, HS 2/GC 2) Parker Balston (Hydrogen Generator (HG))" "GC-2010 Plus (GC) HS-20 (Headspace Sampler) H2PEMPD-650-175 (HG 1) H2PEMPD-510-175 (HG 2)"

(2) ELISA autosampler Tecan Freedom EVO 75

(1) EMIT autosampler Beckman Coulter AU480

What equipment is currently needed? Please provide details about the need and the equipment.

The LAPD Forensic Science Division needs a new generation ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLS/MS/MS). Please refer to the grant project for details on the need.

If equipment is needed, will it be able to test for Delta-9-Tetrahydrocannabinol(THC), 11-Hydroxy-THC and Carboxy-THC?

- Yes
- No

If new equipment is purchased, will training be needed for staff?

- Yes
- No

If yes to above, what training will be needed?



4. Project Description

Project Types: Select one or more project type applicable to your project.

- Equipment (Shall select Training and/or Staff Overtime too)
- Training
- Staff Overtime
- Personnel

Project Description

Project description is a brief overview, a paragraph, of the proposed project.

Through the Department of California Highway Patrol's (CHP) Cannabis Tax Grant Program, the Los Angeles Police Department (LAPD) Forensic Science Division (FSD) is proposing to implement the Cannabinoid Confirmation Test Improvement Program. The program proposes to improve testing capabilities and capacity for cannabinoid confirmation test method by purchasing and validating an ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLC/MS/MS). This program will (1) increase FSD's monthly capacity for cannabinoid confirmation tests by 66%; (2) reduce the turn-around time for cannabinoid confirmation test from by 57%; (3) include OH-THC (a psychoactive delta-9-THC metabolite) in the cannabinoid confirmation testing scope; and (4) reduce the amount of blood specimen required to confirm THC, OH-THC, and Carboxy-THC while maintaining the limits of quantitation published by the National Safety Council.



5. Problem Statement

Problem statement identifies the problem, including statistical data, to be addressed by the project.

There has been an increased demand for drug screening and confirmation testing; however, the FSD has an inadequate sample throughput capacity to keep up with the demand, causing a bottleneck in DUID prosecution. In 2020, the FSD received a monthly average of 80 request for cannabinoid confirmation test but only completed an average of 60 cannabinoid confirmation tests per month.

INCREASED DEMAND. Since 2018, the FSD has experienced a significant increase in the total number of blood specimens received for drug screening and confirmation testing. Specifically, between 2018 and 2020 the total number of drug screens conducted increased by 25%, from 1,136 to 1,424, and confirmation tests performed increased by 34%, from 985 to 1,317. Of the 1,424 blood specimens screened in 2020, over 90% were related to drug-impaired driving (DUID) arrests. The most common drug detected in these DUID blood specimens was cannabinoids; with 67% screening positive. Since 2018, cannabinoid-positive drug screens have increased 29% (746 to 962) and cannabinoid confirmation tests have increased 55% (534 to 828). As of January 2021, the cannabinoid confirmation workload consisted of 140 unassigned cases, and the average turn-around time for confirmation results was approximately 70 days.

INADEQUATE CAPACITY. Currently, the FSD laboratory's cannabinoid confirmation test method is performed on two gas chromatographs with mass spectrometers (GC/MS) and the scope of analysis includes delta-9-tetrahydrocannabinol (THC) and 11-nor-9-Carboxy-delta-9-tetrahydrocannabinol (Carboxy-THC).

The method is time-consuming due to numerous sample preparation steps. It also consumes a large sample volume, requires 2 mL of blood to achieve appropriate lower limits of quantitation on the GC/MS. This large volume of blood is problematic given the limited amount of blood that is received by the laboratory for each case (~ 8 mL), the rise of polydrug use, and the need to run multiple analyses to detect different drugs. Since 2018, the laboratory has experienced a 29% increase in the total number of polydrug blood specimens that screen positive for cannabinoids and at least one other drug (most commonly methamphetamine and benzodiazepines). Given the large amount of blood currently required to confirm THC and Carboxy-THC on the GC/MS, it is not uncommon to deplete the specimen before completing all laboratory tests or before fulfilling a court-ordered split as requested by defense council for independent testing. Implementing a new approach using UHPLC/MS/MS will allow the FSD to reduce the amount of blood required to perform cannabinoid confirmation tests by ten-fold while expanding the scope of analysis and achieving the lower limits of quantitation recommended by the National Safety Council (See Citation 1).

