



THE JACKSON COUNTY MEDICAL EXAMINER'S OFFICE

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To: Barbara Casamento
From: Lindsey J. Haldiman, D.O., Chief Medical Examiner
Date: November 13, 2024
RE: Request for Sole Source Award Approval

The Unidentified Remains and Forensic Equipment Replacement Project will utilize the new technology of Forensic Genetic Genealogy (FGG). Currently there are 27 unidentified remains ready for the FGG process, all of which are intended for FGG in the first year of this project. In the second year, the JCMEO plans to prepare and send approximately 25 additional unidentified remains as well as exhume two unidentified remains (not yet chosen) currently buried, for the intent of sample collections and identification. For the third and fourth year of this project, another two unidentified remains per year will be exhumed for the same purpose. During all four years of the project, funds will be utilized to identify current unidentified cases, along with clearing the backlog of unidentified remains cases. After financial analysis of budgeted costs, procurement amount of \$739,830 for FGG technology are consistent with existing guidelines.

Due to the age, condition, and limited sample size of the remains in most unknown cases, extremely specialized techniques must be used to predict usability of, extract, and analyze DNA from the remains. In addition, once a DNA profile has been made, the likelihood of finding a genealogic relationship depends solely on the number of known profiles available for

comparison through genealogic DNA databases and the ability to locate and contact potential family of unknowns for confirmatory DNA testing. For these reasons, vendors available to provide these services are exceedingly rare. Multiple potential vendors providing DNA analysis services were reviewed including Novogene, SeqCenter, and Illumina, none of which perform FGG testing. Bode Technology, Parabon Nanolabs, and DNA Labs International were potential vendors found that do perform some level of FGG testing. All three rely on public genealogic databases and do not maintain a DNA database of their own. Parabon Nanolabs does not have the capability to search criminal databases, such as CODIS. DNA Labs International provides no assistance with procuring DNA samples from potential familial matches in the event a match is found.

We found only one vendor, Othram, that has the advanced capabilities to provide end-to-end in-house services for FGG from DNA extraction, enrichment, and repair through DNA sequencing and genetic genealogy analysis including personally reaching out to potential family of unknown individuals to obtain confirmatory DNA samples.

Exclusive Othram Services:

1. Complete Integration of Laboratory and Software Services

Othram is the only service provider that builds DNA profiles and develops the algorithms used to search those profiles. This direct and exclusive integration with the FamilyTreeDNA forensic matching database ensures SNP profiles are maximally optimized for forensic genetic genealogy, maximizing the number of genetic matches you can detect and giving you the best chance to solve your case.

2. Exclusive Forensic Search with FamilyTreeDNA and DNASolves

As the exclusive forensic partner of FamilyTreeDNA, Othram integrates ultra-sensitive DNA profiles developed through Forensic-Grade Genome Sequencing® (FGGS®) with advanced features like biogeographical ancestry determination, automated match clustering, and automated triangulation. Searches are performed against the FamilyTreeDNA database and the DNASolves databases, providing the largest consented forensic database search in the market. These databases are searched exclusively through Othram.

3. Forensic-Grade Genome Sequencing® (FGGS®)

Provides ultra-sensitive SNP profiles built from nearly any forensic DNA input. Minimizes the consumption of evidence and budgets through Predictive Suitability Analysis, which evaluates the likelihood of obtaining a usable profile from the sample. Uses genomic refinement, which is a proprietary process to enable successful development of SNP profiles from damaged or degraded DNA evidence. More forensic genetic genealogy cases have been solved with Othram FGGS® than any other method and FGGS is the only method optimized for search with FamilyTreeDNA and DNASolves.

4. KinSNP® Reference Testing

KinSNP® exclusively allows secure pairwise DNA comparisons without public database uploads, ensuring privacy and security for reference testers. This fully offline solution provides maximal protection for third-party individuals who offer to participate in reference testing.

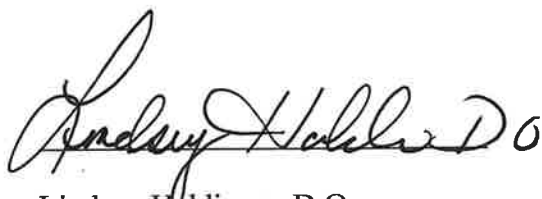
Othram is the only provider that integrates end-to-end laboratory and software services, uniquely positioning us to deliver the best possible outcomes in forensic genetic genealogy. All work is conducted in-house, ensuring seamless workflow from profile generation to database search.

Othram's forensic laboratory has been accredited by the ANSI National Accreditation Board to the ISO/IEC 17025:2017 standards for Forensic Testing and Calibration Laboratories, for Single-Nucleotide Polymorphism (SNP) testing utilizing Massively Parallel Sequencing (MPS).

Contractual Service terms shall commence at 12:00:01 a.m. on March 9, 2024, and expire at 11:59:59 p.m. on March 31, 2028.

Please contact Holly Cass, Entity Administrator, at (816) 881-6650 with questions.

Thank you for your consideration.

A handwritten signature in black ink, appearing to read "Lindsey Haldiman D.O.", written in a cursive style.

Lindsey Haldiman, D.O.
Chief Medical Examiner