

CURRICULUM VITAE ET STUDIORUM

Family Name: **Lievens**
First Name: **Patricia M.-J.**
Birth: January 04 1964
Citizenship: Belgian
Known languages: Italian, English, French.

Current position: Associate professor in Experimental Biology
(BIO/13) at the University of Verona,
Department of Neurosciences, Biomedicine
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1989	“Laurea” <i>cum Laude</i> in Biological Sciences at the University of Siena, Italy.
1989-1990	Glaxo Research Fellowship in the division of Biochemistry at the University of Verona Medical School, Italy.
1990-92	Post-doctoral fellow in the Department of Pediatric Oncology, Children’s Hospital, Harvard University, USA.
1993-94	Research Scientist at the University of Milan, division of human genetics.
1995-99	Research Scientist at the Istituto Neurologico “C. Besta”, Milan Italy.
2000-2008	Research Scientist at the University of Verona, Medical School, in the Department of Morphological Biomedical Sciences, Division of Biochemistry.
2004-2007	PhD program in Cellular and Molecular Pathology at the University of Verona, Italy.
2006, summer	Visiting Scientist at the Research Center of the Shriners Hospital for Children, Portland OR, USA.
2007, summer	Visiting Scientist at the Research Center of the Shriners Hospital for Children, Portland OR, USA.

2008-2012	Senior post-doctoral fellow at the Italian Institute of Technology (iit), Department of Neuroscience and Brain Technologies, Genova Italy.
2013-2017,	Junior assistant professor (RTDa) at the University of Verona, Department of Neurosciences, Biomedicine and Movement Sciences, Section of Biology and Genetics.
2017-2020	Senior assistant professor (RTDb) at the University of Verona, Department of Neurosciences, Biomedicine and Movement Sciences, Section of Biology and Genetics.
2020-	Associate Professor in Experimental Biology at the University of Verona, Department of Neurosciences, Biomedicine and Movement Sciences, Section of Biology and Genetics.
2021-	Member of the Committee for equal opportunities, Employee wellbeing and non-discrimination at work (CUG) of the University of Verona.

Expertise: a solid background in molecular and cellular biology.

Major research area: genetic diseases comprising SBMA, prion protein diseases, chondrodysplasias; post-translational modifications, signal transduction and gene expression.

Teaching and research activities at the University of Verona can be found at the following link: <https://www.dnbm.univr.it/?ent=persona&id=1474&lang=en>

PUBLICATIONS

- Danese E, **Lievens PM**, Padoan A, Peserico D, Galavotti R, Negrini D, Gelati M, Conci S, Ruzzenente A, Salvagno GL, Lippi G. Plasma bile acid profiling and modulation of secreted Mucin 5AC in cholangiocarcinoma. *Int J Mol Sci.* **(2023)** 24(16):12794. doi: 10.3390/ijms241612794.
- Conti G, Calderan L, Quintero Sierra LA, Conti A, Ossanna R, Boschi F, Marzola P, Ferrarini F, Governa M, **Lievens P.-J. M**, Sbarbati A. Tumor and peritumoral adipose tissue crosstalk: de-differentiated adipocytes influence spread of colon carcinoma cells. *Tissue Cell.* **(2023)** 80:101990. doi: 10.1016/j.tice.2022.101990. Epub 2022 Dec 1.
- Danese E, Negrini D, Pucci M, De Nitto S, Ambrogi D, Donzelli S, **Lievens P.-J. M**, Salvagno GL, Lippi G. Bile acid quantification by liquid chromatography-tandem mass spectrometry: method validation, reference range, and interference study. *Diagnostics (Basel)*, 10(7):462. **(2020)** doi: 10.3390/diagnostics10070462.

