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OREGON STATE POLICE Forensic Services Division Newsletter MEDICAL EXAMINERS EDITION

INTRODUCING DR. MICHELE STAUFFENBERG, OREGON'S NEW CHIEF MEDICAL EXAMINER

Mission Statement

The purpose of the Medical Examiner Division is to provide direction and support to the state death investigation program. The Medical Examiner manages all aspects of the state medical examiner program and has responsibility for technical supervision of county offices in each of the 36 counties of Oregon. The division is staffed by four full-time forensic pathologists in Clackamas and two more in Lane County and Southern Oregon, and supported by staff personnel located in the Portland Metropolitan area and the Department of Oregon State Police. The main activity of the division is to certify the cause and manner of a death requiring investigation within the authority of ORS Chapter 146. This activity includes post mortem examination and alcohol and drug analyses. The division also maintains appropriate records and provides lectures and training on legal medicine and death investigation to medical school physicians and students, attorneys, law students, police officers, emergency medical technicians, and other persons associated with the death investigation system.

Oregon State Police is pleased to introduce Dr. Michele Stauffenberg in the role of Chief State Medical Examiner.

Dr. Stauffenberg took over this position on November 1, 2017. Let's get to know her with a bit of Q&A.

Q1: What is your professional background? I am a medical doctor with specialty training and board certification (American Board of Pathology) in Anatomic, Clinical, and Forensic Pathology. I worked for 14 years in Atlanta, GA, at Fulton County Medical Examiners first as an Associate Medical Examiner (5 years) and then Deputy Chief Medical Examiner (9 years). I have family in Texas, and a Texas medical license, so I always intended to go back there and work sometime, but it just hasn't worked out. I spent a year working part time as a medical examiner in Gwinnett County, GA and Lubbock, TX before looking for full-time employment.



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MEET Dr. STAUFFENBERG

Q & A WITH DR. MICHELE STAUFFENBERG, OREGON'S NEW CHIEF MEDICAL EXAMINER

Q2: Where did you grow up and what makes it different from Oregon? I grew up in Van Nuys, CA. It is a little flatter there, and certainly warmer. Los Angeles is a much bigger city than Portland, and has a lot more smog. The beach is closer in LA. Other than that, they are a lot alike. Everyone who lives in Portland and LA thinks it's the coolest place on earth.

Q3: What are your most and least favorite things about Oregon so far? I like the weather. Rain is fine with me, and I don't like snow. I like not commuting to work. I never really minded freeway driving until I started working less than 5 miles from home. As far as least favorite, I don't like that my apartment always reeks of marijuana smoke seeping in from my neighbors.



Q4: What are your professional goals as the new Oregon State Medical Examiner? My goals are to continue to provide and improve medicolegal death investigation to Oregon. I would like to get our office accredited by the National Association of Medical Examiners. I would like to see a regional organization for the medical examiner system and to hire more staff so we can investigate more drug-related deaths, and not just test for toxicology. I would like to improve autopsy photography by having designated staff

at the medical examiner's office take quality photos and be responsible for keeping them organized and usable by the medical examiners staff when reviewing cases. I would like to be able to teach students at a level they can understand what we do here, and how wonderful this work is, so they will be inspired to spend 12 or 13 years past high school studying to be medical examiners. So many more things, but that's a good start.

Q5: Hobbies, family, pets, travel dreams? I love to crochet and pretty much do that all the time in my off time. I have always liked making afghans, but I have branched out into scarves and shawls, so I can use a skein or two of luxury yarn or pretty sock yarn and hide a project in my purse. I am a Master Crocheter, with certification through the Crochet Guild of America. I now serve as a Senior Reviewer for the Masters Program, reviewing the work of others trying to earn their certificate. I don't have any pets, but I have a son with autism, so I try to use creativity and psychology to get him to do and learn things that I think he would enjoy. My other son is a musician in Denver. I have traveled outside the US to Canada, Ireland, France, the Netherlands, and Croatia/Slovenia, and lived in Germany for about a year and a half. I've only seen the inside of Heathrow Airport in England, so I'd kind of like to see more of it sometime. My son and I love a good road trip. We have seen a lot of this country by car. Hmm...I need to get out a map and see what states we have missed.

Q6: If you could be an animal, which one?

I guess I would choose an otter. They always seem to have a lot of fun.