Additionally, the current method does not include 11-hydroxy-delta-9-tetrahydrocannabinol (OH-THC). Blood proteins are precipitated with acetonitrile and the sample is loaded onto a solid-phase extraction column. THC and Carboxy-THC are eluted independently, and the separate fractions are evaporated and derivatized with MSFTA. The fractions are then injected onto two different GC/MS instruments. THC and Carboxy-THC are reported with the lower limits of quantitation of 1 and 4 ng/mL, respectively. This method, while effective, is very tedious and time-consuming due to the numerous pre-analytical sample preparation steps; this limits the total number of samples that can be analyzed.

BOTTLENECK IN PROSECUTION. The City of Los Angeles has 186 active drug-recognition experts and a team of four City Attorneys dedicated to DUID apprehension and prosecution. With the legalization of cannabis and the increase in cannabis-related DUIDs, the FSD has become the bottle-neck in the DUID prosecution chain. The City Attorney's Office will not file or dismiss drug-impaired driving charges without a complete toxicology report. In 2020, City prosecutors requested toxicology on 1,125 drug-impaired driving cases, most of which were cannabinoid-positive (> 60%). With the increase in workload, the City Attorney's Office has to wait approximately 70 days for cannabinoid confirmation laboratory reports; this delays the filing or dismissing of drug-impaired driving charges.

Citation

- (1) Logan B.K., et al. Recommendations for Toxicological Investigation of Drug-Impaired Driving and Motor Vehicle Fatalities – 2017 Update. *Journal of Analytical Toxicology*, 2018;42:63-68.

Statistical Data/Report(s)

If applicable, please upload any statistical data/reports to support your problem statement.



6. Performance Measures

Performance measures include project goals and objectives, activities with timelines and quantitative measurements.

The LAPD's goal for the proposed Cannabinoid Confirmation Test Improvement Program is to improve the FSD's capacity for Cannabinoid screening and confirmation test with the following objectives:

- (1) Increase the number of cannabinoid confirmation tests that can be performed each month with the new instrument and confirmation test method;
- (2) Reduce the turn-around time for cannabinoid confirmation tests. (Turn-around time is the difference, in days, between the date the blood specimen was received by the FSD and the date results are released to the customer via a laboratory report.);
- (3) Include OH-THC (a psychoactive delta-9-THC metabolite) in the cannabinoid confirmation testing scope; and
- (4) Reduce the amount of blood specimen required to confirm THC, OH-THC, and Carboxy-THC while maintaining the limits of quantitation published by the National Safety Council.

To achieve these goals and objectives, the LAPD is proposing to purchase and validate an ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLC/MS/MS) to streamline its current cannabinoid confirmation test method.

The proposed implementation timeline for the 24-month program is as follows:

- First Quarter:
 - The LAPD Grants Section will obtain the Los Angeles City Council's resolution to enter into a grant contract for the CHP Cannabis Tax Fund Grant Program
- Second Quarter:
 - The FSD and Grants Section will initiate the purchasing process with the City of LA and CHP Cannabis Tax Grant Program guidelines.
- Third Quarter:
 - The FSD and Grants Section will complete the purchasing process with the City of LA and CHP Cannabis Tax Grant Program guidelines.
 - The FSD will validate a confirmation test method for the confirmation of THC, OH-THC, and Carboxy-THC in blood using 80 hours of grant-funded overtime. Validation is expected to be completed within eight weeks after instrument installed.
- Fourth Quarter:
 - The FSD will validate a confirmation test method for the confirmation of THC, OH-THC, and Carboxy-THC in blood using 80 hours of grant-funded overtime. Validation is expected to be completed within eight weeks after instrument installed.
- Fifth Quarter
 - All FSD staff that use the current LC/MS/MS will be trained on the new instrument and cannabinoid confirmation test method, which is anticipated to be completed in two weeks.
- Sixth Quarter
 - Collect Data and Metrics
- Seventh Quarter
 - Collect Data and Metrics
- Eight Quarter
 - Collect Data and Metrics

The program objectives should be met once all the program activities completed.



