Just Identifying Lake Erie John Doe

Introduction [00:00:05] Now this is recording RTI International Center for Forensic Science presents Just Science.

Voiceover [00:00:18] Welcome to Just Science, a podcast for justice professionals and anyone interested in learning more about forensic science, innovative technology, current research, and actionable strategies to improve the criminal justice system. In the final episode of our Case Studies: Part 2 mini season, Just Science sat down with Dr. Thomas Gilson, Dr. Harmeet Kaur, and Hristina Lekova with the Cuyahoga County Medical Examiner's Office to discuss a puzzling case in which the identity of a decedent from 2014 still remains unknown. Since 2011, it has been uncommon for the Cuyahoga County Medical Examiner's Office to have a case in which a decedent remains unidentified for an extended period of time. In the case of an unidentified body found in Lake Erie, forensic scientists have utilized techniques such as fingerprinting, DNA matching, facial reconstruction and more in attempts to give this individual his name back. Listen along As Dr. Gilson, Dr. Kaur, and Hristina discuss details of the Lake Erie case, the wide range of resources used for human identification and the benefits of allowing medical examiners and forensic scientists to work in close proximity. This episode is funded by the National Institute of Justice's Forensic Technology Center of Excellence. Some content in this podcast may be considered sensitive and may evoke emotional responses or may not be appropriate for younger audiences. Here's your host, Jaclynn McKay.

Jaclynn McKay [00:01:33] Hello and welcome to Just Science. I'm your host, Jaclynn McKay, with the Forensic Technology Center of Excellence, a program of the National Institute of Justice. Today, we will be discussing an unresolved identification of a John Doe found in Lake Erie. Here to guide us in our discussion is Dr. Thomas Gilson, Dr. Harmeet Kaur, and Hristina Lekova. Welcome, everyone. Thanks for taking the time to talk with us today.

Hristina Lekova [00:01:58] You're welcome.

Thomas Gilson [00:01:59] You're welcome.

Harmeet Kaur [00:01:59] Thank you.

Voiceover [00:02:00] Dr. Gilson, as the Cuyahoga County medical examiner in Ohio, can you speak a little bit about your role?

Thomas Gilson [00:02:06] Yes, I can. I'm kind of a traditional medical examiner, and I run the death investigation agency. So any deaths that are suspicious or they're sudden unexpected or we know are the result of violence, will come to our office for investigation. And then the other hat that I wear is I run the crime laboratory here in Cuyahoga County. So that would include our DNA unit, our fingerprint, toxicology, drug chemistry and firearms laboratory as well.

Voiceover [00:02:36] That's a pretty unique position. Can you describe what it's like wearing both of those hats?

Thomas Gilson [00:02:41] You know, it is kind of not the typical thing. Frequently, the crime laboratory sits in law enforcement office or it sits in a prosecutor's office. I like the way we're structured. It's obviously a little bit extra work, but what it lets me do is take my

experience as a forensic scientist to oversee death investigation in the county and then also have, you know, the hat of having the laboratory that does a lot of the forensic testing also coming through to me as well. I think it's you know, it's a model that I certainly would like to see in more jurisdictions than just a few in Ohio and other parts of the country.

Voiceover [00:03:20] That's a really unique perspective. So today we're going to be discussing a case in which a decedent's identity is still unknown and that's pretty interesting for our listeners, because normally our episodes revolve around cases that have been pretty much finalized and suspects have been called or decedents have been identified. So can you maybe speak to the overall process for your department when you find decedents who are unidentified?

