

**HID Professional Services** 

LIFE TECHNOLOGIES CONFIDENTIAL

July 13, 2022

# Summary

The Human Identification Professional Services (HPS) group of Life Technologies, a part of Thermo Fisher Scientific, is pleased to provide the following qualifications related to work carried out for Validation and Performance Checks of Thermo Fisher supplied HID workflow solutions.

This project is proposed to include the following components:

## **Casework Sample Workflow**

- Validation of PrepFiler™ Express Forensic DNA Extraction Kit (AutoMate Express System)
- Validation of Quantifiler™ Trio DNA Quantification Kit on Applied Biosystems QuantStudio 5
   Real-Time PCR System with HID Real-Time PCR Analysis Software v1.3.1
- Validation of GlobalFiler™ IQC PCR Amplification Kit on Applied Biosystems SeqStudio Genetic Analyzer with GeneMapper ID-X Software v1.6
- Validation of Yfiler Plus PCR Amplification Kit on Applied Biosystems SeqStudio Genetic Analyzer with GeneMapper ID-X Software v1.6

#### **Reference Sample Workflow**

Validation of GlobalFiler™ IQC PCR Amplification Kit (Direct Mode) on Applied Biosystems 3500
 Genetic Analyzer with GeneMapper ID-X Software v1.6 for Buccal cells on Swab Samples

Life Technologies is uniquely positioned to offer the scope as outlined in this bid and downstream support of the entire workflow: instrumentation, chemistry, and software. Your success starts with the validation, and continues with ongoing support from HID Professional Services, Field Application Specialists, Field Service Engineers, Global Training, HID global on-market support, and research and development and developmental validation support. We have a vested interest in partnering with you to ensure your success.

# **Table of Contents**

Life Technologies HID Professional Services	
Moldova MOI Validation experience	1
Summary	2
Table of Contents	3
Qualifications	4
References	
Previous & Current Awards	6
North AmericaEurope, Middle East, Africa	
Asia Pacific & Japan Latin America	21
Company Overview	29
Life Technologies	29
Thermo Fisher ScientificHID Professional Services (HPS)	
HPS EMEA Representatives	31

## QUALIFICATIONS

# References

## DNA Laboratory at Forensic Services in Maldives Police Service, Maldives

## **Dr. Ihthisham Ali** Head of DNA Laboratory ihthisham@police.gov.mv

- 2018 Validation of Quantifiler™ Trio on 7500
- 2018 Validation of GlobalFiler™ on 3500 and GeneMapper™ ID-X v1.5
- 2018 Validation of Yfiler™ Plus on 3500 and GeneMapper™ ID-X v1.5

## Hamilton County Coroner's Laboratory, OH

# Joan Burke

**Brad Everett** 

DNA Technical Leader brad.everett@tn.gov

DNA Technical Leader Joan.burke@hamilton-co.org

- 2021 Validation of GlobalFiler™ on 3500xL with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation of Yfiler<sup>™</sup> Plus on 3500xL with Data Collection Software v4 and GeneMapper<sup>™</sup> ID-X v1.6
- 2021 Validation of GlobalFiler™ on SegStudio
- 2021 Move Performance Checks of Quantifiler™ Trio on QuantStudio™ 5 and GlobalFiler™ on 3500
- 2018 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation of Yfiler™ Plus on 3500
- 2014 Validation of GlobalFiler™ on 3500

## Tennessee Bureau of Investigation

- 2022 Validation of GlobalFiler™ on 3500xL with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2022 Validation of Yfiler<sup>™</sup> Plus on 3500xL with Data Collection Software v4 and GeneMapper<sup>™</sup> ID-X v1.6
- 2018 Validation of Veriti™ Thermal Cycler with GlobalFiler™
- 2015 Identifiler™ Plus Performance Check on 3500
- 2015 Quantifiler™ Trio Validations (2) and Performance Checks (4) on 7500
- 2015 GlobalFiler™ Validation & Performance Checks (7) on 3500
- 2015 Yfiler Plus™ Validation & Performance Checks (7) on 3500
- 2012 Identifiler™ Plus Validation & Performance Checks (2) on 3500
- 2008 Profiler Plus™/COfiler™ Performance Check on 3130x/
- 2008 Profiler Plus™/COfiler™ Performance Check on 310
- 2008 Quantifiler™ Performance Check on 7500
- 2007 Profiler Plus™/COfiler™ Performance Checks (3) on 3130x/
- 2007 Quantifiler™ Human Validation & Performance Check on 7500

Dr. Kristine Kadash

Sarah Lewis

**DNA Technical Leader** 

sarah.lewis@state.co.us

kkadash@co.jefferson.co.us

# Jefferson County Regional Crime Laboratory, CO

- 2018 Probabilistic Genotyping Implementation Support
- 2015 Validation & Performance Check of Yfiler™ Plus on 3500
- 2014 Validation & Performance Checks (2) of PrepFiler™ Express on AutoMate Express™
- 2014 Validation & Performance Check of GlobalFiler™ on 3500
- 2014 Validation & Performance Check of Quantifiler™ Trio on
- 2014 Validation of Hamilton™ ID STARlet™ with GlobalFiler™ & Quantifiler™ Trio

## Colorado Bureau of Investigation, CO

- 2021 Validation and Performance Checks of GlobalFiler™ on 3500xL with Data Collection Software v4 and GeneMapper™ ID-
- 2021 Validation and Performance Checks of Yfiler™ Plus on 3500xL with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation and Performance Check of GlobalFiler™ Express on 3500xL with Data Collection Software v4 and GeneMapper™ *ID-X* v1.6
- 2021 Validation of Yfiler™ Plus in direct mode on 3500xL with Data Collection Software v4 and GeneMapper™ *ID-X* v1.6
- 2016 Performance Check of Hamilton™ ID STARlet™ with Quantifiler™ Trio & GlobalFiler™
- 2016 Performance Check of Hamilton™ ID STARlet™ with Quantifiler™ Trio & Yfiler™ Plus
- 2015 Validation & Performance Checks (6) of Hamilton™ STARlet™ with Quantifiler™ Trio & GlobalFiler™
- 2015 Validation & Performance Checks (5) of Hamilton™ STARlet™ with Quantifiler™ Trio & Yfiler™ Plus
- 2015 Validation of Yfiler™ Plus (direct) on 3500xL
- 2014 Performance Check of Hamilton™ ID STARlet™ with Quantifiler™ Duo & Identifiler™ Plus
- 2013 Validation of GlobalFiler™ Express on 3500xL with BSD600

## Indian River Regional Crime Laboratory, FL

# **Julie Casals**

**DNA Technical Leader** casalsj@ircrimelab.org

- 2021 Validation and Performance Check of RapidHIT™ ID Systems with RapidINTEL™ Sample Cartridges
- 2021 Validation and Performance Check of RapidHIT™ ID Systems with ACE GlobalFiler™ Express Sample Cartridges
- 2020 Validation and Performance Check of ProFlex™ PCR System Thermal Cyclers with GlobalFiler™
- 2019 Validation of GlobalFiler™ with 3500 Data Collection v4 and GeneMapper™ ID-X v1.6
- 2016 Validation of Hamilton™ STARlet™ Express with Quantifiler™ Trio & GlobalFiler™ on 3500
- 2015 Verification of Hamilton™ STARlet™ Express with Quantifiler™ Duo & Identifiler™ Plus

**Emily Campbell-Smith** 

Emily.smith@yorkcountygov.com

**DNA Technical Leader** 

## York County Sherriff's Office Forensic Laboratory, SC

- 2020 Validation of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ *ID-X* v1.6
- 2020 Validation of Yfiler<sup>™</sup> Plus on 3500 with Data Collection Software v4 and GeneMapper<sup>™</sup> ID-X v1.6
- 2020 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2020 Validation of Hamilton™ ID STARlet™ with Quantifiler™
  Trio on QuantStudio™ 5
- · 2020 Probabilistic Genotyping Implementation Support
- 2019 Validation of Hamilton™ ID STARlet™ with Yfiler™ Plus
- 2017 Validation of Hamilton™ ID STARlet™ with GlobalFiler™
- 2017 Validation of Hamilton™ ID STARlet™ with Quantifiler™ Trio
- 2017 Validation of Hamilton™ ID STARlet™ with GlobalFiler™
- 2012 Validation of Identifiler™ Plus on 3500
- 2012 Validation of Quantifiler™ Duo on 7500
- 2012 Validation of PrepFiler™ Extraction
- 2012 Validation of Hamilton™ ID STARlet™ with PrepFiler™,
   Quantifiler™ Duo, & Identifiler™ Plus

## South African Police Service, Pretoria, South Africa

- 2015 Performance Checks (3) of PrepFiler™ Express on AutoMate Express™
- 2015 Performance Check of Quantifiler™ Duo on 7500
- 2014 Validation of Hamilton<sup>™</sup> easyPunch<sup>™</sup>/STARlet<sup>™</sup> with Identifiler<sup>™</sup> Direct
- 2013 Validation & Performance Checks (3) of PrepFiler™ Express on AutoMate Express™
- 2011 Validation of PrepFiler
- 2011 Validation & Performance Checks (3) of Quantifiler™ Duo on 7500
- 2011 Validation & Performance Checks (5) of Identifiler™ Plus on 3130xl
- 2011 Validation & Performance Check of Hamilton™ ID STARlet™ with PrepFiler™, Quantifiler™ Duo, & Identifiler™ Plus
- 2011 Validation of CE setup with Tecan™ 150
- 2011 Performance Checks (8) of Identifiler™ Plus on 9700

# Brigadier Petra Hennop hennopp@saps.gov.za

## **Previous & Current Awards**

The Life Technologies HID Professional Services team has delivered validation and integration projects since 2007. Below is a list of projects that we have delivered, demonstrating that many of our customers have returned for additional projects.

