

## Curriculum Vitae of Stephan Köhnemann

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### Personal data

Date and place of birth: 17.12.1979 in Hagen, Germany  
Nationality: German  
Foreign languages: English, French  
Contact: **Stephan.Koehnemann@thermofisher.com**

### Job Career

01.07.17 – today (Senior) Field Application Scientist, Thermo Fisher Scientific, Darmstadt, Germany. Expert for Rapid and Extraction, managing the HID customer experience lab area in Darmstadt, Germany.  
01.09.15 – 30.06.2017 Headmaster and Key Account Manager of the "DEKRA Vocational School for paramedicine and healthcare", Weimar, Germany.  
17.09.07 – 30.08.2015 Labmanager and Research Scientist, Institute of Legal Medicine, Münster, Germany.

### University Education

01.10.07 – 13.04.10 Dr. rer. medic., Westphalian Wilhelms-University Münster, Germany.  
01.10.05 – 30.09.07 Master of Education (biology & chemistry), Ruhr University Bochum, Germany.  
01.10.02 – 01.09.05 Bachelor of Science. (biology & chemistry), Ruhr University Bochum, Germany.  
01-10-07 – 30.08.15 Optional courses in law, medicine, philosophy and psychology.

### Job Education

01.09.00 – 31.08.02 Rescue Management, German Red Cross, Dortmund, Germany.

### Military Education

01.07.99 – 30.06.00 Corpsman and Vehicle Driver BCE (all standard wheeled military vehicles), 2nd Sanitary Regiment, diverse locations, Germany.

### Main School Education

21.05.1999 Abitur (university entrance degree), Gymnasium an der Schweizer Allee, Dortmund, Germany.

**Important cross-functional and cross-regional projects and activities inside Thermo Fisher Scientific. My manager Anke Kruger should be aware to all of them:**

LKA Stuttgart project for RapidHit ID mobility in a box/van and subsequent remote placement of the ID at a police station in Offenburg (2020). Reference people involved: Adam Shariff, Arnaldo Barrican, Heino Teifel, Thomas Simon.

Marketing, pricing and positioning of the SeqStudio HID against Promega Spectrum (2020). Reference people involved: Cameron Tarley, Angela Lackey, Xavier Christina Pau.

Video documentations for RapidHit ID (2020). To leverage RapidHit ID trainings and demos in Corona times. Reference people involved: Xavier Christina Pau, Thomas Simon.

Video documentations for SeqStudio HID (2020). To leverage SeqStudio HID trainings and demos in Corona times and to keep market share against Promega Spectrum. Reference people involved: Xavier Christina Pau, Angela Lackey, Thomas Simon.

Distributor Online Training participation and preparation (2020). To educate distributors from EMEA region in RapidHit ID, CE and GMIDX troubleshooting. Reference people involved: Gottfried Weichhold, Thierry Jurado.

NGM Detect low mixture study (2019, 2020). To test low mixture ratios with NGM Detect involving different German HID labs using different CE instruments. Reference people involved: Daniel Kriegsmann, Louise Hebert.

Coordinated sample testing on RapidHit ID and 200 – different substrates performance, Gednap samples, bones, toe nails, crime scene samples etc. (2018, 2019, 2020). To leverage the marketing and performance of RapidHit ID and 200 instruments. Reference people involved: Gunther Unger, Beatrice Goh, Jaime Brachold, Xavier Christina Pau, Heino Teifel.

Manual TSS 5.8 and 5.10 software upgrades at different EMEA sites (2018, 2019, 2020). As this is originally a charged FSE visit, this was done to support customers with a free TSS upgrade. Sites upgraded: Darmstadt HID lab, Cologne Legal Medicine Lab, Lausanne Legal Medicine Lab, Innsbruck Legal Medicine Lab, Rzeszow University Lab, Berlin LKA Lab. Reference people involved: Matt Phipps

Darmstadt HID lab management (2018, 2019, 2020). To optimize trainings and demos, as well as consumables and instruments management and shipments. Reference people involved: Thierry Jurado, Silke Deckert, Ulrike Löwenthal.

Gednap booth organization and participation, furthermore presentations at Gednap industry days and during the scientific sessions (2018, 2019, 2020). To leverage our HID NPIs and to present outstanding results. Reference people involved: Xavier Christina Pau, Thomas Simon.

DGAB booth organization and participation, presentations during scientific session (2018, 2019). To present NPIs and outstanding results. Reference people involved: Daniel Kriegsmann, Xavier Christina Pau.