7. Proposed Solution

Proposed solution includes the desired results, the benefits of the results, project deliverables and timeframes.

The LAPD is proposing to purchase a new ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLC/MS/MS) to enable FSD to improve sample throughput capacity and expand the scope of analysis to include OH-THC as recommended by the National Safety Council (Citation 1). This new technology will enable FSD to streamline the cannabinoid confirmation while also expanding the scope to include OH-THC, a psychoactive metabolite of THC. The proposed instruments are sensitive enough to allow for rapid pre-analytical sample preparation that is less time-consuming than the FSD's current GC/MS confirmation method. Adopting this technology will increase the FSD's sample throughput capacity, increase the total number of samples that can be processed per month, and reduce turn-around times.

With this additional instrumentation, the FSD will develop a rapid pre-analytical sample preparation procedure for the confirmation of cannabinoids in blood using smaller sample size. The procedure will include two primary steps after sampling 0.200 mL of blood: (1) add 0.600 mL of acetonitrile to precipitate proteins, and (2) transfer the solvent to an auto-sampler vial using a DPX INTip Filtration tip. These samples are then injected onto the UHPLC/MS/MS.

This proposed addition to FSD's instrumentation, a new-generation UHPLC/MS/MS, offers two key advantages over a GC/MS for confirming cannabinoids in blood: (1) it is significantly more sensitive, and (2) cannabinoids do not require derivatization prior to analysis. This new technology will allow for rapid pre-analytical sample preparation often referred to as a "dilute and shoot" method in the toxicology field. In short, 0.600 mL of acetonitrile is added to 0.200 mL of blood to precipitate out proteins, and then the acetonitrile is transferred to an auto-sampler vial using a DPX INTip Filtration tip to filter out any remaining solids. These samples are then injected onto the UHPLC/MS/MS to confirm THC, OH-THC, and Carboxy-THC. This modernized confirmation test method offers several improvements over the FSD's current procedure including: (1) a reduction in the amount of time required to complete a cannabinoid confirmation test, (2) an increase in the total number of samples that can be processed per month, (3) a reduction in the amount of blood sample required to perform the confirmation test, and (4) the scope of testing will meet the NSC's published recommendations. The FSD understands that there are numerous instruments on the market that meet the needs of this program and that funds available through the CHP Cannabis Tax Grant are limited. The purpose of this program is to improve the cannabinoid confirmation test method while selecting the instrument that is most affordable.

Additionally, the proposed project will also support 80 hours of overtime to validate a streamlined cannabinoid confirmation test method with the new equipment.

Confirmation methods such as the one described here have been implemented in many laboratories across the country with great success. Additionally, Scheidweiler K.B. et al. published a method in the *Journal of Chromatography A*, describing their results using very similar technology and methodology (See Citation 2).

With the new instrument and confirmation test method, the FSD expects the following results:

- (1) The total number of samples that can be processed per month will increase from 60 to 100, a 66% increase.
- (2) The turn-around times will be reduced from 70 days to 30 days or less, a 57% decrease. (Turn-around time is the difference, in days, between the date the blood specimen is received by the FSD and the date that results are released to the customer via a laboratory report.)
- (3) The confirmation test scope will be expanded to include the psychoactive THC metabolite OH-THC.
- (4) The volume for blood required to perform the test will be reduced from 2 mL to 0.2 mL.

The results described above are expected to be attained within twelve months of the Los Angeles City Council's approval to spend the grant funds. The "Performance Measures" section also provides a timeline for the completion of objectives that directly affect the timeframe for these results.

The benefits from this program is two-fold. First, a rapid pre-analytical sample preparation procedure will drastically reduce the time required to complete a cannabinoid confirmation test given that the current method involves solid-phase extraction, two separate elutions, derivatization, and two analytical instruments. The FSD will, therefore, be able to process more cannabinoid-positive blood specimens per month in less time. Second, with a reduction in the amount of blood required to perform the cannabinoid confirmation testing, more specimen will be available for additional drug confirmations or court-ordered sample splits. This has become a more pressing issue with the rise in poly-drug use and the more widespread use of cannabis following its legalization in California.