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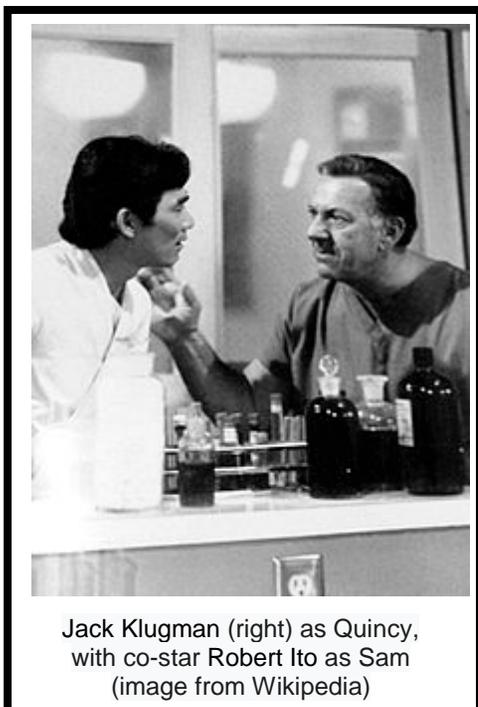
Forensic Services Division Newsletter Medico-Legal Death Investigators

WHAT'S THE DIFFERENCE BETWEEN A MEDICAL EXAMINER AND A CORONER?

If you were of a certain impressionable age between 1976 and 1983, you may have strong memories of watching episodes of *Quincy, M.E.* throughout your childhood. Dr. Quincy was a Medical Examiner, although he worked at the Los Angeles County Coroner's Office. So, is a coroner the same thing as a medical examiner?

Although the terms are sometimes used interchangeably, the two job titles can mean very different things. Both positions function as a vital part of any medico-legal death investigation. Unfortunately, varying terminology from state to state means that there is no clear-cut definition for either. However, in general, a medical examiner, who is usually a forensic pathologist, is a trained physician appointed to the position, while a coroner's position does not require any medical training. In many jurisdictions, the coroner is an elected position and may be filled by a sheriff or the director of a funeral home.

Without medical qualifications, a coroner cannot perform an autopsy. So, what sort of things does a coroner do? The coroner is primarily responsible for identifying the body and notifying the next of kin. They may also conduct an inquest to help determine the manner or cause of death. And a coroner is authorized to sign a death certificate where a coroner-system is in place. You might remember that the Coroner of Munchkinland issued a Certificate of Death for the Wicked Witch of the East when Dorothy's house landed upon her in the movie, *The Wizard of Oz*.



Jack Klugman (right) as Quincy, with co-star Robert Ito as Sam (image from Wikipedia)

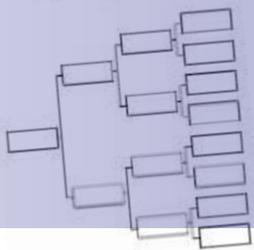
As of 2011, Medical Examiner-exclusive systems were in place in 16 states¹ and the District of Columbia. Other states use coroners or a combination of both roles. Medical Examiners perform autopsies and, as forensic pathologists, combine that information with medical records and other evidence to determine cause and time of death. Both coroners and medical examiners may testify in a court of law about their findings.

In Oregon, the State Medical Examiner is located in the Portland Metro area. She oversees a number of Deputy State Medical Examiners, including one stationed in Lane County and another in the Southern Oregon region.² In other areas of our state, County Medical Examiners perform the necessary functions of the medical examiner in death investigations, working with the State Medical Examiner when necessary. Oregon no longer has coroners operating in an official role.

Medicolegal death investigators have come a long way since Quincy's days, but if this has made you nostalgic for some old episodes, head on over to youtube!

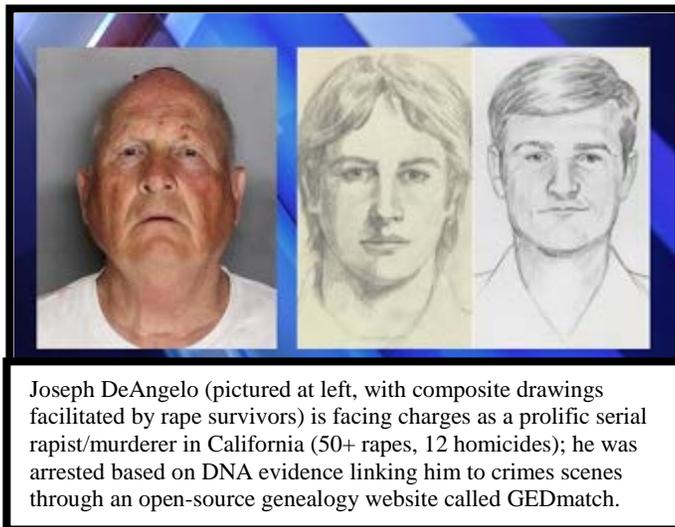
¹<https://www.npr.org/2011/02/02/133403760/coroners-dont-need-degrees-to-determine-death>