POP 6 implementation on 3500 DC 4.0 software (2019). Project to validate POP 6 for 3500 DC 4.0 software and instruments. Reference people involved: Jaime Brachold, David Gonzalez.

HID Roadshow The Hague (2019). For Netherland and Northern European customers.

I-Lead Conference and industry days, booth organization and participation (2019). In Helsinki, Finland, to present RapidHit ID against ANDE. Reference people involved: Heino Teifel.

HID Roadshow Forensic User Meeting Darmstadt, participation and organization (2019). For HID Central Region customers to present the new SeqStudio HID and RapidHit ID live. Reference people involved: Heino Teifel, Thomas Simon, Xavier Christina Pau.

ISFG Prague, booth participation and VOC NGS meeting (2019). Reference people involved: Matt Gabriel, Xavier Christina Pau, Christina Buchanan-Wright.

Distributor Training, participation and organization (2019). To educate distributors from EMEA region. Reference people involved: Heino Teifel, Yogesh Prasad, Xavier Christina Pau.

mtDNA NGS training for Thailand MOI in Darmstadt (2019). Project to leverage NGS business in Asia. Reference people involved: Maginga Sun.

Gednap extraction efficiency App Note (2018, 2019). To highlight and leverage PrepFiler Express and AutoMate Express marketing and performance. Reference people involved: Jianye Ge, Xavier Christina Pau.

Seq4STRs (2018-today). Project to leverage NGS STR analysis against Verogen/Illumina. Reference people involved: Philipp Habermeier, Matt Phipps, Christina Buchanan-Wright.

VOC NGS and STR analysis (2018). Resulting in a new .json file for NGS STR analysis. Reference people involved: Christina Buchanan-Wright, Sharon Wootton, Matt Phipps.

EAFS – European Academy of Forensic Science, booth participation in Lyon, France (2018). To present RapidHit ID against other mobile lab solutions. Reference people involved: Olivier Joalland, Xavier Christina Pau.

Tadpole Investigation (2018). Project to identify root causes for tadpole effect during Chef chip-loading. Reference people involved: Matt Phipps, Joe Chang.

InSec conference booth participation (2018). Warsaw, Poland, to present the RapidHit ID to a military and police audience. Reference people involved: Yogesh Prasad, Maja Swoboda.

JDEAL - Joint Deployable Exploitation and Analysis Laboratory (2018). Project to leverage RapidHit against ANDE system in military and police environment. Reference people involved: Yogesh Prasad, Chris Bridge.

HID new hire and FAS training (2017, 2018, 2019). HID product training for new sales colleagues and instruments training for FAS colleagues in Darmstadt. Reference people involved: Philipp Habermeier, Thierry Jurado.

Tailing issues at LKA Schwerin with sample testing (2017, 2018, 2019). Project to identify causes for tailing on CE instruments at LKA Schwerin. Reference people involved: Thomas Simon, Ellen Crone.

### **Contributions to Application Notes by Thermo Fisher Scientific**

Bone sample processing on the RapidHIT ID System with RapidINTEL cartridges (2020).

Gednap extraction efficiency App Note (2019).

## Written Publications

Arning A, Jeibmann A, Köhnemann S, Brokinkel B, Ewelt C, Berger K, Wellmann J, Nowak-Göttl U, Stummer W, Stoll M, Holling M. (2015) ADAMTS genes and the risk of cerebral aneurysm. *J Neurosurg.* 125: 269-274.

Valverde L, Lischka C, Erlemann S, de Meijer E, de Pancorbo MM, Pfeiffer H, Köhnemann S. (2014) Nomenclature proposal and SNPSTR haplotypes for 7 new *Cannabis sativa* L. STR loci. *Forensic Sci Int Genet.* 13: 185-186.

Köhnemann S. (2014) Rückblick über molekulargenetische Untersuchungsmethoden von *Cannabis sativa* (L.). *Rechtsmedizin* 24: 489-493.

GilArriortua M, Saloña Bordas MI, Köhnemann S, Pfeiffer H, de Pancorbo MM. (2014) Molecular differentiation of Central European blowfly species (Diptera, Calliphoridae) using mitochondrial and nuclear genetic markers. *Forensic Sci Int.* 242: 274-82.