This program will significantly enhance driver safety on the roadways of California's most populated city. FSD stakeholders will receive cannabinoid toxicology results within 30 days of receipt of the blood specimen allowing area courts to more swiftly file or dismiss drug-impaired driving (DUID) charges. The expanded scope of testing gives stakeholders more complete toxicological findings, given that OH-THC can contribute to a driver's overall impairment and should be included quantitatively on DUID reports. Finally, FSD's drug confirmation workload is approximately 60% cannabinoid-positive and 40% other drug confirmations. Making the cannabinoid confirmation more efficient frees up analyst time for additional confirmation testing, method validation, and other programs.



- 2) Scheidweiler K.B., et. al. Quantification of cannabinoids and their free and glucuronide metabolites in whole blood by disposable pipette extraction and liquid chromatography-tandem mass spectrometry. *Journal of Chromatography A*, 1453 (2016) 34–42.



8. Method of Evaluation

Method of Evaluation

Method of evaluation describes the evaluation strategy that will be used to show project effectiveness.

The FSD uses a Laboratory Information Management System (LIMS) to track laboratory activities, chain of custody, services performed, personnel, and other statistical information throughout the entire laboratory. LIMS data is stored on the LAPD's local area network, routinely checked for integrity, and backed up daily. LIMS reports will be used to collect data to support the following performance measures; and will be reported to CHP Cannabis Tax Grant Program personnel.

- (1) Number of cannabinoid confirmation tests completed per month with the new confirmation method.
- (2) Average turn-around time on cannabinoid confirmations per month with the new confirmation method.

Additionally, the FSD will report a summary of the new confirmation test method to include the following parameters:

- (1) Scope of confirmation (e.g. THC, OH-THC, and Carboxy-THC).
- (2) Limits of quantification for all analytes (e.g. THC, OH-THC, and Carboxy-THC).
- (3) Volume of blood required to perform the confirmation test.
- (4) Sample laboratory report for the new confirmation method.



9. Program Sustainability

Program sustainability describes the plan for reducing reliance on state funding in the future and includes efforts that will be continued if funds are either not available or significantly reduced.

The Los Angeles Police Department will assume responsibility for the personnel, supplies, and service maintenance that the program will need after the grant performance period.

It is anticipated that the ultra-high-performance liquid chromatograph with tandem mass spectrometers (UHPLC/MS/MS) will come with a three-year warranty for the (MS/MS) and a one-year warranty for the UHPLC. Once the warranties have expired, the LAPD will assume maintenance costs and add the instruments to the laboratory's general service contract. The FSD procures and maintains service contracts for all instruments as a regular course of business and will include the UHPLC/MS/MS. Service contracts include annual planned/preventative maintenance and any repairs required to maintain the instruments in proper working condition. The FSD will take responsibility for purchasing all consumable supplies required to sustain the program for the life of the instrument. Consumable supplies include solvents, analytical gases (i.e. argon and nitrogen), glassware, and disposable DPX INTip Filtration tips.



10. Administrative Support

Administrative support includes the organization's experience, personnel and physical resources needed for successful implementation of this project.

The FSD is a full-service crime laboratory accredited by the American National Standards Institute – American Society for Quality National Accreditation Board (ANAB) to the International Organization of Standardization – International Electrotechnical Commission's 17025 standard. In March 2019, the FSD was assessed for re-accreditation by the ANAB under the same standard and successfully obtained re-accreditation through March 28, 2023. The FSD has a full-service Toxicology (TOX) Unit that performs drug screening and confirmation testing, blood alcohol testing, and breath-alcohol instrument calibration and maintenance. The TOX Unit personnel also testify as expert witness in court proceedings to the effects of alcohol and drugs on driving performance and in drug-facilitated sexual assault cases. The unit's workload consists almost entirely of blood specimens associated with driving under the influence of alcohol and/or drugs (DUI/DUID) crimes or misdemeanors. In 2020 the TOX Unit received 2,094 blood specimens, 94% of which were DUI- and/or DUID-related. Since 2017, the TOX Unit has validated several test methods to confirm benzodiazepines, zolpidem, carisoprodol, fentanyl, methadone, methamphetamine, and cocaine in blood specimens. The TOX Unit is fully staffed with 25 personnel: one Supervising Criminalist, two Criminalist IIIs (Technical Leads), 10 Criminalist IIs, and two laboratory technicians. The unit has two instrument specialists, one with 13 years of experience and another with 8 years of experience in developing and validating methods on both the UHPLC/MS/MS and ultra-high-performance liquid chromatography/ high resolution mass spectrometry. For this grant, the FSD has the technical staff required to complete and sustain the program long-term.

