

# Elia Mattarucchi

## PERSONAL INFORMATION



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## WORK EXPERIENCE

01/01/2018---today

### Dirigente biologo

Toxicology Laboratory, University Hospital Varese (Italy)

- Supervisor of the development and validation of analytical methods
- Quality assurance manager
- Responsible for a review of analytical outcomes and validation of reports.

19/09/2011--31/12/2017

### Assistant manager

Cerbios Pharma, S.a., research and development division, Lugano (Switzerland).

- Project management.
- Analytical method development and validation.
- Study design (design of experiment (DOE), results review/statistical analysis.
- Characterisation of biotech-products by commonly employed techniques - mass spectrometry (LC-MS), molecular biology (PCR, real-time PCR, DNA extraction, ELISA tests) .
- GLP and GMP operations.

16/09/2008--15/09/2011

### Research assistant

Joint Research Centre of the European Commission (JRC), System Toxicology Unit, (Italy).

- Research projects: in-vitro toxicology and metabolomics on clinical and cell culture samples.
- Organisation and execution of analytical campaigns (mainly using high resolution mass spectrometry).
- Data analysis (multivariate statistics).
- Production of final reports/scientific literature.

01/04/2007--31/08/2008

### Grant holder

Università dell'Insubria, human genetics unit, Faculty of medicine and surgery, Varese (Italy)

- Research project on the application of advanced genetic tests and classification models for the evaluation of chronic patients.
- Study development, direction of the molecular biology operations, data review and production of scientific literature.

01/10/2003--30/09/2006

### Grant holder

Università dell'Insubria, molecular biology unit , Faculty of biological sciences, Varese (Italy)

- Research project on new approaches based on DNA amplification at trace levels by Real-Time PCR for the quantification of the residual disease in cancer patients.
- Molecular biology laboratory operations
- Data review and production of scientific literature.

## EDUCATION

- 01.10.2003 – 31.08.2008 **PhD in degenerative pathology and medical specialization in genetics**  
Università dell'Insubria, Varese (Italy)  
Development and application of innovative genetic test for the molecular characterisation of degenerative diseases and prognostic classification of cancer patients
- 13.10.1997 – 26.03.2003 **Master of science in biology (major in biotechnology)**  
Università dell'Insubria, Varese (Italy)
- Thesis traineeship (March 2002 to March 2003)**  
Joint Research Centre of the European Commission (JRC), Ispra (Italy)  
Development of molecular biology tests for the quantification of GMOs in foodstuff by quantitative PCR and ELISA.
- 07.09.1992 – 20.06.1996 **Scientific college diploma**  
Liceo scientifico statale, Gavirate (Italy)

## PROFESSIONAL SKILLS

### Technical skills

- Project management
- Statistics, multivariate analysis, design of experiment, and classification model.
- GMP, GLP, UNI EN ISO 9001:2008, UNI EN ISO 17025 standards, quality management
- Development and validation of analytical methods
- Analytical techniques: qualitative and quantitative PCR, DNA sequencing, liquid chromatography (RP, SEC, HIC, HILIC, CEX), mass spectrometry (quantitative and qualitative methods, low and high resolution), UV-VIS spectroscopy, SDS-PAGE, 2D electrophoresis, IEF, bio-layer interferometry, ELISA, molecular biology techniques
- Basic knowledge of cell culture, cell sorting and operation in clean rooms under sterile conditions
- Protein characterisation (intact protein, peptide mapping, glycan profile, PTMs).
- Characterisation of small molecules of toxicological and pharmaceutical interest
- Clinical toxicology.
- Metabolomics and proteomics.
- DNA and protein purification (lab and pilot scale)

### Digital competence

- Workfront, MS project (project management software).
- Multivariate data analysis applications (SIMCA).
- Design of experiment (Modde).
- LC-MS software for instrument operations and data mining (Waters, Shimadzu, Agilent and Thermo).
- Real time PCR software (Appliedbiosystems, Biorad and Roche).
- On-line protein, genome and metabolome databases.
- Graphics, image processing and internet explorer.
- Good knowledge of the MS office package.

Communication skills      Good experience in team working within international and multicultural research environment.

Language      Italian (mother tongue)  
English (B2 level)

Organisational / managerial skills      I'm pragmatic, I welcome changes and I think to have the necessary organisation skills to succeed in my assignments within the defined time and budget limits.

Extra-professional activities      In 2005 I joined the Italian National Fire Brigade. Although this work is out of a regular employment, I was frequently called up to the regular service for a short period. To date, I still carry out my operational duties as a volunteer. This activity constantly increases my risk prevention expertise, as well as my communication and team-building skills.  
I practice sports (cycling, fitness, ski and swim) I like boats and travels.