#### North America

## Adams County Sheriff's Office, CO

- 2021 Validation & Performance Checks (3) of PrepFiler™ Express & PrepFiler™ Express BTA on Automate Express™
- 2021 Validation & Performance Check of Quantifiler™ Trio on QuantStudio™ 5
- 2021 Validation & Performance Check of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation & Performance Check of Yfiler™ Plus on 3500 with Data Collection Software v4 and GeneMapper™ *ID-X* v1.6
- 2020 Probabilistic Genotyping Implementation Support

## Alabama Department of Forensic Sciences, AL

2013 – Verification of Hamilton™ EasyPunch™ with Identifiler™ Direct & GlobalFiler™ Express

#### Alameda County Sheriff's Office Criminalistics Laboratory, CA

2008 – Validation of Identifiler™ on 3130x/

#### Alaska Department of Public Safety Scientific Crime Detection Laboratory, AK

- 2020 Validation of GlobalFiler™ on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Validation of GlobalFiler™ Express on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2014 Validation & Performance Checks (4) of GlobalFiler™ on 3500xL
- 2014 Validation & Performance Checks (3) of Quantifiler™ Trio on 7500
- 2013 Validation & Performance Checks (4) of GlobalFiler™ Express on 3500xL
- 2013 Performance Checks (12) of GlobalFiler™ Express on 9700
- 2012 Validation & Performance Checks (3) of Quantifiler™ Duo on 7500
- 2012 Validation & Performance Checks (3) of Yfiler™ on 3500xL

## Albuquerque Police Department Crime Laboratory, NM

- 2020 Validation of GlobalFiler™ on 3500xL & Performance Check on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2020 Validation of Yfiler<sup>™</sup> Plus on 3500xL & Performance Check on 3500 with Data Collection Software v4 and GeneMapper<sup>™</sup> ID-X v1.6
- 2020 Software Upgrade (2) to HID Real-Time Software v1.3.1 on 7500
- 2016 Validation of Quantifiler™ Trio on 7500
- 2014 Validation of GlobalFiler™ on 3500

# Arizona Department of Public Safety Crime Laboratory, AZ

2009 – Performance Checks (7) of Profiler Plus™/COfiler™ on 3130x/

#### Armed Forces DNA Identification Laboratory, DE

- 2012 Performance Checks (2) of Identifiler™ Plus on 3500xL
- 2012 Performance Checks (2) of MiniFiler™ on 3500xL
- 2012 Performance Checks (3) of MiniFiler™ on 3130x/
- 2012 Performance Checks (2) of Yfiler™ on 3500xL
- 2012 Performance Checks (4) of Yfiler™ on 3130x/
- 2012 Performance Checks (2) of Identifiler™ on 3130x/
- 2012 Performance Checks (2) of Quantifiler™ Duo on 7500
- 2011 Performance Check of Identifiler™ Plus on 3500xL
- 2011 Validation of MiniFiler™ on 3500xL
- 2011 Validation of Yfiler™ on 3500xL
- 2011 Performance Check of Quantifiler™ Duo on 7500

## **Baltimore County Police Department Forensic Services Section, MD**

- 2018 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2015 Validation of GlobalFiler™ on 3500
- 2011 Validation of Quantifiler™ Duo on 7500
- 2011 Validation & Performance Check of Identifiler™ Plus on 3130

#### **Boston Police Department Crime Laboratory, MA**

- 2020 Validation of GlobalFiler™ on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Probabilistic Genotyping Implementation Support
- 2018 Validation of Quantifiler™ Trio on QuantStudio™ 5

## Boulder Police Department/Colorado Bureau of Investigation, CO

• 2013 – Validation of Hamilton™ ID STARlet™ with Quantifiler™ Duo & Identifiler™ Plus

## Broward Sheriff's Office Crime Laboratory, FL

- 2020 Validation & Performance Check of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ *ID-X* v1.6
- 2020 Software Upgrade (2) to HID Real-Time Software v1.3.1 on 7500
- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of GlobalFiler™ on 3500
- 2013 Identifiler™ Plus Performance Check on 3500
- 2011 Validation of Identifiler™ Plus on 3500
- 2009 Validation of Identifiler™ on 3130xl
- 2009 Validation of Yfiler™ on 3130xl
- 2009 Validation of MiniFiler™ on 3130x/

## Centre of Forensic Sciences, Ontario, Canada

2012 – Validation & Performance Check of Identifiler™ Plus on 3500xL

#### Charlotte-Mecklenburg Police Department Crime Laboratory, NC

- 2018 Validation of Yfiler™ Plus on 3500
- 2016 Validation of GlobalFiler™ on 3130

## Colorado Bureau of Investigation, CO

- 2021 Validation & Performance Checks of GlobalFiler™ on 3500xL with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation & Performance Checks of Yfiler™ Plus on 3500xL with Data Collection Software v4 and GeneMapper™ *ID-X* v1.6
- 2021 Validation & Performance Check of GlobalFiler™ Express on 3500xL with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation of Yfiler<sup>™</sup> Plus in direct mode on 3500xL with Data Collection Software v4 and GeneMapper<sup>™</sup> *ID-X* v1.6
- 2016 Performance Check of Hamilton™ ID STARlet™ with Quantifiler™ Trio & GlobalFiler™
- 2016 Performance Check of Hamilton™ ID STARlet™ with Quantifiler™ Trio & Yfiler™ Plus
- 2015 Validation & Performance Checks (6) of Hamilton™ STARlet™ with Quantifiler™ Trio & GlobalFiler™
- 2015 Validation & Performance Checks (5) of Hamilton™ STARlet™ with Quantifiler™ Trio & Yfiler™ Plus
- 2015 Validation of Yfiler™ Plus (direct) on 3500xL
- 2014 Performance Check of Hamilton™ ID STARlet™ with Quantifiler™ Duo & Identifiler™ Plus
- 2013 Validation of GlobalFiler™ Express on 3500xL with BSD600

#### Colorado Springs Police Department Metro Crime Laboratory, CO

- 2021 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2021 Validation of Yfiler™ Plus on SeqStudio™
- 2020 Validation of GlobalFiler™ on SegStudio™
- 2020 Probabilistic Genotyping Implementation Support
- 2014 Validation & Performance Check of GlobalFiler™ on 3130

## Columbus Police Department Crime Laboratory, OH

- 2011 Validation of Identifiler™ on 3130
- 2011 Validation of Yfiler<sup>™</sup> on 3130

#### Connecticut Division of Forensic Services, CT

- 2018 Validation & Performance Checks (5) of GlobalFiler™ on 3500xL
- 2018 Validation & Performance Checks (5) of Yfiler™ on 3500xL
- 2018 Probabilistic Genotyping Implementation Support

## Contra Costa County Office of the Sheriff Forensic Services Division, CA

- 2021 Validation of RapidHIT™ ID System with ACE GlobalFiler™ Express Sample Cartridges
- 2010 Validation of Identifiler™ on 3130
- 2010 Validation of Yfiler™ on 3130

#### Delaware Office of the Chief Medical Examiner Forensic Sciences Laboratory, DE

- 2008 Validation of Identifiler™ on 3130xl
- 2008 Validation of Yfiler™ on 3130xl
- 2008 Validation of MiniFiler™ on 3130x/

#### DNA Labs International, Inc., FL

- 2011 Validation of Identifiler™ Plus on 3130xl
- 2011 Validation of Quantifiler™ Duo on 7500
- 2011 Validation of Tecan™ EVO™ 150 with PrepFiler™ & Identifiler™ Plus
- 2011 Validation of Tecan™ EVO™ 150 with Quantifiler™ Duo
- 2011 Performance Check of GeneMapper™ ID v3.2.1 with Identifiler™ Plus

#### **DuPage County Forensic Science Center, IL**

2015 – Validation of Yfiler<sup>™</sup> Plus on 3500

## Florida Department of Law Enforcement Crime Laboratory, FL

- 2011 Validation of Yfiler™ on 3130xl
- 2011 Validation of MiniFiler™ on 3130x/

## Fort Worth Police Department Crime Laboratory, TX

- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of GlobalFiler™ on 3500
- 2011 Validation of PrepFiler™ Express & PrepFiler™ Express BTA on AutoMate Express™
- 2011 Validation of Quantifiler™ Duo on 7500
- 2011 Validation of Identifiler™ Plus on 3500
- 2011 Validation of Yfiler™ on 3500

## Georgia Bureau of Investigation, GA

- 2019 Validation & Performance check of PrepFiler™ Automated on Hamilton™ STARlet™
- 2019 Validation & Performance check of Quantifiler™ Trio on Hamilton™ STARlet™
- 2019 Validation & Performance check of GlobalFiler™ on Hamilton™ STARlet™ and 3500 with Data Collection v4 and GeneMapper™ *ID-X* v1.6
- 2019 Validation & Performance checks (6) of GlobalFiler™ on 3500 with Data Collection v4 and GeneMapper™ *ID-X* v1.6
- 2019 Validation & Performance checks (6) of Yfiler™ Plus on 3500 with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2019 Validations (2) of GlobalFiler™ (Direct Mode) on 3500 with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2011 Validation of Identifiler™ on 3500
- 2011 Validation & Performance Check of Identifiler™ Plus on 3500xL
- 2011 Validation & Performance Checks of Yfiler™ on 310

## Hamilton County Coroner's Laboratory, OH

- 2021 Validation of GlobalFiler™ on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2021 Validation of Yfiler™ Plus on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2021 Validation of GlobalFiler™ on SeqStudio
- 2021 Move Performance Checks of Quantifiler™ Trio on QuantStudio™ 5 and GlobalFiler™ on 3500
- 2018 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation of Yfiler™ Plus on 3500
- 2014 Validation of GlobalFiler™ on 3500

#### Hennepin County Sheriff's Office Crime Laboratory, OH

 2019 – Validation of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6

## **Houston Police Department Crime Laboratory, TX**

- 2011 Validation of Quantifiler™ Duo on 7500
- 2011 Validation & Performance Check of Identifiler™ Plus on 3130x/
- 2011 Validation of Yfiler™ on 3130xl
- 2011 Validation of Tecan™ HID EVO™ 150 with Quantifiler™ Human, Quantifiler™ Duo, Identifiler™, MiniFiler™, & Yfiler™

#### Illinois State Police. IL

- 2014 Move Performance Checks (3) of Quantifiler™ Duo on 7500
- 2014 Move Performance Checks (2) of Identifiler™ Plus on 3130

## Indianapolis-Marion County Forensic Services Agency, IN

- 2011 Validation of Biomek NxP with Quantifiler™ Duo & Identifiler™ Plus
- 2010 Validation of Identifiler™ Plus on 3130
- 2010 Validation of MiniFiler™ on 3130

## Indian River Regional Crime Laboratory, FL

- 2021 Validation & Performance Check of RapidHIT™ ID Systems with RapidINTEL™ Sample Cartridges
- 2021 Validation & Performance Check of RapidHIT™ ID Systems with ACE GlobalFiler™ Express Sample Cartridges
- 2020 Validation of GlobalFiler™ with ProFlex™ PCR System Thermal Cyclers
- 2016 Validation of Hamilton™ STARlet™ Express with Quantifiler™ Trio & GlobalFiler™ on 3500
- 2015 Verification of Hamilton™ STARlet™ Express with Quantifiler™ Duo & Identifiler™ Plus

## Joint Expeditionary Forensics Facilities, MD

- 2010 Performance Check of Quantifiler™ Human on 7500
- 2010 Validation of Identifiler™ Plus on 3130xl
- 2010 Validation of MiniFiler™ on 3130xl
- 2010 Performance Check Yfiler™ on 3130xl