The proposed program will be staffed with a program manager, assistant program manager, and a grant analyst. The Program Manager, Vanessa Gould, has been a Criminalist with the LAPD's FSD for 29 years, with 12 years of experience in a supervisory position managing technical staff and various FSD projects, including grant management. The assistant Program Manager, Aaron McElrea, has been a Criminalist with LAPD's FSD for 15 years, with 4 years of experience in a supervisory position managing technical staff and projects. In that time, he has coordinated numerous validations for drug confirmation test methods using the gas chromatograph with mass spectrometer and liquid chromatograph with tandem mass spectrometers (LC/MS/MS). An LAPD Grant Analyst will be assigned to the proposed program to submit all financial and progress reports as well as manage all grant administration duties.

The LAPD has many years of experience in managing federal grants. It has been awarded and has successfully managed grants ranging from \$100,000 to \$16,000,000 from various local, state, and federal entities including FEMA and DOJ. The LAPD Grants Sector consists of a Grants Manager and six Grants Analysts to oversee and report on over 30 active grants. The FSD has also demonstrated the ability to manage federal grants with its DNA Capacity Enhancement and Backlog Reduction Program (2009 through 2020) and the Coverdell Competitive Grant (2008, 2010, 2014, and 2019).



11. Other Grant Programs

Impaired Driving Enforcement Funding

Has grant funding been received in the past for impaired driving enforcement?

- Yes
 No

If yes, what was the outcome?

The Department has received grant funds from the California Office of Traffic Safety (OTS) for approximately 19 years to fund DUI and traffic enforcement operations. The OTS grant funding for DUI enforcement has been an integral part of the Department's overall DUI enforcement plan. During 2020, the Selective Traffic Enforcement Program (STEP) Grant funded 162 DUI checkpoints, which resulted in the following:

- 243,436 Vehicles Through the Checkpoints
- 126,255 Drivers Screened
- 1,530 SFSTs Performed
- 525 Drivers Arrested for DUI
- 388 Drivers Arrested for DUID
- 40 Drivers Arrested for Combination DU/DUID

In addition to the checkpoints, the STEP Grant funded 199 DUI saturation patrols, which resulted in the following:

- 4,057 Traffic Stops
- 580 SFSTs Performed
- 297 Drivers Arrested for DUI
- 99 Drivers Arrested for DUID
- 11 Drivers Arrested for Combination DU/DUID

Application to other Grant Programs

Has or will a proposal be submitted to another grant program for this project (i.e., that would fund the same project components applied for in this project, or for related project components to be completed during the same time period as those described in this project).

- Yes
 No

If yes, identify granting agency or organization(s), grant program name(s), proposal title, date submitted (or to be submitted), and relationship between proposals. Please also clearly distinguish in which tasks would be funded by CHP, and which would be funded by other organizations



12. Terms and Conditions

By submitting your application, you agree to the following terms and conditions:

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge. I further understand that any false, incomplete, or incorrect statements may result in my disqualification from the grant process or dismissal from receiving grants funded from the California Highway Patrol (CHP) Cannabis Tax Fund Grant Program. I authorize the California Highway Patrol to investigate referenced documents or other documents submitted to the program to check the accuracy of the information provided.

I agree with the Request for Application, the above terms and conditions, and the California Code of Regulations, Title 13, Division 2, Chapter 13, Sections 1890.00 through 1890.27.