## PUBLICATIONS (peer reviewed)

Full-text papers are available at: [https://www.researchgate.net/profile/Elia\\_Mattarucchi](https://www.researchgate.net/profile/Elia_Mattarucchi)

-Mattarucchi E, Peruzzo C, Consuelo Maio R, Andreotta U, Ferario M.M. (2019) Quantification bias in blood alcohol determination by headspace gas chromatography. *International Journal of Medical Laboratory Research* **4**:64-67.

-Mattarucchi E, Pallotti F, Casalone R.(2015) Authors' Reply to Crampe and Langabeer. *Molecular diagnosis & therapy* **19**:253-254.

-Mattarucchi E., Pallotti F., Casalone R. (2015) Technical Issues Behind Molecular Monitoring in Chronic Myeloid Leukemia. *Molecular diagnosis & therapy* **19**:139-40.

-Pagani I., Spinelli O., Mattarucchi E., Pirrone C., Et. al. (2014) Genomic quantitative real-time PCR proves residual disease positivity in more than 30% samples with negative mRNA-based qRT-PCR in Chronic Myeloid Leukemia. *Oncoscience* **1**: 510-521.

-Mattarucchi E., Guillou C. (2012) Critical aspects of urine profiling for the identification of potential biomarkers using UPLC-TOF-MS. *Biomedical Chromatography* **26**: 512-517.

-Mattarucchi E., Baraldi E., Guillou C. (2012) Metabolomics applied to urine samples in childhood asthma; differentiation between asthma phenotypes and identification of relevant metabolites. *Biomedical Chromatography* **26**: 89 - 94.

-Mattarucchi E., Guillou C. (2011) Comments on "optimized pre-processing of UPLC-MS urinary metabolic profiles for improve information recovery". *Analytical Chemistry* **83**: 9719-9720.

-Mattarucchi E., Stocchero M., Moreno-Rojas J.M., Giordano G., Reniero F., Guillou C. (2010) Authentication of Trappist Beers by LC-MS Fingerprints and Multivariate Data Analysis. *Journal of Agricultural and Food Chemistry* **58**: 12089 – 12095.

-Mattarucchi E., Spinelli O., Rambaldi A., Pasquali F., LoCurto F., Campiotti L. and Porta G. (2009) Molecular monitoring of residual disease in chronic myeloid leukemia by genomic DNA compared with conventional mRNA analysis. *The Journal of Molecular Diagnostics* **11**: 482 – 487.

-Mattarucchi E., Guerini V., Rambaldi A., Campiotti L., Achille V., Pasquali F., LoCurto F. and Porta G. (2008) Microhomologies and interspersed repeat elements at genomic breakpoints in Chronic Myeloid Leukemia. *Gene Chromosomes and Cancer* **47**: 625 - 632.

-Porta G., Maserati E., Mattarucchi E., Minelli A., Pressato B., Valli R., Ballardini G., Bonetti F., Lo Curto F., Locatelli F., Danesino C. and Pasquali F. (2007) Monosomy 7 in myeloid malignancies: parental origin and monitoring by real-time quantitative PCR. *Leukemia* **21**: 1833-1835.

-Porta G, Mattarucchi E., Maserati E., Pressato B., Valli R., Morerio C., Zecca M., Panarello C., Locatelli F., Lo Curto F. and Pasquali F. (2007) Monitoring the Isochromosome I(7)(q10) in the Bone Marrow of Patients with Shwachman syndrome by Real-time quantitative PCR. *Journal of Pediatric Hematology* **29**: 163-165.

-Mattarucchi E., Marsoni M., Passi P., Lo Curto F., Pasquali F. and Porta G. (2006) Establishment and study of different Real-Time PCR assays for the quantification of cells with deletions of chromosome 7. *Journal of Molecular Diagnostics* **8**: 218-224.

-Martignoni E., Cosentino M., Ferrari M., Porta G., Mattarucchi E., Marino F., Lecchini S. and Nappi G. (2005) Two patients with COMT inhibitor-induced hepatic dysfunction and UGT1A9 genetic polymorphism. *Neurology* **65**: 1820-1822.

-Mattarucchi E., Binelli G., Marsoni M., Passi A., Lo Curto F., Pasquali F. and Porta G. (2005) Different Real Time PCR approaches for the fine quantification of SNP's alleles in DNA pools: assays development, characterization and pre-validation. *Journal of Biochemistry and Molecular Biology* **38**: 555-562.

-Mattarucchi E., Weighardt F., Barbati C., Querci M. and Van Den Eede G. (2005). GMO quantification based on tandem-marker plasmids. *European Food Research and Technology* **221**: 511-519.

It authorizes the processing of personal data.

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