Thomas Gilson [00:03:49] This case is interesting and I'll come back to that in a second because he's persistently remained unidentified. And I think, you know, since 2014, that's unique almost in our office. I've been here since 2011, and I think he's one of two people who haven't been identified in those 11 years. So it's not infrequent Jaclynn, when somebody comes to our office that we don't know who they are. They may have collapsed suddenly, they were taken to a hospital or maybe they were just transported from the street. One of the big things we have to do in that situation is to try to identify who they are. It's one of those fundamental questions you ask in any death investigation, and that's going to take a couple of different tacks. I mean, somebody may say, I kind of know who that is, but I'm not sure. Then it's a confirmation. Somebody may say, you know, somebody came to my house and told me my brother passed away. If I can view them, I could tell you who that person is. And most of your identifications are done visually, even in, you know, busy offices like our office, but also in smaller places. When somebody kind of stays around and we're not sure who they are I think the first thing we'll frequently try to do is fingerprint them. And there are databases for fingerprints. They usually involve, you know, people who've been arrested. But that's a population that's overrepresented in any medical examiner's office in general. So it's a good place to start. Beyond that, we start to do things like if it's somebody we have a suspected identity for and the fingerprints are negative, we may try to find x-rays, dental charting, things like that, that may kind of say, okay, that's who this is. I think that's our last resort. A lot of times we can run a DNA profile and there's a couple nice features to that. Again, there's a big database we could tap into to see if it matches it. Primarily, the big database that we initially try to access is from people who've been arrested or convicted of crimes. The other thing we can do with DNA is if we're not sure who the person is, but we think, oh, there's a relative, a mother or father, a child, we can kind of start to try to do familial linkages back to somebody like, oh yeah, this likelihood that this person belongs to the person who they think this is is, you know, sufficient to make an identification. So that's kind of our first round of things, I would say. And I would predict most of the time we don't get so far as to DNA except in some unusual circumstances. So before we do an identification, you know, somebody becomes unidentified. The first three fingerprints, dental work, or just any x rays, they're going to probably nail them down. Visual, as I mentioned, very, very good way to identify somebody as long as you don’t push it. If somebody disfigured from an accident or they're badly decomposed, then we have to start to move to other things.

Jaclynn McKay [00:06:31] Dr. Kaur, you work as the Managing Director of Laboratories at the Cuyahoga County Medical Examiner's Office. Can you tell our audience a little bit more about those laboratories, what testing is accomplished and how the lab functions under the medical examiner's office?

Harmeet Kaur [00:06:47] At the Cuyahoga County Regional Forensic Science Laboratory we are a full-service crime laboratory, but we have the benefits to be working under the medical examiner's office. We have six forensic science units, traditional forensic science disciplines that include DNA, drug chemistry, fingerprints, firearms, trace evidence and toxicology. In addition, we also have a parentage identification laboratory where we perform the DNA relationship testing. So we have a traditional laboratory, we have all the testing available in-house, we receive the evidence from all law enforcement agencies all across the county like the crime labs do, but the one thing different that we have is that they are part of the medical examiner's office. So in cases where, you know, fatalities are involved, we work directly with the medical examiner's office on those cases. For example, in a suspicious death case, in a homicide case, a trace evidence unit works directly on the bodies to collect that evidence so that evidence is collected and processed by the laboratories and any evidence which is collected by the pathologist during autopsies or, for example, you know, there's a bullet from the body they will go directly to the firearms unit. And any swabs which are collected, let's say, in a sexual assault victim, they will go to the DNA unit and so on. So there is that direct relationship. We don't have to wait, you know, from samples to arrive from another office. So that's very, very helpful. You know, the biggest advantage that we have is this DNA relationship testing laboratory, because, you know, when we do have an unidentified victim, as Dr. Gilson said, we do try the fingerprint, we try the dental records, we try the X-rays. But if we have to go the DNA route, we have the laboratory in-house, not just to develop a profile, but also to compare, you know, with the possible relatives if they are available. And our parentage laboratory that is accredited by AAPB, which is Association for the Advancement of Blood and Biotherapies, and so we have an accredited laboratory in-house. We work with the relatives and we compare other profiles and see if there is any relationship there. Sometimes, you know, when we don't have any information available about the relatives, we also go the CODIS route, as Dr. Gilson said. We can upload the profile to the missing persons database and that's where we have another kind of alternative to identify these unidentified victims, like in this case.

Jaclynn McKay [00:09:22] So, Dr. Kaur, if a crime scene investigator worked the scene of a suspicious death, would they submit their evidence to your lab for processing to maybe compare against any evidence that was taken off of a decedent? Or do you guys just process evidence that is taken from a deceased person?