I Agree

When using AMPLIFUND, I authorize the state to take my requested action by an electronic means and authorize the state to accept the combination of my USER ID and password in lieu of my written signature.

I Agree.

My password is unique to me and is to remain confidential. I will not allow other individuals to use my USER ID and password to access AMPLIFUND.

I Agree.

It is my responsibility to maintain the confidentiality of AMPLIFUND information.

I Agree.

Once I submit the application, I am unable to add, edit, or delete any application information.

I Agree

Confidentiality Notice: All documents submitted as a part of the Cannabis Tax Fund Grant Program proposal are public documents and may be subject to a request pursuant to the California Public Records Act. The CHP cannot ensure the confidentiality of any information submitted in or with this proposal. (Gov. Code, § 6250 et seq.)

I Agree

Vendor I.D

I have provided a STD. 204 form which is required for payments to all entities.

I Agree

STD. 204 form

LAPD_STD204

City Council or County Board of Supervisors Resolution

A City Council or County Board of Supervisors Resolution will be submitted to the CHP prior to the execution of the Grant Agreement.

I Agree

A county, city, district, or other public body shall provide a copy of a resolution, order, motion, and ordinance of local governing body, which by law has the authority to enter into an agreement authorizing execution of a grant agreement. If applicant does not have a signed resolution at final application submission time, applicant may submit signed resolution via email prior to execution of the grant agreement. The resolution must explicitly state the agency has delegated authority to enter into an agreement for the requested amount.



Budget

Proposed Budget Summary

Expense Budget

	Grant Funded	Total Budgeted
Personnel		
Criminalist II TBD/Various	\$7,680.00	\$7,680.00
Subtotal	\$7,680.00	\$7,680.00
Equipment		
Ultra-High-Performance Liquid Chromatograph with Tandem Mass Spectrometers (UHPLC/MS/MS)	\$355,000.00	\$355,000.00
Subtotal	\$355,000.00	\$355,000.00
Total Proposed Cost	\$362,680.00	\$362,680.00

Revenue Budget

	Grant Funded	Total Budgeted
Grant Funding		
Award Requested	\$362,680.00	\$362,680.00
Subtotal	\$362,680.00	\$362,680.00
Total Proposed Revenue	\$362,680.00	\$362,680.00

Proposed Budget Detail

See attached spreadsheet.

Proposed Budget Narrative

Personnel

Personnel costs include direct compensation for salaries and fringe benefits for grant funded positions. Please itemize employees' salaries, overtime, and benefits. Narrative shall include: classification, monthly or hourly rate, percent applicable to the project and project related duties.

Criminalist II TBD/Various

FSD is seeking 80 hours of grant-funded overtime to validate the new cannabinoid confirmation method in a timeframe that is compatible with the performance period of this grant program. The average hourly pay of a Criminalist is \$64 per hour, with an average overtime rate of \$96 per hour for 80 hours the cost is \$7,680.

Equipment



Equipment are non-expendable, tangible, personal property having a normal useful life of more than one year and an acquisition cost of at least \$5,000. For each line item, narrative shall include: description, how it will be used for the project, how it will enhance/support the project, quantity, unit cost and total cost for each equipment purchase. Note: equipment costs include all accessories. Please only include the portion of the cost that will be used for project activities.

Ultra-High-Performance Liquid Chromatograph with Tandem Mass Spectrometers (UHPLC/MS/MS)

The FSD will purchase a Thermo Fisher TSQ Altis Triple Quadrupole with Vanquish Flex Quaternary – TriPlus Autosampler – UHPLC/MS/MS System for \$355,000. This system will come with the following components: 1) TSQ Altis Triple Quadrupole Mass Spectrometer with Heated Electrospray Ionization Source 2) Quaternary Pump 3) Vanquish Flex/System Base 4) TriPlus Autosampler 5) Nitrogen Generator 6) High Performance Personal Computer with Windows 10 7) Tracefinder 5.1 SP2 Software 8) All sub-components needed for installation 9) Installation 10) Three-year warranty on TQS Altis 11) One-year warranty on Quaternary Pump and Vanquish Flex/System Base