²https://www.oregon.gov/osp/SME/Pages/about_us.aspx



GENETIC GENEALOGY TESTING

Earlier this year, a suspected serial rapist and murderer in California (The Golden State Killer), was identified after 30+ years, in part, by using his DNA profile (obtained from multiple crimes scenes) to search against an open-source DNA genealogy database called GEDmatch. Oregon State Police have received multiple inquiries regarding this technology, and whether Oregon's Forensic Labs have the ability to use this technology to solve cold cases. This article provides general information we hope will guide you and your agency in the decision-making process when considering Genetic Genealogy testing.



Joseph DeAngelo (pictured at left, with composite drawings facilitated by rape survivors) is facing charges as a prolific serial rapist/murderer in California (50+ rapes, 12 homicides); he was arrested based on DNA evidence linking him to crimes scenes through an open-source genealogy website called GEDmatch.

What is Genetic Genealogy testing?

Genetic genealogy (GG) is a tool that can be used to identify human remains by linking DNA to family members of a missing person, or to point to the likely identity of an individual whose DNA was found at a crime scene. Genealogists accomplish this by comparing the amount of DNA that is shared between two people, combined with traditional genealogical research using historical records to infer relationships between individuals. GG can be used to generate leads and further cold case investigations.

Does the Oregon State Police Forensic Lab perform this type of analysis and comparison?

No, OSP does not perform this type of testing and we have no immediate plans to begin a program utilizing genetic genealogy. Private labs are available for consultation or to begin the process of sample testing in your cold case. See the contact information at the end of this article.

What kind of information can be obtained from a GG analysis?

The amount of information obtained from GG analysis can vary widely depending on the familial distance of the genetic matches (sibling versus cousin versus third cousin) and the corresponding genealogical information available. In some cases, analysts can identify a specific region from which the family of an unidentified person originated and/or surnames that will likely appear in that family tree. In some instances, analysts have been able to provide an identity for the unknown person.

Do some genetic genealogy databases allow searches for law enforcement purposes?

Most open-source, publically-available GG databases have posted notices to their participants that the database could be used for law enforcement purposes. Given these notices and the amount of press surrounding the Golden State Killer case, we believe that participants are now aware that these databases could be used for law enforcement searches and comparisons. Some companies that maintain databases of genetic profiles state that they only specifically work with law enforcement if a search warrant or court order is obtained, but some genealogical information is available online to any registered user. It's important to note that such databases do not disclose or expose any raw genetic data; only the amount and chromosomal location of shared DNA segments can be seen.

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DNA Phenotyping Analysis

GENETIC GENEALOGY TESTING

How can law enforcement use genetic genealogy information?

GG analysis can generate leads for investigators by searching databases of genetic profiles for information relevant to a case. This tool helps law enforcement be more efficient by narrowing the pool of suspects to a region, a set of families, or even to an individual. It's up to the law enforcement agency to use traditional investigative methods to confirm, negate, or supplement the information provided by the genealogical search. As there most likely will be DNA evidence available in these cases, suspect identifications can be sought via traditional nuclear-DNA comparisons.

What is DNA Phenotyping?

If genetic genealogy testing does not produce meaningful results, agencies may consider DNA phenotyping for information about their unidentified subject. Phenotyping analysis predicts the physical appearance (eye and hair color, complexion, and other details) and the biogeographic ancestry of an unknown person from their DNA. Although individuals may have altered their appearance, phenotyping analysis may provide valuable investigative information about an unknown person.