Aznar JM, Celorrio D, Odriozola A, Köhnemann S, Bravo ML, Builes JJ, Pfeiffer H, Herrera RJ, de Pancorbo MM. (2014) I-DNASE21 system: development and SWGDAM validation of a new STR 21-plex reaction. *Forensic Sci Int Genet.* 8: 10-19.

Valverde L, Lischka C, Scheiper S, Nedele J, Challis R, de Pancorbo MM, Pfeiffer H, Köhnemann S. (2014) Characterization of 15 STR cannabis loci: Nomenclature proposal and SNPSTR haplotypes. *Forensic Sci Int Genet* 9: 61-65.

Köhnemann S, Pfeiffer H, Scheiper S, Appel O, Staginnus C, Morzfeld J. (2013) DNA-Untersuchungen an *Cannabis sativa* (Hanf). *Kriminalistik.* 01/13: 36-40.

Valverde L, Köhnemann S, Cardoso S, Pfeiffer H, de Pancorbo MM. (2012) Improving the analysis of Y-SNP haplogroups by a single highly informative 16 SNP multiplex PCR-minisequencing assay. *Electrophoresis.* 34: 605-612.

Köhnemann S, Nedele J, Schwotzer D, Morzfeld J, Pfeiffer H. (2012) The validation of a 15 STR multiplex PCR for *Cannabis* species. *Int J Legal Med.* 126: 601-606.

Valverde L, Köhnemann S, Rosique M, Cardoso S, Zarrabeitia M, Pfeiffer H, de Pancorbo MM. (2012) 17 Y-STR haplotype data for a population sample of Residents in the Basque Country. *Forensic Sci Int Genet.* 6: e109-111.

Valverde L, Rosique M, Köhnemann S, Cardoso S, García A, Odriozola A, Aznar JM, Celorrio D, Schuerenkamp M, Zubizarreta J, Davis MC, Hampikian G, Pfeiffer H, de Pancorbo MM. (2011) Y-STR variation in the Basque diaspora in the Western USA: evolutionary and forensic perspectives. *Int J Legal Med.* 126: 293-298.

Köhnemann S, Kretzschmann J, Mittmann K, Pfeiffer H. (2011) Import and direct processing of capillary electrophoresis analysis data in forensic casework. *Forensic Sci Int Genet. Supplement Series 3:* e459-e460.

Köhnemann S, Pennekamp P, Pfeiffer H. (2011) An allelic ladder based upon reference alleles for mtDNA SNP analysis using the SNaPshot technique. *Electrophoresis.* 32: 1860-1863.

Paneto GG, Köhnemann S, Martins JA, Cicarelli RM, Pfeiffer H. (2011) A single multiplex PCR and SNaPshot minisequencing reaction of 42 SNPs to classify admixture populations into mitochondrial DNA haplogroups. *Mitochondrion.* 11: 296-302.

Köhnemann S, Pfeiffer H. (2011) Application of mtDNA SNP analysis in forensic casework. *Forensic Sci Int Genet.* 5: 216-221.

Köhnemann S, Pennekamp P, Schmidt PF, Pfeiffer H. (2010) qPCR and mtDNA SNP analysis of experimentally degraded hair samples and its application in forensic casework. *Int J Legal Med.* 124: 337-342.

Köhnemann S, Hohoff C, Pfeiffer H. (2009) An economical mtDNA SNP assay detecting different mitochondrial haplogroups in identical HVR 1 samples of Caucasian ancestry. *Mitochondrion.* 9: 370-375.

Köhnemann S, Sibbing U, Pfeiffer H, Hohoff C. (2008) A rapid mtDNA assay of 22 SNPs in one multiplex reaction increases the power of forensic testing in European Caucasians. *Int J Legal Med.* 122: 517-523.

### **Oral Presentations at scientific conferences**

Köhnemann S, Brachold J, Immel U-D, Bender K, Lim J, Lagace R, Parita G, Claire B, Thierry J, Ariana W, Jonathan T. (2020) Rapid DNA as Part of a Comprehensive Disaster Victim ID Plan. 2020 annual ENFSI DNA expert working group meeting, 09.-10. September 2020, online hosted by the Netherlands Forensic Institute.

Immel UD, Bender K, Germerott T, Köhnemann S. (2020) DNA-Analyse aus Knochen mittels RapidHIT ID™. 99. Jahrestagung der DGRM, 01.-04. September 2020, Luzern, Switzerland.

Köhnemann S. (2020) Applications of the Applied Biosystems™ RapidHIT™ ID System. Current results and application examples. HIDS Virtual, 24. June 2020, Online Congress by Thermo Fisher Scientific.

