



**Peter M. Schneider Short term International Society for Forensic Genetics (ISFG) Fellowship SHORT REPORT** – 6 months research visit to the University of Washington, Seattle, USA  
**Applicant:** dr. Sofie Claerhout – **Duration:** From April 1st, 2023 until September 30th, 2023

Purpose of the research stay:

My postdoctoral research combines genetics with genealogy to learn about human Y-chromosomal diversity for forensic familial searching purposes (CSY). One of my interdisciplinary research questions aims to estimate how many Y-profiles are needed in a national DNA database to make familial searching on chrY a success (for different cold case contexts and conditions). Therefore, good knowledge and practice in biostatistics and bioinformatics for my postdoc is key. Prof. Bruce Weir is an excellent and well-known biostatistician and statistical geneticist at the University of Washington. During my stay, I received access to his knowledge, publications and books as well as all his courses. This provided me the opportunity to learn, collaborate and become an expert in biostatistics myself (and to teach it further).

Main outcome of the research visit:

- 1. Training.** I actively participated in prof. Bruce Weir his research group, the biostatistics summer school and the 3-day conference of Statistical and Quantitative Genetics. I followed a Forensic Biostatistics program including 20 lectures on Forensic Biostatistics at the University of Washington with over 8 experts in the field, explaining hands-on biostatistics in 18 forensic cases.
- 2. Connections.** I connected with international academics and experts in interdisciplinary fields, such as prof. Jérôme Goudet (Population Genetics, University of Lausanne), forensic DNA expert Sean Carhart (WSP DNA technical leader), Lara Zarowsky (Washington Innocence Project), Timothy Zoland (FBI CODIS lead), Michael Coble (Human Identification, University of North Texas) and Niharika Karnik (Ph.D. in Mechanical Engineering, UW and Idaho Lab).
- 3. Collaborations.** I established an ongoing collaboration with prof. Jan Graffelman (Applied Biostatistics, Universitat Politècnica de Catalunya), where next year we will be co-promoters of a shared master student project; and with Betty Cohn (Bioethics, UW), from who I gained valuable and objective insights in the bioethical context of familial searching.
- 4. Invitations.** I received a personal invitation to attend/visit, among others, the Washington State Patrol (WSP); the last presentation of prof. Bruce Weir on the OJ Simpson trial; retirement symposium and celebration of prof. Bruce Weir; PhD defense of dr. Sanne Aalbers; symposia of the department of human genetics; and genetics journal clubs organized by Diane Xue.
- 5. Outreach.** I gave lectures to different UW research groups and presented my CSY-research to the UW students as an international guest teacher in the course Forensic Genetics. I elaborated my research to >150 experts at the Conference of Statistical and Quantitative Genetics.
- 6. Scientific outcomes.** I wrote a manuscript concerning the bioethical opinions surrounding the use of forensic DNA kinship research. For this, I connected with bioethicists Betty Cohn (UW) and prof. Pascal Borry (KUL). This manuscript is currently submitted for publication. My research on familial searching success rate is still ongoing through virtual meetings with prof. Bruce Weir.

I am extremely grateful for the support of ISFG which made this research stay possible. Thank you for your commitment to promoting international collaborations in the field of forensic research.

- Dr. Sofie Claerhout  
KU Leuven Postdoctoral researcher