## Jefferson County Regional Crime Laboratory, CO

- 2018 Probabilistic Genotyping Implementation Support
- 2015 Validation & Performance Check of Yfiler™ Plus on 3500
- 2014 Validation & Performance Checks (2) of PrepFiler™ Express on AutoMate Express™
- 2014 Validation & Performance Check of GlobalFiler™ on 3500
- 2014 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2014 Validation of Hamilton™ ID STARlet™ with GlobalFiler™ & Quantifiler™ Trio

## Jefferson Parish Sheriff's Office Regional DNA Laboratory, LA

- 2020 Validation & Performance Check of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2020 Validation & Performance Check of Yfiler™ Plus on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2020 Validation & Performance Check of GlobalFiler™ in Direct Mode on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2009 Validation of Quantifiler™ Duo on 7500

## Johnson County Sherriff's Office Criminalistics Laboratory, KS

- 2012 Verification of Hamilton™ ID STARlet™ with Quantifiler™ Duo & Identifiler™ Plus
- 2010 Validation of Identifiler™ Plus on 3500

## Kansas Bureau of Investigation, KS

- 2012 Validation of Tecan™ HID 150 with Identifiler™ Plus & Yfiler™
- 2012 Validation of Tecan™ HID 150 with of Quantifiler™ Duo
- 2009 Validation of Identifiler™ on 3130xl
- 2009 Validation of Yfiler™ on 3130xl
- 2009 Validation of MiniFiler™ on 3130xl
- 2009 Validation of Quantifiler™ Duo on 7500

## Kansas City Police Crime Laboratory, MO

- 2014 Validation of Hamilton™ ID STARlet™ with Quantifiler™ Trio & GlobalFiler™
- 2008 Validation of Yfiler™ on 3130xl

## Kentucky State Police, KY

- 2017 Validation of Y-screen Assay using Quantifiler™ Trio
- 2017 Validation of Quantifiler™ Trio on 7500
- 2017 Validation of GlobalFiler™ on 3130x/
- 2017 Validation of Yfiler™ Plus on 3130x/
- 2013 Validation of GlobalFiler™ Express on 3500xL

## Kern Regional Crime Laboratory, CA

- 2020 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2016 Validation of Hamilton™ ID STARlet™ with Quantifiler™ Trio, GlobalFiler™, & Yfiler™ Plus
- 2013 Validation of Hamilton™ ID STARlet™ with Quantifiler™ Duo, Identifiler™ Plus, & Yfiler™

## Las Vegas Metropolitan Police Department, NV

2009 – Validation of GeneMapper™ ID-X

#### Los Angeles Police Department Criminalistics Laboratory, CA

- 2011 Validation & Performance Check Yfiler™ on 3130
- 2011 Performance Check GeneMapper™ ID-X v1.2.1

# Louisiana State Police Crime Laboratory, LA

- 2011 Validation & Performance Check of QIAGEN™ QIAgility™ with Quantifiler™ Duo, Quantifiler™ Human, Profiler Plus™, COfiler™, MiniFiler™, & Yfiler™
- 2010 Validation of PrepFiler™ on Tecan™ HID 150
- 2010 Validation & Performance Check of Identifiler™ Direct on 3130xl
- 2010 Validation of Tecan™ HID 150 with Identifiler™ Direct on 3130xl BSD600
- 2009 Validation & Performance Check of Yfiler™ on 3130xl
- 2009 Validation of MiniFiler™ on 3130xl
- 2009 Validation & Performance Check of Quantifiler™ Duo on 7500

## Maine State Police, ME

- 2015 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2015 Validation & Performance Check of GlobalFiler™ on 3500

## **Marion County Forensic Services Agency, IN**

- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation & Performance Check of GlobalFiler™ on 3500
- 2015 Validation & Performance Check of Yfiler™ Plus on 3500

#### Massachusetts State Police Forensic Services Group, MA

- 2009 Validation of Identifiler™ Direct on 3130xl with BSD600
- 2009 PerkinElmer JANUS™ Robot

#### MedTox™ Laboratories, MN

2009 – Validation of Identifiler™ on 3130x/

#### Miami-Dade Police Department, FL

- 2014 Validation of GlobalFiler™ on 3500 & 3130xl
- 2014 Validation of Quantifiler™ Trio on 7500

#### Miami Valley Regional Crime Laboratory, OH

- 2016 Script Verification of Tecan™ EVO™ 150 with Quantifiler™ Trio & GlobalFiler™
- 2012 Validation of PrepFiler™ Automated on Tecan™ EVO™ 200
- 2011 Validation of Tecan™ EVO™ 200 with Quantifiler™ Human & Quantifiler™ Y on 7500
- 2011 Validation of Tecan™ EVO™ 150 with Identifiler™, Yfiler™, & MiniFiler™

#### Mississippi Department of Public Safety Forensics Laboratory, MS

- 2021 Validation and Performance Check of RapidHIT™ ID Systems with ACE GlobalFiler™ Express Sample Cartridges
- 2016 Validation of GlobalFiler™ Express on 3500xL & BSD600
- 2015 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2015 Validation & Performance Check of GlobalFiler™ on 3500
- 2015 Validation & Performance Check of Yfiler™ Plus on 3500
- 2012 Validation of Quantifiler™ Duo on 7500
- 2012 Validation of Yfiler™ on 3130
- 2011 Performance Check of Quantifiler™ Human on 7500
- 2011 Performance Check of Identifiler™ on 3130
- 2011 Performance Check of Profiler Plus™/COfiler™ on 3130
- 2007 Validation of Profiler Plus™/COfiler™ on 3130
- 2007 Performance Check of Profiler Plus™/COfiler™ on 3130xl

# Missouri State Highway Patrol, MO

2020 – Y-Screen Assay Validation on Hamilton STARlet™ using Quantifiler™ Trio

## Monroe County Crime Laboratory, NY

- 2021 Validation of GlobalFiler™ on 3500 with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2021 Validation of GlobalFiler™ on 3500 with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2018 Performance Checks (2) of PrepFiler™ Express on AutoMate Express™
- 2018 Validation of Y-screen Assay using Quantifiler Trio
- 2018 Validation & Performance Check of Quantifiler™ Trio™ on QuantStudio™ 5
- 2018 Performance Check of GlobalFiler™ on 3500
- 2018 Validation of Yfiler™ Plus on 3500
- 2013 Validation & Performance Check of PrepFiler™ Express on AutoMate Express™
- 2013 Validation of GlobalFiler™ on 3500
- 2012 Validation of QIAGEN™ QIAgility™ with Quantifiler™ Duo on 7500
- 2011 Performance Checks (2) of Identifiler<sup>™</sup> on 3130
- 2011 Performance Check of Yfiler™ on 3130
- 2011 Performance Checks (2) Quantifiler™ Duo on 7500
- 2009 Validation of MiniFiler™ on 3130
- 2009 Validation of Yfiler™ on 3130
- 2009 Validation of Quantifiler™ Duo on 7500

## **Montgomery County Crime Laboratory, MD**

- 2015 Validation of Perkin Elmer Multiprobe with Quantifiler™ Trio & GlobalFiler™
- 2014 Validation of GlobalFiler™ on 3500
- 2014 Validation of Quantifiler™ Trio on 7500

## Nassau County Medical Examiner's Office: Division of Forensic Services, NY

- 2015 Validation & Performance Check of QIAGEN™ QIAGIlity™ with Quantifiler™ Trio on 7500
- 2015 Validation & Performance Check of QIAGEN™ QIAgility™ with GlobalFiler™ on 3500

#### **Naval Surface Warfare Center, MD**

- 2010 Validation & Performance Check of Identifiler™ Plus on 3130xl
- 2010 Validation of MiniFiler™ on 3130xl
- 2010 Validation of Quantifiler™ Duo on 7500
- 2009 Validation of Identifiler™ on 3130xl
- 2009 Validation of Yfiler™ on 3130xl
- 2009 Validation of Quantifiler™ Duo on 7500
- 2008 Validation & Performance Checks (2) of Identifiler™ on 3130xl
- 2008 Validation & Performance Check of Yfiler™ on 3130xl
- 2008 Validation & Performance Check of Quantifiler™ Duo on 7500

#### Nebraska State Patrol Crime Laboratory, NE

- 2018 Validation of Yfiler™ Plus on 3500
- 2017 Validation of Y-screen Assay using Quantifiler Trio
- 2017 Probabilistic Genotyping Implementation Support
- 2008 Validation of Identifiler™ on 3130x/

## New Mexico Department of Public Safety, NM

- 2016 Validation & Performance Check of Yfiler™ Plus on 3500
- 2016 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2016 Validation & Performance Check of GlobalFiler™ on 3500
- 2011 Validation & Performance Check of Identifiler™ Plus on 3500xL
- 2010 Validation of Identifiler™ Direct with BSD600 on 3500xL

## North Carolina State Bureau of Investigation Raleigh Crime Laboratory, NC

- 2013 Validation of GeneMapper™ ID-X
- 2011 Validation of Identifiler™ Plus on 3130xl
- 2011 Validation of MiniFiler™ on 3130xl
- 2011 Validation of Quantifiler™ Duo on 7500

## North Carolina State Crime Laboratory, NC

2014 – Validation & Performance Check of GlobalFiler™ Express on 3500xL

#### North Dakota Attorney General Crime Laboratory, ND

- 2021 Validation & Performance Check of GlobalFiler™ on 3500 with Data Collection v4 and GeneMapper ID-X v1.6
- 2021 Validation & Performance Check of Yfiler™ Plus on 3500 with Data Collection v4 and GeneMapper ID-X v1.6
- 2021 Validation of the Y-Screen Assay with Quantifiler™ Trio
- 2021 Validation & Performance Check of GlobalFiler™ (Direct Mode) on 3500 with Data Collection v4 and GeneMapper ID-X v1.6
- 2014 Validation of GlobalFiler™ on 3500
- 2014 Validation of GlobalFiler™ Express on 3500

#### Northeast Illinois Regional Crime Lab

- 2018 Probabilistic Genotyping Implementation Support
- 2016 Validation of Yfiler™ Plus on 3500
- 2015 Validation of GlobalFiler™ on 3500

#### NMS Labs, PA

- 2018 Validation & Performance Check of Quantifiler™ Trio on QuantStudio™ 5
- 2018 Validation & Performance Checks (2) of GlobalFiler™ on 3500
- · 2018 Probabilistic Genotyping Implementation Support