Köhnemann S, Weichhold G, Simon T, Kriegsmann D, Markstätter B, Kruger A, Habermeier P, Teifel H, Cristina Pau X. (2020) Einsatzmöglichkeiten der Rapid DNA-Analyse. Eine Übersicht des Produktportfolios mit aktuellen Ergebnissen und Anwendungsbeispielen. 40. Spurenworkshop der DGRM, 20.-22. February 2020, Munich, Germany.

Köhnemann S, Weichhold G, Simon T, Kriegsmann D, Markstätter B, Kruger A, Habermeier P, Pau X (2019) Die Applied Biosystems™ GlobalFiler™ STR Chemie auf vier unterschiedlichen Untersuchungsplattformen. 39. Spurenworkshop der DGRM, 21.-23. February 2019, Jena, Germany.

Köhnemann S, Weichhold G, Kruger A, Kriegsmann D, Simon T, Habermeier P. (2018) Defizienzfälle: Welche Möglichkeiten bietet das Kinship Modul der Converge™ Software in Kombination mit dem Precision ID GlobalFiler™ NGS STR Panel v2?. 14. DGAB Jahrestagung, 07.-09. June 2018, Freiburg, Germany.

Weichhold G, Köhnemann S, Kruger A, Kriegsmann D, Simon T, Pau X. (2018) DNA-Datenanalyse für Spurenfälle und Abstammungsuntersuchungen in einer allumfassenden Software Lösung: Converge™. 38. Spurenworkshop der DGRM, 22.-24. February 2018, Basel, Switzerland.

Köhnemann S. (2017) Professionalisierung des nichtärztlichen Rettungsdienstpersonals – Zukünftige Herausforderungen für die interdisziplinäre Zusammenarbeit. Probelehrveranstaltung. Probelehrveranstaltung, Ernst-Abbe-Hochschule Jena, Fachbereich Rettungswesen und Notfallversorgung, 24. January 2017, Jena, Germany.

Köhnemann S. (2014) Neueste Entwicklungen in der Cannabis DNA-Analyse. 2. Forschungs- und Technologiesymposium der Polizei, 04.-05. June 2014, Münster, Germany.

Köhnemann S. (2014) New developments in Cannabis STR analysis. 1. Ogólnopolska Konferencja Biologii Kryminalistycznej, 27.-30. Mai 2014, Szczytno, Poland.

Köhnemann S, Valverde L, Ofeiffer H. (2013) Abstammungsbegutachtung bei 9 putativen Geschwistern in einem Defizienzfall. Jahrestagung der DGAB und deutschen ISFG, 12.-15. June 2013, Greifswald, Germany.

Lischka C, Valverde L, Köhnemann S, Pfeiffer H. (2013) Genetische Analyse von Cannabis sativa: Ein Fallbeispiel aus Münster. Frühjahrstagung der DGRM Nord, 24.-25. Mai 2013, Hannover, Germany.

Köhnemann S, Schumann S, Pfeiffer H, GeSID Group (2012) MtDNA haplogroups and sudden infant death syndrome. DNA in Forensics 2012 – Exploring the Phylogenies, 06.-08. September 2012, Innsbruck, Austria.

Köhnemann S. (2012) DNA-Tests und die deutsche Immigrations-Politik, ein Referat zu einer Publikation von Heinemann und Lemke. DGAB Tagung, 14.-16. June 2012, Mannheim, Germany.

Schumann S, Köhnemann S, Vennemann M, GeSID Gruppe, Pfeiffer H. (2012) MtDNA SNPs und der plötzliche Säuglingstod. Frühjahrstagung der DGRM, 01.-02. June, Bonn, Germany.

Köhnemann S. (2012) Das Beispiel Deutschland: DNA-Tests Immigrations-Politik, ein Referat zu einer Publikation von Heinemann und Lemke. Symposium des Arbeitskreises West der DGAB, 17. February 2012, Cologne, Germany.

Köhnemann S, Nedele J, Morzfeld J, Pfeiffer H. (2012) Eine Multiplex PCR zur Bestimmung von 15 Cannabis STRs. 32. Spurenworkshop der DGRM, 24.-25. February, Hannover, Germany.

Scheiper S, Köhnemann S, Morzfeld J, Appel O, Pfeiffer H, Staginnus C. (2012) Molekulargenetische Identifizierung von Cannabis aus unbekanntem Probenmaterial. 32. Spurenworkshop der DGRM, 24.-25. February, Hannover, Germany.