Harmeet Kaur [00:09:44] So, we do actually both. So, for example, if there is a crime scene, the evidence is collected by the law enforcement agency and they will submit the evidence to us. But any evidence which is collected from the decedent is collected by, you know, the medical examiner's office, and that's also submitted to us directly in-house.

Thomas Gilson [00:10:01] I was just going to tack on one of the things that we really like about our setup in Cuyahoga County is it kind of creates that one stop shop. So, you know, forensic pathology, death investigation happens here hand in hand with the forensic laboratory. And, you know, having worked in other offices earlier in my career, there's a tremendous disconnect sometimes between the crime lab and the medical examiner's work. But to the extent that we're in the same building and there aren't silos between us and we can communicate with each other, that's a wonderful relationship to have. Dr. Kaur forgot more about DNA probably than I ever learned, you know, and to have that kind of talent just down the hallway from me or Hristina, talk about relationship DNA and how to kind of match those things up, it's a model I think our country should really think about doing much, much more commonly because my experience, you know, in other places and then coming here, I like this model a lot. I love this model.

Jaclynn McKay [00:11:04] To your point, Dr. Gilson, I find it fascinating that the actual experts are collecting their own evidence the way that they need it to be collected and preserve it the way it needs to be preserved. Hristina, as the supervisor of the Parentage Laboratory, can you provide more information about what that laboratory actually does?

Hristina Lekova [00:11:25] Yes, sure. Again, and I also before that, want to point out that having the autopsy in our building, it's also helps our department because we can actually - each body depends of the condition of the body we will require a different specimen for DNA extraction and to be able to actually be at the autopsy and collect the sample that you really need to develop a profile, that's also very, very helpful. Main purpose for the department was to assist medical examiners. At that time it was coroner in 2007 with the identification using DNA relationship testing. We are developing STR profiles and in some cases we will have forensic DNA department to develop a Y-STR profiles for us. Then we will test direct the relationship. Its main child and the parents, full or the half siblings and the grandparents. The current parentage testing. In some cases where we do not have a direct relationship or we are not, we cant develop a STR profile and these also only mitochondrial profile is an option, then we will send our samples to the North Texas University Identification Lab and they will develop their mitochondrial profiles and will try to compare possible maternal matches.

Jaclynn McKay [00:12:44] So diving in specifically to this case back in 2014, your office found a decedent in Lake Erie and as you've mentioned, have been trying to identify him ever since. Can you walk our listeners through the beginnings of this case and how it has evolved?

Thomas Gilson [00:13:01] Yeah, I think this is one of the ones that sticks with you, actually, because by training I'm a medical doctor, a forensic pathologist. So I try to take call like the rest of the doctors in the office. My administrative responsibilities don't let me do a full caseload of autopsy work, but I still want to keep my skills up. So this was a weekend I was working and this poor fellow, he was just found in Lake Erie right off of, uh, we have a airport right on the lakefront, and he was found there floating. I think a fisherman found him. He was in bad shape. I mean, he had been in the water for a while, so he wasn't going to be somebody we could do a visual identification on. He had some clothing on, no identification in his pockets. So I kind of knew going in this was probably going to be a tougher identification. So we did a full autopsy on him. The other thing we're trying to figure out is any funny business involved. And he had some cutting injuries. But Lake Erie is a very busy commercial waterway. So I think they could have been easily related to, you know, boats and him just getting potentially, you know, struck by a propeller or something like that. And then, uh, you know, you kind of try to look at things and say like, is there anything distinctive about this guy? And he had a healed broken nose. And I said, well, that's, you know, that might be helpful. Beyond that, you know, we couldn't do fingerprints. We kind of just had to hunker down and see if anybody was missing this guy, search our missing persons things and start to collect things to maybe get a DNA profile to see if we could match him up somewhere. So that's kind of the beginning of, you know, this odyssey that we've been on since 2014. And yeah, as I say, I kind of had the impression this might be a bit of a tougher identification, but little did we know, you know, years later, we'd be talking to, you know, our partners saying, you know, can you help us out to get this message out a little further, maybe for somebody we're missing?