#### Oakland County Sheriff's Office, MI

- 2014 Validation & Performance Checks (3) of PrepFiler™ Express on AutoMate Express™
- 2014 Validation of GlobalFiler™ Express on 3500
- 2014 Validation of Tecan™ HID 100 with GlobalFiler™ & Quantifiler™ Trio

## Ohio Bureau of Criminal Investigation, OH

2016 – Verification of Tecan™ Freedom EVO™ 150 with GlobalFiler™ Express

#### Oklahoma State Bureau of Investigation, OK

- 2021 Validation & Performance Checks (5) of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation & Performance Checks (5) of Yfiler™ Plus on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation & Performance Checks (5) of GlobalFiler™ Express on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation & Performance Checks (5) of Yfiler™ Plus (direct mode) on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation of GlobalFiler™ Express on 3500xL
- 2020 Y-Screen Assay Validation using Quantifiler™ Trio
- 2020 Validation & Performance Checks (4) of Quantifiler™ Trio on QuantStudio™ 5
- 2016 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2016 Validation & Performance Check of GlobalFiler™ on 3500
- 2016 Validation of Yfiler™ Plus on 3500
- 2016 Validation of GlobalFiler™ Express on 3500
- 2016 Validation of Yfiler™ Plus (direct) on 3500
- 2015 Performance Checks (2) of PrepFiler™ Express on AutoMate Express™
- 2014 Performance Checks (3) of PrepFiler™ Express on AutoMate Express™
- 2013 Validation & Performance Check of PrepFiler™ Express on AutoMate Express™
- 2009 Validations (3) of Profiler Plus™/COfiler™ on 3130x/

## Orange County Crime Laboratory, CA

2010 – Validation of Tecan™ HID 150 with PrepFiler™ Automated

## Orangeburg Department of Public Safety Forensic Laboratory at Claflin University, SC

- 2018 Validation of Quantifiler™ HP on 7500
- 2018 Validation of GlobalFiler™ on 3500

## Palm Beach County Sheriff's Office Crime Laboratory, FL

2008 – Validation of MiniFiler™ on 3130xl

## Philadelphia Police Department, Philadelphia, PA

- 2016 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2016 Validation & Performance Checks (2) of GlobalFiler™ on 3500xL
- 2016 Validation & Performance Checks (2) of Yfiler™ Plus on 3500xL
- 2016 Validation & Performance Checks (2) of GlobalFiler™ Express on 3500xL

## Phoenix Police Department, AZ

- 2017 Y-Screen Assay Validation using Quantifiler™ Trio
- 2017 Validation & Performance Check of QIAgility™ with GlobalFiler™ and Yfiler™ Plus

## Pinellas County Forensic Laboratory, FL

- 2008 Validation & Performance Check of Identifiler™ on 3130
- 2008 Validation & Performance Check of Yfiler™ on 3130
- 2008 Validation & Performance Check of MiniFiler™ on 3130
- 2008 Validation & Performance Check of Quantifiler™ Duo on 7500

#### Prince George's County Police Department Forensic Services Division, MD

- 2021 Probabilistic Genotyping Implementation Support
- 2018 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2014 Validation of GlobalFiler™ on 3500

## Prolacta Bioscience, Inc., CA

- 2016 Validation of GlobalFiler™ on 3500xL
- 2016 Validation of GlobalFiler™ (direct) on 3500xL

#### Royal Canadian Mounted Police, Ontario, CA

• 2018 – Validation of Precision ID mtDNA Control Region Panel on Ion Chef™ & Ion S5™ Systems

#### Rhode Island Department of Health, RI

2011 – Validation of Identifiler™ Plus on 3130

#### Sacramento County District Attorney Laboratory of Forensic Services, CA

- 2011 Validation & Performance Check of Identifiler™ Plus on 3130xl
- 2011 Performance Checks (2) of Identifiler™ Plus on 3130

#### San Bernardino County Sheriff's Department Scientific Investigations Division, CA

- 2015 Validation of Yfiler™ Plus on 3500
- 2014 Validation & Performance Check of GlobalFiler™ on 3500

#### San Diego Police Department Crime Laboratory, CA

2021 –Validation of Quantifiler™ Trio on QuantStudio™ 5

## San Francisco Police Department Criminalistics Laboratory, CA

- 2015 Validation of Tecan™ Freedom EVO™ 150 with Quantifiler™ Trio & GlobalFiler™ on 3130
- 2015 Validation of Tecan™ Freedom EVO-2™ with Quantifiler™ Trio & GlobalFiler™
- 2012 Validation & Performance Check of Identifiler™ Plus on 3130x/

# San Mateo County Sheriff's Office Forensic Laboratory, CA

- 2021 Validation & Performance Check of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- · 2021 Probabilistic Genotyping Implementation Support
- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation & Performance Check of GlobalFiler™ on 3130

## Santa Clara Office of the District Attorney Crime Laboratory, CA

- 2011 Validation of Tecan™ HID 150 with PrepFiler™ Automated & Identifiler™ Plus on 3130
   2011 Validation of Tecan™ HID 150 with Quantifiler™ Duo on 7500

#### Scottsdale Police Department Crime Laboratory, AZ

- 2020 Validation of PrepFiler™ Express on Automate Express™
- 2020 Performance Check of GlobalFiler™ on 3500
- 2018 Validation of Quantifiler™ Trio on QuantStudio™ 5

## South Carolina Law Enforcement Division Forensic Services Laboratory, SC

- 2009 Validation of Quantifiler™ Duo on 7500
- 2008 Validation of MiniFiler™ on 3130xl
- 2008 Validation of Yfiler™ on 3130xl

## South Dakota Forensic Laboratory, SD

2013 – Validation of GlobalFiler™ on 3500

#### Southwest Louisiana Criminalistics Laboratory, LA

- 2009 Validation of Quantifiler™ Duo on 7500
- 2009 Validation of MiniFiler™ on 3130

## St. Charles County Police Department Criminalistics Laboratory, MO

- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of GlobalFiler™ on 3130

## St. Tammany Parish Coroner's Office Crime Laboratory, LA

- 2021 7500 HID Real-Time PCR Analysis Software v1.3.1 Software Upgrade Functional Testing with Quantifiler™ Trio
- 2021 Validation & Performance Check of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2021 Validation & Performance Check of Yfiler™ Plus on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1.6
- 2018 Validations (3) of ProFlex<sup>™</sup> Thermal Cyclers with GlobalFiler
- 2018 Validations (3) of ProFlex<sup>™</sup> Thermal Cyclers with Yfiler<sup>™</sup> Plus
- 2018 Probabilistic Genotyping Implementation Support
- 2015 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2015 Validation & Performance Check of GlobalFiler on 3500xL
- 2015 Validation & Performance Check of Yfiler™ Plus on 3500xL
- 2012 Move of Identifiler™, MiniFiler™, Yfiler™ on 3130
- 2012 Performance Check of Quantifiler™ Human & Quantifiler™ Y on 7500
- 2012 Performance Checks of Identifiler<sup>™</sup>, MiniFiler<sup>™</sup>, & Yfiler<sup>™</sup> on 9700
- 2009 Performance Checks of Identifiler<sup>™</sup>, MiniFiler<sup>™</sup>, & Yfiler<sup>™</sup> on 9700
- 2007 Validation & Performance Check of Identifiler™ on 3130
- 2007 Validation & Performance Check of Yfiler™ on 3130
- 2007 Validation & Performance Check of MiniFiler™ on 3130
- 2007 Validations (2) & Performance Check of Profiler Plus™/COfiler™ on 3130xl
- 2007 Validation & Performance Check of Quantifiler™ Human on 7500

#### Suffolk County Crime Laboratory, NY

- 2018 Validation of Quantifiler<sup>™</sup> Trio on QuantStudio<sup>™</sup> 5
- 2016 Validation of Quantifiler™ Trio on 7500
- 2012 Validation of Identifiler™ Plus on 3500

#### Tarrant County Medical Examiner's Criminalistics Laboratory, TX

2012 – Validation of Identifiler™ Plus on 3500

#### Texas Department of Safety, TX

- 2017 Validation & Performance Check of GlobalFiler™ Express on 3500xL
- 2017 Validation & Performance Checks (2) of GlobalFiler™ Express on 3130xl
- 2017 Validation & Performance Check of Yfiler™ Direct on 3500xL
- 2017 Validation & Performance Checks (2) of Yfiler™ Direct on 3130x/

#### Tennessee Bureau of Investigation, TN

- 2022 Validation of GlobalFiler™ on 3500 with Data Collection Software v4 and GeneMapper™ ID-X v1 6
- 2021 Validation of Yfiler™ Plus on 3500 with Data Collection Software v4 and GeneMapper™ ID-X
- 2018 Validation of Veriti™ Thermal Cycler with GlobalFiler™
- 2015 Performance Check of Identifiler™ Plus on 3500
- 2015 Validations (2) & Performance Checks (4) of Quantifiler™ Trio on 7500
- 2015 Validation & Performance Checks (7) of GlobalFiler™ on 3500
- 2015 Validation & Performance Checks (7) of Yfiler Plus™ on 3500
- 2012 Validation & Performance Checks (2) of Identifiler™ Plus on 3500
- 2008 Performance Check of Profiler Plus<sup>™</sup>/COfiler<sup>™</sup> on 3130xl
- 2008 Performance Check of Profiler Plus™/COfiler™ on 310
- 2008 Performance Check of Quantifiler™ on 7500
- 2007 Performance Checks (3) of Profiler Plus™/COfiler™ on 3130xl
- 2007 Validation & Performance Check of Quantifiler™ Human on 7500

#### **Tucson Police Department Crime Laboratory, AZ**

2020 – Validation of Quantifiler™ Trio on QuantStudio™ 5

#### Undisclosed Forensic Laboratory, MD

- 2015 Validation & Performance Check of Yfiler™ Plus on 3500xL
- 2015 Validations (2) of Yfiler™ Plus (direct) on 3500xL
- 2014 Validation & Performance Check of GlobalFiler™ on 3500xL
- 2013 Validation & Performance Check of Identifiler™ Plus on 3500xL
- 2013 Validation of PrepFiler™ Express on AutoMate Express™
- 2012 Validation & Performance Check of Quantifiler™ Duo on 7500
- 2012 Validation of GlobalFiler™ Express on 3500xL

#### Undisclosed Forensic Laboratory, VA

- 2021 Validation of GeneMapper ID-X v1.6 as Expert System with GlobalFiler™ Express
- 2021 Validation of GeneMapper ID-X v1.6 as Expert System with Yfiler™ Plus (direct mode)
- 2020 Validation & Performance Check of GlobalFiler™ on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Validation & Performance Check of Yfiler<sup>™</sup> Plus on 3500xL with Data Collection v4 and GeneMapper<sup>™</sup> ID-X v1.6
- 2020 Validation & Performance Check of GlobalFiler™ Express on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Validation & Performance Check of Yfiler™ Plus (direct mode) on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6