Gil Arriortua M, Babucke P, Salona Bordas MI, Köhnemann S, de Pancorbo MM, Pfeiffer H. (2012) Pilotstudie zur COX I mtDNA Variation von Caliphoridae Spezies in Deutschland und Spanien. 32. Spurenworkshop der DGRM, 24.-25. February, Hannover, Germany.

Paneto G, Köhnemann S, Martins J, Cicarelli R, Pfeiffer H. (2011) A single multiplex PCR and SnaPshot minisequencing reaction of 42 SNPs to classify admixture populations into mitochondrial DNA haplogroups. 24<sup>th</sup> Congress of the International Society for Forensic Genetics, 29. August – 03. September 2011, Vienna, Austria.

Kretzschmann J, Köhnemann S, Mittmann K, Pfeiffer H. (2011) Import und direkte Verarbeitung von Analysedaten in der forensischen Fallbearbeitung. 31. Spurenworkshop der DGRM, 25.-26. February, Hamburg, Germany.



Köhnemann S, Schumann S, Vennemann M, GeSID Gruppe, Pfeiffer H. (2010) MtDNA SNPs und SIDS – Mitochondriale Punktmutationen und der plötzliche Säuglingstod. 89. Jahrestagung der DGRM, 22.-25. September, Berlin, Germany.

Apelt U, Köhnemann S, Pfeiffer H, Renneberg R, von Wurmb-Schwark, N. (2010) Vergleich von DNA-Extraktionsverfahren zur molekulargenetischen Analyse von humanen Haaren. 89. Jahrestagung der DGRM, 22.-25. September, Berlin, Germany.

Köhnemann S, Pennekam P, Ströse A, Fiebig M, Pfeiffer H. (2010) Eine optimierte Analyse von SNPs in Forschung und Spurenanalyse. 89. Jahrestagung der DGRM, 22.-25. September, Berlin, Germany.

Köhnemann S, Pfeiffer H. (2010) The potential of mtDNA SNP analysis in forensic case work. IV. International EMPOP Meeting, 22.-24. April, Berlin, Germany.

Köhnemann S, Hoppe K, Pfeiffer H. (2010) Ein erhöhter Typisierungserfolg von Haar-Extrakten mittels mtDNA Quantifizierung. 30. Spurenworkshop der DGRM, 04.-06. February, Zürich, Switzerland.

Köhnemann S, Pfeiffer H. (2009) Mischspurenanalyse bei mtDNA SNPs. Ein konkretes Fallbeispiel. 88. Jahrestagung der DGRM, 22.-26. September, Basel, Switzerland.

Köhnemann S, Pfeiffer H. (2009) Analyse von Abortmaterial zwecks Abstammungsbegutachtung. Eine Kasuistik aus dem Institut für Rechtsmedizin Münster. ISFG/DGAB Tagung, 18.-20. June, Hamburg, Germany.

Köhnemann S, Jeibmann A, Holling M, Paulus W, Pfeiffer H. (2009) Mitochondriale SNPs in einer Fallgruppe mit intrakraniellm Aneurysma im Vergleich zu einer Kontrollgruppe. Frühjahrstagung der DGRM, 15.-16. Mai, Düsseldorf, Germany.

Köhnemann S, Hohoff C, Pfeiffer H. (2009) Das letzte Mittel könnte die erste Wahl sein: Einsatz von mtSNPs in Spurenfällen. 29. Spurenworkshop der DGRM, 27.-28. February, Münster, Germany.

Köhnemann S, Hohoff C, Pfeiffer H. (2009) Ein forensisches 32 mt-SNP Nachweisverfahren mit interdisziplinären Anwendungsmöglichkeiten. 29. Spurenworkshop der DGRM, 27.-28. February, Münster, Germany.

Köhnemann S, Pfeiffer H, Hohoff C. (2008) Erhöhte forensische mtDNA Unterscheidung durch kombinierte HVI-Sequenzierung und SNP-Typisierung. ISFG/DGAB Tagung, 13.-14. June, Köln, Germany.

Köhnemann S, Pfeiffer H, Hohoff C. (2008) Increasing the mtDNA discriminatory power by HV1 sequencing and mtDNA-SNP typing. DNA in Forensics, 27.-30. Mai, Ancona, Italy.