Jaclynn McKay [00:14:49] You mentioned that you didn't think that foul play might be involved, but have you had to work with law enforcement throughout this process at all?

Thomas Gilson [00:14:59] We have worked a lot with a lot of different folks on this. So what I can say, Jaclynn, is I don't know about foul play. You know, a lot of times the injuries that we're going to say, boy, that makes, you know, this death foul play. They may have skeletal components to them, but a lot of them don't necessarily. And when we finished, you know, that part of our investigation as to why this person died, I just have to say undetermined, which is kind of medicalese for I don't know. So I can't point to anything and say, oh, there's a real smoking gun injury here that suggests some kind of funny business, but it's never off the table and I think that's kind of one of the things that you'll see a lot of times when you recover somebody's body and they're skeletonized is, sometimes you get lucky and you see, you know, like something that kind of points to like that's why they passed away. But a lot of times, including this case, best you can say is, you know, they don't see any signs of funny business. That's part of the story, too, is when law enforcement we're working with them, you know, are there missing persons or is there anybody who this might be? That's going to play into identification and then, you know, some of those stories are going to be around, you know, is this person who's missing? Is there any suspicion that they were either, you know, harmed in some way and then potentially thrown into a lake to kind of obscure their recovery or conceal what happened?

Jaclynn McKay [00:16:18] So, as you mentioned, the decedent didn't have any identification on him. You weren't able to take fingerprints. What was kind of your next step in trying to get this person identified? Did you send any information to maybe a forensic anthropologist to try to do a facial reconstruction?

Thomas Gilson [00:16:39] Yes, we did. I'm going to walk back a little bit on that. So I can't do the fingerprints. I can't do the X-rays, you know, dental things and maybe send them out to the local dentist's association and see if anybody sort of says, oh, you know, there's something very distinctive about this fella's dental work that makes me think this was so-and-so or one of my patients or something like that. No luck on that. You know, we didn't really see anything in terms of other skeletal injuries or deformities other than the nasal fracture I mentioned. He didn't have anything like he had a hip replacement or something and maybe we could have taken a serial number off of a prosthetic device. That wasn't an option. I've mentioned the visual wasn't an option. We did take a piece of the skeleton and develop a DNA profile and it didn't work for us. And then, you know, at this point, Lake Erie, if you remember it, borders Ohio, the Great Lakes, but it also borders Canada. And we tried to expand our outreach, you know, across the border to Canada to see if we could kind of, hey is there anybody missing up there? The CODIS system was going to work in Canada for us, at least to some extent. So we're trying as many avenues as we can to see if there's anything that matches this guy. And at this point, you're kind of like I keep running into, you know, dead ends here. Let's go talk to the anthropologist and the anthropologist, I'll put a plug in for her, we had used the wonderful anthropologist from Penn State University, Linda Spurlock. Dr. Linda Spurlock and I also used a colleague of mine who I'd worked with before from Mercyhurst University, Dr. Steve Sims and they both brought different things to the table. The basics we could get, you know, how tall did we think this person was? How old do we think they are? Maybe we can get some idea about race and certainly we can get some idea about gender. So we had something of a profile, so now we could maybe start to filter through some of those missing persons reports. But, you know, I think one of the things that frustrates me about this case is how many times you kind of like it's got to break soon and it just didn't. You know, so you would have like, I kind of know what he looks like. He's got a broken nose. I'm just waiting for some family member to come and tell me, you know, this is a, you know, Uncle Bob, and this is what he looked like and here's my DNA and we'll match them up or something, but just struck out. So the next thing that we tried, Dr. Spurlock has this really tremendous talent