## Union County Prosecutor's Office Forensics Laboratory, NJ

- 2016 Validation & Performance Check Quantifiler™ Trio on 7500
- 2016 Validation & Performance Check GlobalFiler™ on 3500

## U.S. Army Criminal Investigation Laboratory, GA

- 2014 Validation & Performance Check of GlobalFiler™ on 3500xL
- 2014 Validation & Performance Check of GlobalFiler™ on 3130x/
- 2014 Validation of Quantifiler™ Trio on 7500
- 2013 Validation & Performance Check of GlobalFiler™ Express on 3500xL
- 2013 Validation & Performance Check of GlobalFiler™ Express on 3130xl
- 2012 Performance Checks (10) of Identifiler™ Plus on 3130x/
- 2012 Performance Checks (8) of Yfiler™ on 3130x/
- 2009 Validation of Quantifiler™ Duo on 7500
- 2007 Performance Check of Identifiler™ on 3130x/
- 2007 Performance Check of Yfiler™ on 3130x/
- 2007 Validation of MiniFiler™ on 3130x/

## Unified Metropolitan Forensic Crime Laboratory, CO

- 2021 Performance Check of Hamilton™ Microlab™ ID STARlet with Quantifiler™ Trio
- 2021 Performance Check of Hamilton™ Microlab™ ID STARlet with GlobalFiler™
- 2021 Performance Check of Hamilton™ Microlab™ ID STARlet with Yfiler™ Plus
- 2018 Validation & Performance Checks (4) of PrepFiler™ Express on Automate Express™
- 2018 Validation & Performance Check of Quantifiler™ Trio on QuantStudio™ 5
- 2018 Validation of Hamilton™ Microlab™ ID STARlet with Quantifiler™ Trio
- 2018 Validation & Performance Check GlobalFiler™ on 3500
- 2018 Validation of Hamilton™ Microlab™ ID STARlet with GlobalFiler™
- 2018 Validation & Performance Check Yfiler™ Plus on 3500
- 2018 Validation of Hamilton™ Microlab™ ID STARlet with Yfiler™ Plus
- · 2018 Probabilistic Genotyping Implementation Support

#### University of North Texas Forensic Science Center, TX

2011 – Validation of Identifiler™ Direct on 3500xL

## Ventura County Sheriff's Forensic Science Laboratory, CA

- 2015 Validation & Performance Check of GlobalFiler™ on 3500
- 2015 Validation & Performance Check of Quantifiler™ Trio on 7500

#### Washoe County Sheriff's Office Forensic Science Division, NV

- 2022 Validation & Performance check of Quantifiler™ Trio on QuantStudio™ 5
- 2022 Performance Check of Quantifiler™ Trio on Hamilton™ STARlet™ Presto
- 2022 Performance Check of GlobalFiler™ on Hamilton™ STARlet™ Presto
- 2022 Performance Check of Yfiler™ Plus on Hamilton™ STARlet™ Presto
- 2022 Validation of GlobalFiler™ (direct mode) on Hamilton™ EasyPunch™ STARlet™
- 2022 Validation of PrepFiler™ Automated on Hamilton™ AutoLys™ and STARlet™ Presto™
- 2020 Validation & Performance Checks (2) of PrepFiler™ Express on Automate Express™
- 2020 Validation & Performance Check of GlobalFiler™ on 3500xL with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Probabilistic Genotyping Implementation Support
- 2018 Validation of Y-screen Assay using Quantifiler™ Trio
- 2018 Validation & Performance Check of Quantifiler™ Trio on 7500
- 2018 Validation of GlobalFiler™ on 3500xL

## West Virginia State Police Forensic Laboratory, South Charleston, WV

- 2020 Validation of GlobalFiler™ on 3500 with Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Validation of GlobalFiler™ (direct mode) on 3500 with Data Collection v4 and GeneMapper™
  ID-X v1.6
- 2018 Validation of Y-screen Assay using Quantifiler™ Trio
- 2018 Validation & Performance Check of GlobalFiler™ (direct mode) on 3500
- 2016 Validation & Performance Check of GlobalFiler™ on 3500

## Wyoming State Crime Laboratory, WY

2016 – Verification of Hamilton<sup>™</sup> Microlab<sup>™</sup> ID STARlet<sup>™</sup> with Quantifiler<sup>™</sup> Trio, GlobalFiler<sup>™</sup> & Yfiler<sup>™</sup> Plus

#### York County Sherriff's Office Forensic Laboratory, SC

- 2020 Validation of GlobalFiler™ with 3500 Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Validation of Yfiler™ Plus with 3500 Data Collection v4 and GeneMapper™ ID-X v1.6
- 2020 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2018 Validation of Yfiler™ Plus on 3500
- 2018 Validation of Hamilton™ Microlab™ ID STARlet with Yfiler™ Plus
- 2017 Validation of Hamilton™ ID STARlet™ with Quantifiler™ Trio
- 2017 Validation of Hamilton™ ID STARlet™ with GlobalFiler™
- 2012 Validation of Identifiler™ Plus on 3500
- 2012 Validation of Quantifiler™ Duo on 7500
- 2012 Validation of PrepFiler™ Extraction
- 2012 Validation of Hamilton™ ID STARlet™ with PrepFiler™, Quantifiler™ Duo, & Identifiler™ Plus

## Europe, Middle East, Africa

#### **Undisclosed Forensic Laboratory, Belgium**

- 2016 Validation of GlobalFiler™ on 3500xL
- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of GlobalFiler™ on 3500

#### Hanover, Germany

2012 – Verification of Hamilton™ ID STARlet™ with NGM™, SEfiler™, Quantifiler™ Duo

## **Undisclosed Forensic Laboratory, Germany**

- 2017 Implementation Evaluation of NGM Detect™ on 3500
- 2017 Implementation Evaluation of Yfiler™ Plus on 3500

#### **Undisclosed Forensic Laboratory, Italy**

- 2020 Validation of RapidHIT™ ID Systems with RapidINTEL™ Sample Cartridges
- 2019 Validation & Performance Check of Yfiler™ Plus on 3500
- 2018 Validation & Performance Check of GlobalFiler™ on 3500
- 2016 Validation of Quantifiler™ Trio on Hamilton™ Microlab™ STARlet™
- 2016 Validation of GlobalFiler™ on Hamilton™ Microlab™ STARlet™
- 2016 Validation of Yfiler™ Plus on Hamilton™ Microlab™ STARlet™

## **Undisclosed Forensic Laboratory, Italy**

- 2016 Validation of CPA200™ with GlobalFiler™ Express
- 2016 Validation of CPA200™ with Yfiler Plus (direct)
- 2016 Validation & Performance Check of Hamilton™ easyPunch™ STARlet™ GlobalFiler™ Express on 3500xL
- 2016 Validation & Performance Check of Hamilton™ easyPunch™ STARlet™ Yfiler™ Plus on 3500xL

## Undisclosed Forensic Laboratory, Italy

2019 – Validation of Yfiler™ Plus on 3500

2018 – Validation of GlobalFiler™ on 3500

## **Undisclosed Forensic Laboratory, Italy**

- 2020 Validation of Yfiler™ Plus on 3500
- 2020 Validation of GlobalFiler™ on 3500
- 2020 Validation of NGM Detect<sup>™</sup> on 3500

## **Undisclosed Forensic Laboratory, Italy**

- 2019 Validation of Yfiler™ Plus on 3500
- 2018 Validation of GlobalFiler™ on 3500

## **Undisclosed Forensic Laboratory, Italy**

- 2020 Validation of Yfiler™ Plus on 3500
- 2018 Validation of GlobalFiler™ on 3500

#### Ministry of Martyrs and Missing, Libya

- 2017 Validation & Performance Check of PrepFiler™ Express on AutoMate Express™
- 2017 Validation of Quantifiler™ Trio on 7500
- 2017 Validation of GlobalFiler™ on 3500
- 2017 Validation of GlobalFiler™ Express on 3500

## Namibian Police (NFSI), Namibia

- 2015 Validation & Performance Check of PrepFiler™ Express on AutoMate Express™
- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation of GlobalFiler™ on 3500xL
- 2015 Validation of Yfiler™ Plus on 3500xL
- 2014 Validation of PrepFiler™ Express with Differential Extraction on AutoMate Express™
- 2014 Validation of PrepFiler™ with Differential Extraction
- 2011 Validation of PrepFiler™
- 2011 Validation of Quantifiler™ Duo on 7500
- 2011 Validation of Identifiler™ Plus on 3500
- 2011 Validation of Hamilton™ ID STARlet™ with Identifiler™ Direct on 3500 with BSD1000
- 2011 Validation of Hamilton™ ID STARlet™ with PrepFiler™ Automated, Quantifiler™ Duo, & Identifiler™ Plus

#### Warsaw Police, Poland

• 2011 – Verification of Tecan™ HID 150 of NGM, PrepFiler™ Automated, Quantifiler™ Duo

#### Portugal Policia Judiciara, Portugal

- 2020 Validation of RapidHIT™ ID Systems with RapidINTEL™ Sample Cartridges
- 2020 Validation of RapidHIT™ ID Systems with ACE GlobalFiler™ Express Sample Cartridges

## Undisclosed Forensic Laboratory, Kingdom of Saudi Arabia

 2017 – Validations (2) of Hamilton<sup>™</sup> EasyPunch<sup>™</sup> STARlet<sup>™</sup> and Hamilton<sup>™</sup> Microlab<sup>™</sup> ID STARlet Express with GlobalFiler<sup>™</sup> (direct)

## Scottish Police Authority, Scotland

- 2020 Verifications (2) of Hamilton™ ID STARlet™ with Quantifiler™ Trio
- 2014 Validations (2) of Hamilton™ ID STARlet™ with GlobalFiler™ Express
- 2013 Validations (2) of Hamilton™ AutoLys STAR™ & Hamilton™ ID STARlet™
- 2013 Performance Check of Hamilton™ ID STARlet™
- 2013 Validation & Performance Checks (2) of GlobalFiler™ on 3500xL
- 2013 Validation & Performance Check of Quantifiler™ Duo on 7500
- 2013 Validations (2) & Performance Checks (5) of SGM Plus<sup>™</sup> on 3500xL
- 2013 Validation of Identifiler™ Plus on 3500xL

#### Undisclosed Forensic Laboratory, Switzerland

- 2020 Verification of Hamilton™ STARlet™ with PrepFiler™ Automated BTA
- 2015 Validation of Hamilton™ STAR™ AutoLys/STARlet™ with PrepFiler™