Köhnemann S, Sibbing U, Pfeiffer H, Brinkmann B, Hohoff C. (2008) A rapid mtDNA assay of 22 SNPs increases the discriminatory power. 28. Spurenworkshop der DGRM, 15.-16. February, Salzburg, Austria.

### **Poster Presentations at scientific conferences**

Köhnemann S, Immel UD, Bender K, Brachold J. (2020) Traditional and Rapid DNA Approaches to bone sample processing with Applied Biosystems™ Workflows. HIDS Virtual, 24. June 2020, Online Congress by Thermo Fisher Scientific.

Köhnemann S, Kretzschmann J, Mittmann K, Pfeiffer H. (2011) Import and direct reduction of analysis data in forensic casework – suggestions for high quality data. 24<sup>th</sup> Congress of the International Society for Forensic Genetics, 29. August – 03. September 2011, Vienna, Austria.

Köhnemann S, Pennekamp P, Ströse A, Fiebig M, Pfeiffer H. (2011) An allelic ladder for an optimised SNaPshot analysis. 24<sup>th</sup> Congress of the International Society for Forensic Genetics, 29. August – 03. September 2011, Vienna, Austria.

Valverde L, Köhnemann S, Cardoso S, Schuerenkamp M, Pfeiffer H, de Pancorbo M. (2010) Basques and Germans Y-STRs haplotype distribution in Europe. VII. International Y-User Workshop, 22.-24. April 2010, Berlin, Germany.

Köhnemann S, Jeibmann A, Hohoff C, Paulus W, Pfeiffer H. (2008) Nachweis von mitochondrialen Einzelnukleotid-Polymorphismen bei FFPE-Schnitten von tumorösem und nicht-tumorösem Gewebe. 87. Jahrestagung der DGRM, 24.-27. September 2008, Dresden, Germany.

Köhnemann S, Sibbing U, Pfeiffer H, Hohoff C. (2007) mtDNA SNPs in a population sample from northwestern Germany. ISFG 22nd Congress, 21-25. August 2007, Copenhagen, Denmark.

### **Guest Lectures at companies and organizations:**

GW-Pharma, 02.07.2013: "Cannabis DNA analysis methods at the Institute of Legal Medicine in Münster". Sittingbourne, England.

Forensic Analysis Master Class, 14.05.2013: "Forensic Molecular Genetics". Universidad del Pais Vasco, Bilbao, Spanien.

Lions Club Herford, 18.09.2012: „Forensische Molekularbiologie“. Herford, Germany.

Der Spieker in Dülmen, 09.06.2011: „Der Fall Anna Katharina Emmerick“. Dülmen, Germany.

Max-Planck-Institute for Molecular Biomedicine Münster, 07.06.2011: "Mords Interesse". Münster, Germany,

Diamedis Diagnostics, 25.05.2011: "Forensic Molecular Genetics". Bielefeld, Germany.

Max-Planck-Institute for Molecular Biomedicine Münster, 6<sup>th</sup> Single Cell and Molecule Analysis Conference, 23.11.2009: "Popular Science Lecture – Legal Medicine and Forensic Molecular Biology". Münster, Germany.

### **Lectures at Universities**

SoSe 2010 – WiSe 2013: "Forensic Molecular Genetics for medicine students". Westphalian Wilhelms-University, Münster, Germany.

SoSe 2010 – WiSe 2013: "Forensic Molecular Genetics for law students". Westphalian Wilhelms-University, Münster, Germany.

Forensic Analysis Master Class, 21.02.2011: "The use of mtDNA SNPs in crime scene investigations using SNaPshot". Universidad del Pais Vasco, Bilbao, Spain.

Forensic Analysis Master Class, 22.02.2010: "The use of mtDNA SNPs in crime scene investigations using SNaPshot". Universidad del Pais Vasco, Bilbao, Spain.

## Patent and confidential projects

A single multiplex PCR and SNaPshot minisequencing reaction of 42 SNPs to classify admixture populations into mitochondrial DNA haplogroups; Patent, PI1104979-0 (Brasilien).

FDA approval of selected breeds of Cannabis for pharmaceutical production, Cannabis STR testing, collaboration with GW Pharm (<https://www.gwpharm.co.uk/>).

Genomic SNaPshot ancestry multiplex assay planning and execution, developmental validation and testing, collaboration with Genetic Ancestor UK (<http://www.geneticancestor.com/>).