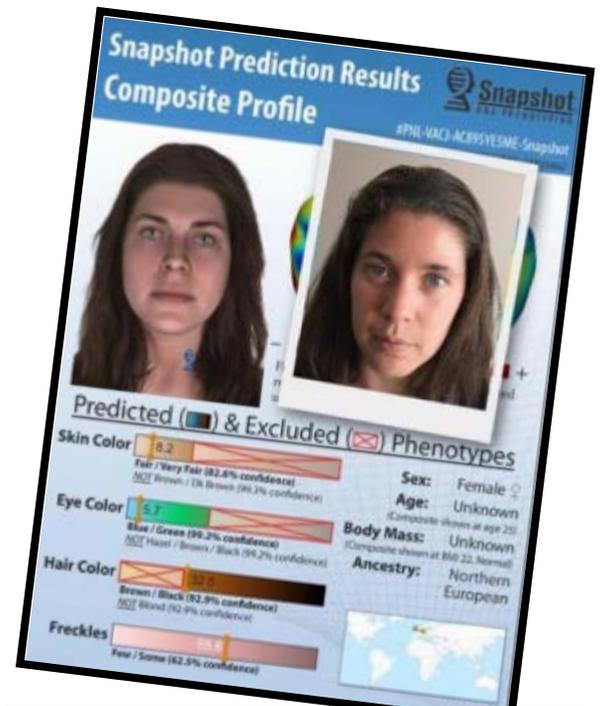
How much does it cost?

The costs depend on the quality of the sample and the amount of analysis that must be performed to acquire results. Expect costs to range from \$1,500-- for a situation where the sample was too degraded for use or failed to provide useful data-- up to around \$7,000 per case.

I want to have one of my cases tested. Where do I start?

You will need to first determine if a DNA extract was retained by the DNA laboratory that completed your case and if it is available for additional testing. If the University of North Texas processed your missing persons sample, contact Dixie Peters at the UNTHSC Center for Human Identification: 817-735-2749 or dixie.peters@unthsc.edu. If the OSP DNA Lab processed your sample, contact DNA Supervisor Stephenie Winter-Sermeno at 971-673-8261 or swinter@osp.state.or.us

These staff members may also be able to provide the names of private labs that can perform genetic genealogy or phenotyping analysis.



An example of results from DNA Phenotyping: a report and composite sketch include eye color, skin color, hair color, face morphology, and detailed biogeographic ancestry.



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AAP: a service for parents in Oregon

ANONYMOUS ANALYSIS EXPLAINED

Did you know...

Oregon State Police Forensic Labs offer a free, anonymous drug-testing service?

The **Anonymous Analysis Program (AAP)** was established to assist parents and guardians in the event that suspected drugs or drug paraphernalia are found in their minor's possession. Testing is free and confidential; suspected drug samples are subjected to the same testing that is performed on suspected drugs submitted as evidence. However, the results will not be used for any enforcement or litigation purposes (civil or criminal). A report showing the results of the analysis will *not* be issued. Instead, the findings are reported verbally to the submitting agency or individual making the request. OSP provides this service so that parents/guardians receive accurate information about suspicious-looking materials in their minor's possession to assist them in making appropriate decisions. After analysis has been completed, samples submitted to the laboratory will *not* be returned, regardless of the results. Anonymous Analysis is *not* performed at the request of employers.

Parents/guardians may submit suspected drugs/paraphernalia by delivering the item(s) directly to a participating regional Oregon State Police Forensic Lab or to any local law enforcement agency for transfer to their regional lab. A case number will be assigned, but no personal information from the parent/guardian will be recorded. Results can be obtained by the parent/guardian contacting the office or laboratory where the item was submitted and referencing the assigned case number. Turn-around time is dependent on case load, staff availability, and lab capability, but will be minimized whenever possible.

Please contact your lab or patrol office for hours and availability of Anonymous Analysis services. For further information regarding the AAP program, call Chemistry Technical Leader Jeff Borngasser at (541) 732-4090 or e-mail jeff.borngasser@state.or.us



Drugs may be obtained by in-person transactions or via online sale. There are many new "designer drugs" that are not considered illegal by the Drug Enforcement Administration and therefore are available from internet sources that sell them labeled as "research chemicals". Although not controlled federally, some of these compounds are illegal in Oregon, and many are dangerous to smoke, ingest, or inject. Below is a partial list of drugs seen by OSP Forensic Labs in routine controlled substance case work.

- Stimulants such as Methamphetamine and Cocaine
- Depressants such as Heroin and Fentanyl, including many new "designer" fentanyls
- Hallucinogens such as MDMA (Ecstasy) and related compounds, LSD, and Psilocybin-containing mushrooms
- New classes of drugs such as Synthetic Cannabinoids ("Spice") and Substituted Cathinones ("Bath Salts")
- Pharmaceutical preparations of Oxycodone (OxyContin) and Hydrocodone (Vicodin), Diazepam (Valium), Alprazolam (Xanax), Methylphenidate (Ritalin), Buprenorphine, and Methadone
- Steroids, Kratom, Marijuana, and THC residue