## Undisclosed Forensic Laboratory, Pretoria, South Africa

- 2015 Performance Checks (3) of PrepFiler™ Express on AutoMate Express™
- 2015 Performance Check of Quantifiler™ Duo on 7500
- 2014 Validation of Hamilton™ easyPunch™/STARlet™ with Identifiler™ Direct
- 2013 Validation & Performance Checks (3) of PrepFiler™ Express on AutoMate Express™
- 2011 Validation of PrepFiler
- 2011 Validation & Performance Checks (3) of Quantifiler™ Duo on 7500
- 2011 Validation & Performance Checks (5) of Identifiler™ Plus on 3130xl
- 2011 Validation & Performance Check of Hamilton™ ID STARlet™ with PrepFiler™, Quantifiler™
  Duo, & Identifiler™ Plus
- 2011 Validation of CE setup with Tecan™ 150
- 2011 Performance Checks (8) of Identifiler™ Plus on 9700

## **Undisclosed Forensic Laboratory, Cape Town, South Africa**

- 2015 Performance Check of PrepFiler™ Express on AutoMate Express™
- 2015 Performance Checks (3) of 9700 Thermal Cycler
- 2014 Validations (3) of Hamilton™ easyPunch™/STARlet™ with Identifiler™ Direct
- 2014 Performance Check of PrepFiler™ Express on AutoMate Express™
- 2014 Performance Check of Identifiler™ Plus on 3500xL
- 2014 Validation of GeneMapper™ ID-X v1.4
- 2012 Validation of PrepFiler™
- 2012 Validation & Performance Checks (2) of Quantifiler™ Duo on 7500
- 2012 Validation of Identifiler™ Plus on 3500xL

## **Undisclosed Forensic Laboratory, Turkey**

2015 – Verification of Tecan™ HID EVOlution™ with PrepFiler™

#### Abu Dhabi Police Laboratory, United Arab Emirates

2011 – Validation of Identifiler™ Direct on 3500xL with BSD600

#### Metropolitan Police, London, United Kingdom

- 2010 Validation of Identifiler™ on 3130x/
- 2010 Validation of Quantifiler™ Duo on 7500

## Asia Pacific & Japan

#### Undisclosed Forensic Laboratory, Australia

2017 – Validation & Performance Check of Yfiler™ Plus on 3500xL

#### Undisclosed Forensic Laboratory, Australia

- 2016 Validation of VeriFiler™ Express on 3500
- 2016 Validation of Yfiler™ Plus Direct on 3500

## Undisclosed Forensic Laboratory, Australia

2013 – Validation & Performance Check of GlobalFiler™ on 3500xL

## Undisclosed Forensic Laboratory, Australia

2011 – Validation of NGM SElect™ Express on 3500

# Undisclosed Forensic Laboratory, Australia

• 2013 – Validation of GlobalFiler™ on 3500

#### Undisclosed Forensic Laboratory, Australia

- 2015 Validation of Yfiler™ Plus on 3500xL
- 2013 Validation & Performance Check of GlobalFiler™ on 3500xL
- 2013 Validation & Performance Check of GlobalFiler™ Express on 3500xL

## Department of Scientific Services, Brunei Datussalam

- 2021 Validation of GlobalFiler™ Express on 3500xL
- 2021 Validation of CPA200™ using GlobalFiler™ Express with 3500xL
- 2018 Validation of Quantifiler™ Trio on 7500
- 2018 Validation of GlobalFiler™ on 3500
- 2018 Validation of PrepFiler™ Express on AutoMate Express™

#### Central Forensic Science Laboratory Bhopal, India

2020 – Verification of GlobalFiler™ on 3500

## Central Forensic Science Laboratory Chandigarh, India

2019 – Verifications (5) of GlobalFiler™ on 3500

## Central Forensic Science Laboratory Guwahati, India

2020 – Verification of GlobalFiler™ on 3500

## Central Forensic Science Laboratory Hyderabad, India

- 2021 Verification of VeriFiler™ Plus on 3500
- 2020 Verification of GlobalFiler™ on 3500

## Central Forensic Science Laboratory Jaipur, India

2019 – Verification of GlobalFiler™ on 3500xL

## Central Forensic Science Laboratory Lucknow, India

• 2019 – Validation of RapidHIT™ 200 System with ACE GlobalFiler™ Express Sample Cartridges

#### Central Forensic Science Laboratory Pune, India

2020 – Verification of GlobalFiler™ on 3500

#### Delhi Forensic Science Laboratory, India

2017 – Verification of GlobalFiler™ on 3500xL

## Forensic Science Laboratory Punjab, India

2021 – Verification of VeriFiler™ Plus on 3500

#### Gurgaon Life Sciences Laboratory, India

2017 – Validation of GlobalFiler™ on 3500xL

## National Institute of Criminology and Forensic Science Delhi, India

2019 – Verification of GlobalFiler™ on 3500

#### **Undisclosed Forensic Laboratory, Indonesia**

2019 – Verification of GlobalFiler™ on 3500

#### **Undisclosed Forensic Laboratory, Indonesia**

- 2021 Validation of GlobalFiler™ on 3500
- 2021 Validation of Quantifiler™ Trio on 7500
- 2014 Validation of Quantifiler™ Duo on 7500
- 2014 Validation of Identifiler™ Plus on 3500

## Undisclosed Forensic Laboratory, Indonesia

- 2015 Validation of PrepFiler™ Express & PrepFiler™ Express BTA on AutoMate Express™
- · 2015 Validation of GlobalFiler on 3500
- 2014 Validation of Quantifiler™ Duo on 7500
- 2014 Validation of Identifiler™ Plus on 3500xL

#### **Undisclosed Forensic Laboratory, Japan**

2017 – Validation of GlobalFiler™ on 3500

#### **Undisclosed Forensic Laboratory, Japan**

- 2021 Validation of GlobalFiler™ on SeqStudio™
- 2021 Move Verifications (2) of GlobalFiler™ on 3500xL
- 2021 Validation of GlobalFiler™ on 3500xL
- 2021 Internal Laboratory Verifications (2) of GlobalFiler™ on 3500xL
- 2021 Performance Check of Quantifiler™ Trio on QuantStudio™ 5
- 2021 Performance Checks (18) of Quantifiler™ Trio and Quantifiler™ HP on QuantStudio™ 5
- 2021 Performance Checks (54) of ProFlex™ PCR System with GlobalFiler™ and 3500xL
- 2020 Performance Checks (128) of Quantifiler™ Trio and Quantifiler™ HP on QuantStudio™ 5
- 2020 Validations (2) of GlobalFiler™ on 3500xL
- 2020 Validations (3) of GlobalFiler™ on SeqStudio™
- 2020 Validation of GlobalFiler™ on 3500
- 2020 Validation of Yfiler™ Plus on 3500
- 2020 Performance Check of Quantifiler™ Trio on QuantStudio™ 5
- 2020 Probabilistic Genotyping Implementation Support
- 2020 Internal Laboratory Verifications (5) of GlobalFiler™ on 3500xL
- 2020 Internal Laboratory Verifications (3) of GlobalFiler™ on 3500xL
- 2020 Validations (2) of GlobalFiler™ on 3500xL
- 2020 Validations (2) of Yfiler™ Plus on 3500xL
- 2019 Performance Checks (3) of Quantifiler™ Trio & Quantifiler™ HP on QuantStudio™ 5
- 2019 Internal Laboratory Verifications (40) of GlobalFiler™ on 3500xL
- 2018 Validation of Quantifiler™ Trio & Quantifiler™ HP on QuantStudio™ 5
- 2018 Internal Laboratory Verifications (57) of GlobalFiler™ on 3500xL
- 2017 Internal Laboratory Verifications (11) of GlobalFiler™ on 3500xL
- 2016 Internal Laboratory Verifications (11) of GlobalFiler™ on 3500xL
- 2015 Internal Laboratory Verifications (11) of GlobalFiler™ on 3500xL
- 2014 Validation of GlobalFiler™ on 3500xL
- 2013 Validation of Identifiler™ on 3730

## Undisclosed Forensic Laboratory, Malaysia

- 2019 Validation of GlobalFiler™ on 3500
- 2019 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2017 Validations (3) of GlobalFiler™ on 3500xL
- 2017 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2015 Validation of PrepFiler™ Express on AutoMate Express™
- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation of GlobalFiler™ on 3500
- 2014 Validation of PrepFiler™ Express & PrepFiler™ Express BTA on AutoMate Express™
- 2014 Validation of Quantifiler™ Duo on 7500
- 2014 Validation of GlobalFiler™ on 3500xL
- 2012 Validation of Identifiler™ Plus on 3500xL

# **Undisclosed Forensic Laboratory, Malaysia**

- 2017 Performance Checks (4) of GlobalFiler™ Express on 9700
- 2017 Move Performance Checks (2) of GlobalFiler™ Express on 3500xL
- 2016 Validations (2) of GlobalFiler<sup>™</sup> Express on 3500xL

#### Maldives Police Service, Maldives

- 2018 Validation of Quantifiler™ Trio on 7500
- 2018 Validation of GlobalFiler™ on 3500
- 2018 Validation of Yfiler™ Plus on 3500

## University of Medicine, Ministry of Health and Sports, Myanmar

- 2018 Verification of Quantifiler™ Trio on QuantStudio™ 5
- 2018 Verification of GlobalFiler™ on 3500

## **Undisclosed Forensic Laboratory, Philippines**

- 2019 Validation & Performance Check of VeriFiler™ Plus on 3500xL with Data Collection v4
- 2021 Validation & Performance Checks (2) of RapidHIT™ ID Systems with ACE GlobalFiler™
  Express Sample Cartridges
- 2019 Validation & Performance Check of VeriFiler™ Plus (direct) on 3500xL with Data Collection Software v4 and Hamilton™ NIMBUS™
- 2017 Validation of Yfiler™ Plus (direct) on 3500

## **Undisclosed Forensic Laboratory, Singapore**

- 2020 Validation & Performance Check of Yfiler™ Plus on 3500xL
- 2020 Probabilistic Genotyping Implementation Support
- 2017 Evaluation of Precision ID Workflow with Precision ID Ancestry Panel, Ion Chef Instrument, and Ion S5 Sequencer
- 2017 Performance Check of GlobalFiler™ on 3500xL
- 2017 Performance Check of ProFlex<sup>™</sup> Thermal Cycler

#### **Undisclosed Forensic Laboratory, Singapore**

- 2012 Validation & Performance Check of Quantifiler™ Duo on 7500
- 2012 Validation & Performance Checks (2) of Identifiler™ Plus on 3500xL

## **Undisclosed Forensic Laboratory, Singapore**

- 2012 Validation & Performance Check of Identifiler™ Direct on 3500xL with BSD600
- 2012 Validation & Performance Check of Yfiler™ (direct) on 3500xL with BSD600