## Important Qualifications and Training Participations

02.-06.03.2020	Technical Training, San Francisco, USA.
06.-09.03.2018	Technical Training, San Francisco, USA.
16.-20.04.2018	Kepner Tregoe Troubleshooting Training, Darmstadt, Germany.
18.-19.10.2017	Customer Experience Training, Hemel Hempstead, UK.
11.-12.02.2017	Advanced Medical Life Support Certificate, Stuttgart, Germany.
16.06.2016	Marketing Strategies Certificate, Leipzig, Germany.
27.07.2015	Permission to work as a headmaster in Thuringia, Germany.
12.-13.05.2015	Didactic Transformation Strategies, Münster, Germany.
10.09.2014	Workshop „Statistefix“, Bonn, Germany.
03.07.2014	Workshop „Professional Communication and Education“, Bochum, Germany.
09.01.2014	Certificate „Expert for paternity testing DGAB“, Cologne, Germany.
02.12.2011	Workshop „Application of statistical methods“, Bonn, Germany.
17.-18.-06.2010	Advanced training „Projektleiter Gentechnik / Beauftragter für die biologische Sicherheit“, Münster, Germany.
07.-09.06.2010	Workshop “Interpretation of complex STR-results”, Copenhagen, Germany.
01.-11.04.2008	Trainee program “Human Genetics”, Münster, Germany.

## **Scientific Expert Activities:**

Reviewer for the "International Journal of Legal Medicine", in total 92 Reviews from July 2009 to August 2013.

Certified expert for Paternity testing and DNA traces. In total more than 750 expertises for police and court. 17 summons to court. 5 invites for visits to crime scenes.

## **Supervisor Activities**

„Vergleich von mtDNA HV-Sequenzierungen und SNaPshot Analysen“, Doctoral-Thesis, June 2014, Adrian Pfältzer.

„Eine Multiplex-PCR zur Bestimmung von Tauben STRs“, Bachelor-Thesis, August 2013, Sabine Schulze-Johann.

„Untersuchungen an Cannabis sativa STRs für die forensische Molekulargenetik“, Bachelor-Thesis, December 2012, Sabine Erlemann.

„Cloning of alleles for the establishment of an allelic ladder for forensic Cannabis STR analysis“, Bachelor-Thesis, June 2012, Stefanie Scheiper.

„Molekulargenetische Analyse von forensischen Insektenarten (Entomologie) durch Sequenzierung von Cytochrom Oxidase I“, Projected Work, February 2012, Petra Babucke.

„Molekulargenetische Identifizierung von Cannabis aus unbekanntem Probenmaterial“, Projected Work, February 2012, Stefanie Scheiper.

“Establishment of an Allelic Ladder for the examination of STRs in Cannabis”, Master-Thesis, August 2011, Rachel Challis.

“Detection of SNPs for the Discrimination of Cannabis sativa using SeqScape Software”, Bachelor-Thesis, August 2011, Daniela Schwotzer.

“Development of a multiplex PCR for Cannabis STRs”, Master-Thesis, July 2011, Johanna Nedele.

„Klonierung forensischer Allele für die Etablierung einer Allelleiter mit 42 mtDNA SNPs“, Bachelor-Thesis, June 2010, Anda Jana Ströse.

„Etablierung einer Datenverarbeitungssoftware unter Verwendung von MS-Access für die Spurenanalytik im Bereich Forensische Molekulargenetik“, Bachelor-Thesis, August 2010, Janosch Kretzschmann.

„Klonierung einer Allelleiter für ein forensisches mtDNA SNP Nachweisverfahren“, Bachelor-Thesis, September 2009, Melissa Fiebig.

„Etablierung einer SNaPshot Multiplex PCR“, Bachelor-Thesis, June 2009, Ann-Christin Tewes.

### **Scholarship**

01.10.07 – 13.04.10                      Scholarship of the IMF-Münster, Germany. Studies in Anatomy, Physiology, Pathology and Legal Medicine.

### **Third-Party Funds**

DFG-Project „mtDNA SNPs and Sudden Infant Death Syndrome“, 2010: ``PF 356/8-1``.

IMF-Project „mtDNA SNPs and Forensic Applications“ (Stipendium), 2008: ``PF 5 1 08 01``.

Scientific Award of the Konrad-Händel-Stiftung 2008: “RNA-Expression and sudden cardiac death”.

Travel Expense Awards of the DAAD: ``D/2012/13162/20`` and ``D/2011/03775/20``.