generating sketches of people from their skeletal remains. And she actually got two folks, other cases of ours identified sort of based on her sketch. Somebody said, I know who that was. We had her draw on the sketch. And, you know, in those kind of things, once you've got your profile, you know, how tall, how old, then the issue kind of becomes, you know, you can do some things, I think, pretty clearly. So, you know, you can get some facial features. But, you know, we didn't really have a lot of hair or anything on the guy. So, you know, does he wear a mustache, does he wear a beard, you know, is this hair long or is it short? And that's where I think, you know, a good forensic anthropologist or a forensic artist can be good about kind of focusing on the things that we would think are really going to be helpful to identify them and maybe not overemphasizing the things that we don't know so well. So we get our sketch and you know, it's another one like this is wonderful. Let's see if we can put this out somewhere. And, you know, most people who disappear kind of disappear somewhere locally. Though, I mentioned in this case, you know, we had Lake Erie to deal with. So, you know, touches Pennsylvania, touches New York, touches Canada, touches parts of Michigan, etc. So we tried to get wide distribution on it, but we focused locally on this and just said, look, here's this guy. This is what we think he looked like. We thought he went missing the year before he was found because that was a very cold winter and lots of Lake Erie had frozen that winter. So we figured he probably didn't fall into the water, you know, during the winter because we just - so much ice. So we gave it our best time estimate when he passed away. And then we got leads. We followed up on all of them. Some of them seemed very promising. You know, the broken nose, again, is kind of one of those stories. I don't know, maybe there's more people with broken noses out there than I think of, but, you know, everything kind of just in the end faded away. And periodically, you know, in the years that followed, we would try the same thing. You know, maybe somebody wasn't on the website, you know, that day when we blasted out this picture the first time, or maybe they left the area and they moved back or something, something, you know, and now we're kind of reaching out into some of these national databases like NamUs and we're putting his profile on there. NamUs is a database for missing and unidentified people. So that's what the m-U stands for, missing and unidentified. So we put his profile there and it's a wonderful resource because it helps us potentially identify somebody. It also lets family members who have lost people for years look for, you know, hey, maybe there's, you know, where my sister has been all this time.

Jaclynn McKay [00:21:57] It seems like you all are really trying to exhaust every avenue that you can in order to try to give this man his name back. Dr. Kaur, Hristina, could either of you walk us through how the DNA from the decedent was processed in this case and any leads that you were able to generate?

Hristina Lekova [00:22:16] The DNA in this particular case. We first after two weeks after the body was received, we developed STR and Y-STR profile. The STR profile was entered into CODIS and there was no matches, as Dr. Gibson mentioned. And that the same DNA profile. Also, we are in the future planning to use for a different approach to try to solve this case. We also used a DNA profile developed for some relationship testing because over the years we had several different leads from the case being on the NamUs website. And also the case was featured in one of the series on Channel 19 called Unidentifieds. And we have public will be calling when they review that. So we would do relationship testing for those possible relatives. And the DNA profile was developed actually from the one of the toenails from the victim, because he actually had his boots on. And then that would actually preserve some of the biological material. And were able to use one of the nails to develop a DNA profile.

Jaclynn McKay [00:23:34] That's really fascinating. I don't know that I have heard that before, so.

Hristina Lekova [00:23:37] This is something we do here in our laboratory. If we are able to have a nail, the fingernail or toenail, we will extract DNA from that. And actually the DNA, we always will keep the DNA. The reason is there is no cold cases in unidentifieds. There's always new technology coming and the base for that new technology is DNA.

Jaclynn McKay [00:24:02] So at this point, what are the remaining steps left you would like to explore?

Harmeet Kaur [00:24:08] So the two main remaining avenues that we - one we are pursuing and if it doesn't work, we'll go to the next one. But two main steps. One is the genetic genealogy, and the other is the familial search through CODIS. Right now, we are working the Porchlight Project to work on developing a SNP profile and uploading that to genealogy database and just do the traditional genealogy. Find a close or a distant relative and try to identify the decedent through that. If that does not work, then we have the avenue of kind of going there route of the familial search through CODIS, which is a different procedure, but that's something which we can pursue.

Jaclynn McKay [00:24:52] Do you have any advice for those agencies with unidentified remains cases or operating a laboratory out of a medical examiner's office?