## **Undisclosed Forensic Laboratory, South Korea**

- 2021 Validation of RapidHIT™ ID Systems with ACE GlobalFiler™ Express Sample Cartridges
- 2021 Validation of RapidHIT™ ID Systems with RapidINTEL™ Sample Cartridges
- 2019 Verification of PrepFiler™ Automated Extraction on Hamilton™ ID NIMBUS™ Presto
- 2015 Validation of Identifiler™ Plus on 3500

# Undisclosed Forensic Laboratory, Taiwan

- 2017 Validation of GlobalFiler™ on 3500xL
- 2017 Validation of Yfiler™ Plus on 3500xL

## Undisclosed Forensic Laboratory, Taiwan

2017 – Validation of Identifiler™ Plus on 3500

# **Undisclosed Forensic Laboratory, Taiwan**

2021 – Validation of Identifiler™ Plus on 3500

## Undisclosed Forensic Laboratory, Taiwan

2017 – Validation of Identifiler™ Plus on 3500xL

## **Undisclosed Forensic Laboratory, Taiwan**

- 2021 Validation of GlobalFiler™ on 3500xL
- 2015 Validation of Yfiler™ Plus on 3500xL
- 2013 Validation of GlobalFiler™ on 3500xL

## **Undisclosed Forensic Laboratory, Thailand**

- 2021 Validation of GlobalFiler™ IQC on 3500xL
- 2021 Validation of GlobalFiler™ IQC (direct mode) on 3500xL
- 2021 Validation of Yfiler™ Plus on 3500xL
- 2020 Validation of VeriFiler™ Plus on 3500xL
- 2020 Validation of VeriFiler™ Express on 3500xL
- 2018 Verification of CPA200™ using GlobalFiler™ Express with 3500xL
- 2017 Validation of Yfiler™ Plus on 3500xL
- 2015 Validation of GlobalFiler™ on 3500xL
- 2013 Validation of GlobalFiler™ Express on 3500xL with BSD600
- 2012 Validation of Identifiler™ Direct on 3500xL with BSD600

#### **Undisclosed Forensic Laboratory, Thailand**

- 2021 Validation of GlobalFiler™ IQC on 3500
- 2019 Validation of VeriFiler™ Plus on 3500

## Undisclosed Forensic Laboratory, Thailand

2019 – Validation of VeriFiler™ Plus (direct mode) on 3500xL

## **Undisclosed Forensic Laboratory, Thailand**

- 2021 Validaiton of GlobalFiler™ IQC (direct mode) on 3500xL
- 2021 Validations (2) of GlobalFiler™ IQC on 3500xL
- 2021 Validations (2) of GlobalFiler™ IQC on 3500
- 2020 Validations (2) of GlobalFiler™ IQC on 3500xL
- 2020 Validations (2) of GlobalFiler™ IQC on 3500
- 2020 Validation of VeriFiler™ Plus on 3500xL
- 2019 Validations (2) of VeriFiler™ Plus on 3500
- 2019 Validation of VeriFiler™ Plus on 3500xL

## Latin America

## Centro de Genética Forense -Poder Judicial de Córdoba, Argentina

2019 – Validation of GlobalFiler™ (direct mode) on 3500

## Junin Laboratorio de Genética Forense Inst.Inv.Criminaly Cs.Forenses Norte, Argentina

- 2019 Validation of Quantifiler Trio<sup>™</sup> on 7500
- 2019 Validation of GlobalFiler™ on 3500

## Laboratorio de Genética Forense Ministerio Público Fiscal, Mendoza, Argentina

- 2021 Validation of RapidHIT™ ID Systems with RapidINTEL™ Sample Cartridges
- 2018 Validation of Quantifiler Trio<sup>™</sup> on 7500
- 2018 Validation of GlobalFiler™ on 3500
- 2018 Validation of GlobalFiler™ (direct mode) on 3500

## Departamento de Polícia Técnico-Científica - Amazonas, Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Yfiler™ Plus
- 2019 Validation of Quantifiler™ Trio on 7500
- 2019 Validation of GlobalFiler™ on 3500
- 2019 Validation of Yfiler™ Plus on 3500

## Perícia Forense do Estado do Ceará - Núcleo de Perícia em DNA Forense (NUPDF), Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

# Instituto Nacional de Criminalística/Diretoria Técnico-Científica/Polícia Federal (Distrito Federal), Brazil

- 2020 Verification of Hamilton<sup>™</sup> AutoLys<sup>™</sup> and Hamilton<sup>™</sup> Microlab<sup>™</sup> ID STARlet<sup>™</sup> with PrepFiler<sup>™</sup> Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

# Laboratório de Biologia e DNA Forense – Instituto de Criminalística Leonardo Rodrigues (Goiania), Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

#### Polícia Civil do Estado do Maranhão, Brazil

- 2018 Validation of Quantifiler™ Trio on 7500
- 2018 Validation of GlobalFiler™ on 3500

#### Perícia Oficial e Identicação Técnica do Estado de Mato Grosso - POLITEC, Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

## Instituto de Polícia Científica da Paraíba, Brazil

- 2021 Validation of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2021 Validation of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

#### Laboratório de Genética Molecular Forense, Parana, Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™
- 2020 Validation of GlobalFiler™ on 3500
- 2020 Validation of Yfiler™ Plus on 3500
- 2020 Validation of GlobalFiler™ (direct mode) on 3500
- 2020 Validation of Yfiler™ Plus (direct mode) on 3500

## Instituto de Genética Forense Eduardo Campos - IGFEC/SDS/PE, Pernambuco, Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

## Laboratório de Perícia e Pesquisa em Genética Forense, Recife, Brazil

- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation of GlobalFiler™ on 3500

## Departamento de Polícia Técnico-SSP-Bahia, Brazil

- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with PrepFiler™ Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

## Superintendência da Polícia Técnico-Científica

- 2020 Verification of Hamilton<sup>™</sup> AutoLys<sup>™</sup> and Hamilton<sup>™</sup> Microlab<sup>™</sup> ID STARlet<sup>™</sup> with PrepFiler<sup>™</sup> Automated
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2020 Verification of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™

# Laboratório de Genética Forense do Departamento de Perícias Laboratoriais do Instituto-Geral de Perícias, Brazil

- 2020 Verification of Hamilton™ AutoLys™ with PrepFiler™ Automated
- 2017 Validation of Quantifiler™Trio on 7500
- 2017 Validation of GlobalFiler™ on 3500

#### Policía de Investigaciones, Concepción, Chile

- 2015 Validation of Quantifiler™ Duo on 7500
- 2015 Validation of GlobalFiler™ Express on 3500

# Polícia Investigaciones, Laboratorio de Criminalística regional Iquique, Sección Bioquímica y Biología, Chile

- 2020 Validation of Quantifiler™ Trio on 7500
- 2020 Validation of GlobalFiler™ on 3500

## Policía de Investigaciones, Santiago, Chile

- 2014 Validation of Quantifiler™ Duo Validation on 7500
- 2014 Validation of GlobalFiler™ Validation on 3500

#### UGF Legal Medicine Santiago, Chile

- 2021 Validation of Quantifiler™ Trio on 7500
- 2021 Validation & Performance Check of VeriFiler™ Plus on 3500
- 2021 Validation & Performance Check of VeriFiler™ Express on 3500

## Laboratorio de Criminalística de Carabineros, Sección Bioquímica, Santiago, Chile

- 2018 Validation of Quantifiler™ Trio on 7500
- 2018 Validation of GlobalFiler™ on 3500

#### Laboratorio de Criminalística Central, Santiago, Chile

- 2016 Validation of Hamilton™ Microlab™ ID STARlet™ with Quantifiler™ Trio
- 2016 Validation of Hamilton™ Microlab™ ID STARlet™ with GlobalFiler™
- 2016 Validation of Hamilton™ Microlab™ ID STARlet™ with Yfiler™ Plus
- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of Yfiler™ Plus on 3500

# Polícia Investigaciones, Laboratorio de Criminalística regional Temuco, Sección Bioquímica y Biología, Chile

- 2021 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2021 Validation of GlobalFiler™ on 3500

## Servicio Médico Legal, Valparaíso, Chile

· 2018 - Validation of VeriFiler Express on 3500

#### **Undisclosed Forensic Laboratory Colombia**

- 2016 Validation of Quantifiler<sup>™</sup> Trio on 7500
- 2016 Validation of GlobalFiler™ on 3500
- 2016 Validation of Yfiler™ Plus on 3500

## **Undisclosed Forensic Laboratory Colombia**

- 2019 Validation of PrepFiler™ Express and PrepFiler™ Express BTA on Automate Express
- 2019 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2019 Validation of VeriFiler™ Plus 3500
- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of GlobalFiler™ on 3500
- 2016 Validation of Yfiler™ Plus on 3500

## **Undisclosed Forensic Laboratory, Colombia**

- 2015 Validation of Quantifiler™ Trio on 7500
- 2015 Validation of GlobalFiler™ on 3500

#### Servicio Nacional Forense de Ecuador, Ecuador

- 2021 Validation of PrepFiler™ Express on Automate Express
- 2021 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 221 Validation of GlobalFiler™ on 3500

#### **FGJ Ciudad Mexico**

- 2021 Validation of PrepFiler™ *Express* on Automate *Express*
- 2021 Validation of Quantifiler™ Trio on QuantStudio™ 5
- 2021 Validation of VeriFiler™ Plus on 3500xL

## Procuraduría General de la Republica, Mexico

- 2017 Validation of Quantifiler™ Trio on 7500
- 2017 Validation of GlobalFiler™ on 3500

## Laboratorio de Genética Forense de la Dirección de Servicios Periciales, Sonora, Mexico

- 2016 Validation of PrepFiler™ Express & PrepFiler™ Express BTA on AutoMate Express™
- 2016 Validation of Quantifiler™ HP on 7500
- 2016 Validation of Quantifiler™ Trio on 7500
- 2016 Validation of GlobalFiler™ on 3500
- 2016 Validation of GlobalFiler™ Express on 3500

## Polícia Científica - Montevideo, Uruguay

- 2016 Verification of PrepFiler™ Automated on Hamilton™ STARlet™ Express
- 2016 Verification of Quantifiler™ Trio on Hamilton™ STARlet™ Express
- 2016 Verification of GlobalFiler™ on Hamilton™ STARlet™ Express

# **Company Overview**

## Life Technologies

Life Technologies is a global biotechnology tools company providing premier systems, consumables, and services for scientific researchers around the world. Life Technologies customers conduct their research across the biological spectrum, working to advance personalized medicine, regenerative science, molecular diagnostics, agricultural and environmental research, and 21st-century forensics.

With more than 50,000 products used by more than 75,000 customers around the globe, Life Technologies is advancing scientific research in areas like academic research, drug discovery and development, toxicology and forensics, disease diagnostics, clinical cell therapy and regenerative medicine, and biologics manufacturing.

Life Technologies is a strong proponent of global corporate social responsibility. Through the Life Technologies Foundation, our company has donated millions of dollars to help demystify the world of science, empower today's children to become tomorrow's scientific leaders, and deepen society's appreciation of science.

The company is also proud of its global citizenship and efforts to reduce its environmental impact; we have reduced our CO<sub>2</sub> emissions by 36% since 2006 and energy consumption by 32% since 2004. Life Technologies is a member of FTSE4Good Index Series and the Dow Jones Sustainability Index, where it was Biotechnology Sector Leader in 2008.

## Thermo Fisher Scientific

Thermo Fisher Scientific Inc., the parent company of Life Technologies, is the world leader in serving science, with revenues of \$17 billion and 50,000 employees in 50 countries. Our mission is to enable our customers to make the world healthier, cleaner and safer. We help our customers accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics, and increase laboratory productivity. Through our four premier brands – Thermo Scientific, Life Technologies, Fisher Scientific, and Unity Lab Services – we offer an unmatched combination of innovative technologies, purchasing convenience, and comprehensive support.

Thermo Fisher Scientific financial information can be obtained through the following website: http://ir.thermofisher.com/investors/financial-information/financial-results/default.aspx

Life Technologies products harness the power of science to transform lives. A member of the Thermo Fisher Scientific family of brands, our instruments, everyday tools, and services offer high-quality, innovative life science solutions for every lab and application. As a worldwide leader in forensics, we deliver some of the most comprehensively validated products, expertise, and application support available to the human identification community. From our trusted reagents, through high-performance genetic analyzers and software, to in-depth training and on-site technical assistance, our integrated systems work together to help maximize your productivity and enable your success.

## **HID Professional Services (HPS)**

The HID Professional Services team was developed to meet the ever-expanding needs of the global forensic community. The rigorous validation services meet and often exceed published validation standards and guidelines. The program was developed with extensive input from external expert consultants from the forensic community, a number of whom are still involved in our projects, as well as input from the FBI, NIST, and auditing/accrediting bodies such as NFSTC. During the course of a validation project, the laboratory's Technical Leader is kept abreast of the entire process and project, and

Moldova MOI HPS Validation Experience

has complete visibility to all procedures, data, results, and conclusions. Projects have been designed to be executed with minimal disruption to the overall operations of the laboratory, while partnering closely with laboratory personnel while on-site.

Throughout each project, the laboratory maintains ownership of the validation through meetings to discuss the experimental design, daily updates while on-site, shadowing of the HID Professional Services validation application specialists, and updates when the report writing process has begun. HID Professional Services is available for consultation during any audits that involve these validations, so you can have confidence that you will be supported after a project is complete.

We have been conducting validation services globally since 2007. Our team has completed over 400 projects, including validations, performance checks, robotic integrations, laboratory-wide systems integrations, and turnkey projects, for forensic sites in the United States, Europe, Africa, Asia, and Australia.

Life Technologies has an extensive support network available before, during, and after any project. In addition to the validation specialists, Field Applications Specialists, Field Service Engineers, and Technical Support specialists are available to support your instruments, software, and reagents. As the manufacturer of the products included with a project, we have scientists on staff who participated in the development and developmental validations of reagents, consumables, instrumentation, and software. Furthermore, as the manufacturer Life Technologies is uniquely qualified to performance check, validate, troubleshoot, maintain, and optimize the use of these instruments, chemistry and software for your laboratory.

Please see the attached pages for representative CVs from members of the Life Technologies HID Professional Services team who may be involved with your project.

# **HPS EMEA Representatives**



This is to certify that Sonja Strümpher is certified Validation Application Specialist for Human Identification Workflow Solutions.



Thermo Fisher

#### SONJA STRÜMPHER VALIDATION SPECIALIST

#### Education

University of Pretoria, Pretoria, South Africa Bachelor of Science (Hons) specializing in Molecular Genetics Bachelor of Science: Genetics, Biochemistry, and Microbiology

1999

#### Experience

- Thermo Fisher Scientific (Life Technologies) HID Professional Services, Pretoria, South Africa Senior Product Applications Specialist

  Expanded role from previous Product Application Specialist position

  EMEA-wide technical leadership responsibility and overseeing technical processes including experimental designs, scope documentation, consultation, teach-back and review of technical documents.

  Managing validation and support needs for Forensic Science Laboratory South Africa as well as global support for Forensic Science Laboratory validation projects.

#### Product Applications Specialist

May 2012 - October 2016

- Responsibility as a Validation Application Specialist for HID Validation and Professional Services covering EMEA regions.
   Job duties include Validation and Performance Check of HID systems and workflows.
- Validation process duties involve experimental design, experiment execution, data analysis, and report writing. Further duties extend to training and implementation of the specific workflows, as well as development of standard operating procedures.
- · Qualified and trained by Life Technologies on all relevant instruments, chemistries and software.
- Experience obtained:
  - penence obtained:
    SAPS Forensic Science Laboratory: Semi-Automated Crime Index System Workflow
    Validation and Implementation (Manual and Robotic Process).
    SAPS Forensic Science Laboratory: Semi-Automated Reference Index System
    Workflow Validation and Implementation (Robotic Process).

  - National Forensic Science Institute, Namibia: Validation of Semi-automated Crime Index and Reference Index Systems.

    National Forensic Science Institute, Namibia: Validation of Next Generation Chemistries for DNA workflow (Quantifiler Trio, GlobalFiler and Yfiler Plus).

- Field Application Support Specialist April 2009 May 2012

  Responsible as Field Support Specialist of the Applied Biosystems Human Identification
  - and Quality Safety Testing customers covering South Africa and English-speaking Africa. Job duties included training, implementation, and after-sales support of all Applied Biosystems instruments and chemistries. Troubleshooting on-site or remotely for chemistry and instrument related issues. Additional responsibilities were to assist sales
  - representatives with pre-sales demonstrations, user meetings, and workshops. Qualified and trained by Life Technologies to support and train on Life Techno

HID Professional Services Page 1



This is to certify that David Gonzalez is certified Validation Application Specialist for Human Identification Workflow Solutions.



EMEA Human Identification Professional Sentces and Project Management Senior Manager



#### DAVID GONZALEZ VALIDATION SPECIALIST

#### Education

University of Wales Swansea
Master of Science (Hons): Environmental Biology

2004

University of Wales Swansea Bachelor of Science (Joint Hons): Genetics and Marine Biology

2002

#### Experience

Thermo Fisher Scientific (Life Technologies) - HID Professional Services, EMEA

Product Applications Specialist

HID life science chemistry validations and data analysis.

Latooratory workflow, verification, validation, implementation, performance check.

Technical project management.

Liquid handling robotic systems validations and LIMS design.

Paper substrate punching robotic systems validations.

Customer and consultant training.

Customer troubleshooting, auditing and diagnostic review.

Customer reports and data analysis.

Product development.

Task force lead.

2014 - Present

#### Orchid Cellmark Ltd. (UK)

2010-2014

- **Process Specialist** Dynamic role working on Cellmark projects as Project Manager, Project Scientist and IT liaison.

  - Ensured legislation compliance as Project Manager for a Home Office project.
     Project managing introduction of AB NGM to maintain position as supplier to the U.K. National DNA Database. Project managed immigration DNA sample processing for a Middle Eastern country.

    Project managed process improvement project ensuring contract was renewed for Child
  - Support Agency.

    Co-Project Managed and created sample handing database for a SNP analysis contract. Helped define, test and train users on multiple internal LIMS. Technical reports gained UKAS approval on numerous projects. Repaired and improved liquid handling robots as specialist ensuring turnaround times. Created and provided advanced liquid handling robotics training to staff.
- Team Leader 2007-2010

  - Leader
     Team leader responsible for high volume, fast tumaround, forensic PACE sample processing.
     Managed out-of-hours laboratory team, completed high volume of work.
     Amended laboratory management procedures improving tumaround times and pass
  - · Contributed to winning tenders by forward planning and ensuring laboratory capacity.

HID Professional Services Page 1



This is to certify that Gareth Stead is certified Validation Application Specialist for Human Identification Workflow Solutions.



EMEA Human Identification Professional Services and Project Managament Senior Managar



#### GARETH R. STEAD VALIDATION SPECIALIST

#### Education

University of Kent, United Kingdom Bachelor of Science (Hons): Forensic Science (1<sup>st</sup>)

July 2005

#### Experience

Thermo Fisher Scientific (Life Technologies) - HID Professional Services, Paisley, United Kingdom Product Applications Specialist Senior Associate Product Applications Specialist October 2015 – Present February 2013 – October 2015

- Undertook a major twelve-month validation project for the Scottish Police Authority that
  culminated in the successful implementation of new DNA processing workflows across
  five laboratories for both casework and reference samples.
- Worked on the development and validation of new automation systems, including the Hamilton ID NIMBUS Presto for high-throughput DNA extraction using PrepFiler and PrepFiler BTA chemistries and the Hamilton AutoLys SAE for automated sexual assault
- Developed and optimized new protocols for existing products, including new PrepFiler and PrepFiler BTA lysis protocols for use with the Hamilton AutoLys and a new GlobalFiler Express direct amplification protocol for use with Whatman OmniSwabs.
- Trained and experienced in robotic programming and associated software and protocol installations for Hamilton and Tecan automation instruments. This has allowed me to install and verify methods for customers across EMEA, North American and Latin

Associated British Agriculture, Cardiff, United Kingdom
Laboratory Analyst

Ouality control and enzyme activity analysis of agricultural feed products using ELISA, Quickstix and Quantiplate techniques.

Forensic Science Service, Birmingham, United Kingdom Research Biochemist

February 2006 - December 2011

- Validated and implemented eleven Hamilton STARplus automated liquid handling workstations into four DNA processing facilities, resulting in increased success rates across all sample types and decreased sample processing time.
   Validated and implemented Hamilton SAM automated freezers into four DNA
- casework laboratories, achieving full end-to-end automation and becoming the first UK users of the technology.

  Developed and validated the PowerPlex ESI 16 PCR multiplex in partnership with
- Promega US, allowing the laboratory to meet the requirements of the EU Prüm Convention on cross-border forensics (with validation data being published in FSI
- Designed and developed a DNA recovery device that is currently patent-pending. Implementation of the device, both in-house and within police scenes of crime units led to drastic improvements in success rates from the poorest quality sample types.

HID Professional Services Page 1