Hristina Lekova [00:25:02] In my perspective, over the years here, there are several options when the medical examiners or coroner's office have unidentified, and I'm speaking from DNA point of view. One of them is to contact your state lab or local lab and try to develop a DNA profile. If your state lab does not have those capabilities, then send out the specimen to University of North Texas. They will develop that profile. And usually if somebody is missing a relative, the first place they call, it's the coroner's or medical examiner's office. If you have cases like this, direct those relatives to the local police department. They will collect the specimen and it will be entered into the missing persons database because as I said, limitations for the relationship testing is that if we don't have relatives to compare to, the DNA is just a DNA. That's nothing going to help us. And it is very important that the medical examiner coroner's offices are part of the NamUs because there's a public part of that website and there's a lot of people who are missing relatives that will look at that and actually generate several leads from NamUs.

Thomas Gilson [00:26:18] I think Hristina said a lot of really good things there. The other thing I would say to my colleagues in the medical examiner's office are, you know, that technology changes and be aware of what's coming down the pipeline, because these folks will be identified, you know, to some extent, I hope, by the effort that we put into trying to identify them. So, I'll date myself a little bit. When I was starting my forensic pathology training, that was the year the article came out that described mitochondrial DNA. Before that, you know, we had different types of DNA, and there were these long, cumbersome things like, you know, the RFLP, and steadily, you know, I think over years of my practice, we can do more with less and we can find out more information with less. So, you know, the first time I chased, you know, skeletal remains, there were three labs in the country that did mitochondrial DNA. And it was four years after that article came out. Now there's other options. When we started this case, Dr. Kaur talked a lot about genetic genealogy. You know, that wasn't really an option to us. The idea that we could take our profile and see if we could identify relatives through the databases, you know, sort of like there was a very notable case in Ohio. She was called The Buckskin Girl, and she was

unidentified for a long time and I think, you know, she was overshadowed by the Golden State killer because I think everything got overshadowed by the Golden State. It was such a dramatic solve, you know, and I think a terrible person was actually kind of being held accountable for doing terrible things. The idea, though, I think that identifying bad guys as part of a genetic genealogy does is half the story. Identifying these people, we just don't know who they are is the other part. And we have gone back and done a couple of exhumations around the idea that we'll try to identify somebody. It's obvious that identifying this person is going to push the whole investigation forward, not knowing who this person is. You know, maybe it's somebody who, once we have them identified, it puts a spin on it, like, oh, he works on a boat and maybe he fell off or maybe he was, you know, somebody who was engaged in a lot of illegal activity who might've been dumped out there. You know, it lets us do more. So I would say that don't give up on these cases, especially, keep up to date with what new tech comes out of there and, you know, be aware of the resources that are available to you. And sometimes, you know, I think it's just pray for a break too, those things will happen. And I kind of feel our responsibility to try to identify everybody who passes through the office is something I would encourage any of my colleagues to embrace as much as possible.

Jaclynn McKay [00:29:05] So, Dr. Gilson, to your point, it sounds like as technology advances, it offers more hope and new hope for these cases to get identified. And I really am wishing you all the best of luck to try to keep pursuing those avenues and give this gentleman his name back. Dr. Gilson, Dr. Kaur and Hristina, it has been a pleasure speaking with you all. Thank you for your time and for sharing your insight with us today.

Hristina Lekova [00:29:31] Thank you.

Thomas Gilson [00:29:32] You're welcome.

Harmeet Kaur [00:29:32] Thank you.

Jaclynn McKay [00:29:33] If you enjoyed today's episode, be sure to like and follow Just Science on your platform of choice. For more information on today's topic and resources in the forensics field, visit ForensicCOE.org. I'm Jaclynn McKay and this has been another episode of Just Science.

Voiceover [00:29:52] This concludes our Case Studies: Part 2 mini season. Join us in the New Year for a new season of Just Science covering human remains topics. Opinions or points of views expressed in this podcast represent a consensus of the authors and do not necessarily represent the official position or policies of its funding.