- Danese E., Ruzzenente A, Montagnana M., **Lievens P. M.-J.** Current and future roles of mucins in cholangiocarcinoma. Recent evidences for a possible interplay with bile acids. *Annals of Translational Medicine*, 6, 333-9. doi: 10.21037/atm.2018.07.16 **(2018)**.
- Montone R., Baruzzi A., Romanelli M.G., Liboi E. and **Lievens P. M.-J.** Mutant FGFR3 associated with SADDAN disease causes cytoskeleton disorganization through PLC γ 1/Src-mediated paxillin hyperphosphorylation. *Int J Biochem Cell Biol.* 95, 17-26. doi: 10.1016/j.biocel.2017.12.008. **(2018)**.
- Marinozzi MR, Pandolfi L, Malatesta M, Colombo M, Collico V, **Lievens P. M.-J.**, Tambalo S, Lasconi C, Vurro F, Boschi F, Mannucci S, Sbarbati A, Proserpi D, Calderan L. Innovative approach to safely induce controlled lipolysis by superparamagnetic iron oxide nanoparticles-mediated hyperthermic treatment. *Int J Biochem Cell Biol.* 93, 62-73. doi: 10.1016/j.biocel.2017.10.013. **(2017)**.
- Polanco MJ, Parodi S, Piol D, Stack C, Chivet M, Contestabile A, Miranda HC, **Lievens P. M.-J.**, Espinoza S, Jochum T, Rocchi A, Grunseich C, Gainetdinov RR, Cato AC, Lieberman AP, La Spada AR, Sambataro F, Fischbeck KH, Gozes I, Pennuto M. Adenyl cyclase activating polypeptide reduces phosphorylation and toxicity of the polyglutamine-expanded androgen receptor in spinobulbar muscular atrophy. *Sci Transl Med.* 8, 370ra181. doi: 10.1126/scitranslmed.aaf9526 **(2016)**.
- **Lievens P. M.-J.**, Kuznetsova T, Kochlamazashvili G, Cesca F, Gorinski N, Galil DA, Cherkas V, Ronkina N, Lafera J, Gaestel M, Ponimaskin E, Dityatev A. ZDHHC3 tyrosine phosphorylation regulates neural cell adhesion palmitoylation. *Mol Cell Biol.* 36, 2208-2225. doi: 10.1128/MCB.00144-16. **(2016)**.
- Garau G, Magotti P, Heine M, Korotchenko S, **Lievens P. M.-J.**, Berezin V, Dityatev A. Heparin/heparan sulphates bind to and modulate neuronal L-type (Cav1.2) voltage-dependent Ca²⁺ channels. *Exp. Neurol.* 274, 156-165. **(2015)**.
- Scaramuzzino C., Casci I., Parodi S., **Lievens P. M.-J.**, Polanco M.J., Milioto C., Chivet M., Monaghan J., Mishra A., Badders N., Aggarwal T., Grunseich C., Sambataro F., Basso M., Fackelmayer F.O., Taylor J.P., Pandey U.B., Pennuto M. Protein Arginine Methyltransferase 6 Enhances Polyglutamine-Expanded Androgen Receptor Function and Toxicity in Spinal and Bulbar Muscular Atrophy. *Neuron* 85, 88-100 **(2015)**
- Degli Esposti M., Chouaia B., Comandatore F., Crotti E., Sassera D., **Lievens P. M.-J.**, Daffonchio D., Bandi C. Evolution of mitochondria reconstructed from the energy metabolism of living bacteria. *Plos One* 9, e96566, doi: 10.1371/journal.pone.0096566 **(2014)**

- Romanelli M.G., Diani E, **Lievens P. M.-J.** New insight into functional roles of the polypyrimidine tract-binding protein. *Int. J. Mol. Sci.* 14, 22906-32 (2013).
- Kochlamazashvili G, Henneberger C, Bukalo O, Dvoretzkova E, Senkov O, **Lievens P. M.-J.**, Westenbroek R, Engel AK, Catterall WA, Rusakov DA, Schachner M, Dityatev A. The extracellular matrix molecule hyaluronic acid regulates hippocampal synaptic plasticity by modulating postsynaptic L-type Ca(2+) channels. *Neuron* 67, 116-128 (2010).
- **Lievens P. M.-J.**, Zanolli E., Garofalo S., and Liboi E.. Cell adaptation to activated FGFR3 includes Sprouty4 up regulation to inhibit the receptor-mediated ERKs activation from the endoplasmic reticulum. *FEBS Lett.* 583, 3254-3258 (2009).
- **Lievens P. M.-J.**, De Servi B., Garofalo S., Lunstrum G. P., Horton W. A. and Liboi E.. Transient dimerization and interaction with ERGIC-53 occur in the fibroblast growth factor receptor 3 early secretory pathway. *Int. J. Biochem. Cell Biol.* 40(11), 2649-2659 (2008).
- Crotti A., Lusic M., Lupo R., **Lievens P. M.-J.**, Liboi E., Della Chiara G., Tinelli M., Lazzarin A., Patterson B. K., Giacca M., Bovolenta C., and Poli G.. Naturally occurring C-terminally truncated STAT5 is a negative regulator of HIV-1 expression. *Blood*. 109(12), 5380-5389 (2007).
- Crotti A., Chiara G. D., Ghezzi S., Lupo R., Jeeninga R. E., Liboi E., **Lievens P. M.-J.**, Vincenzi E., Bovolenta C., Berkhout B. and Poli G.. Heterogeneity of signal transducer and activator of transcription binding sites in the long-terminal repeats of distinct HIV-1 subtypes. *Open Virology*. 1, 26-32 (2007).
- **Lievens P. M.-J.**, Roncador A. and Liboi E. K644E/M FGFR3 mutants activate Erk1/2 from the Endoplasmic Reticulum through FRS2 α and PLC γ -independent pathways. *J. Mol. Biol.* 357, 783-792 (2006).
- **Lievens P. M.-J.** Mutinelli C., Baynes D. and Liboi E..The kinase activity of fibroblast growth factor receptor 3 with activation loop mutations affects receptor trafficking and signaling . *J. Biol. Chem.* 279, 43254-43260 (2004).
- **Lievens P. M.-J.** and Liboi E..The thanatophoric dysplasia type II mutation hampers complete maturation of FGF receptor 3 (FGFR3), which activates signal transducer and activator of transcription 1 (STAT1) from the endoplasmic reticulum. *J. Biol. Chem.* 278, 17344-17349 (2003).
- Tagliavini F., **Lievens P. M.-J.**, Trinchant C., Warter J.M., Mohr M., Perini F., Salmona M., Rossi G., Giaccone G., Piccardo P., Ghetti B., Bugiani O., Beavis R.C., Frangione B.,Prelli F. A 7-kDa prion protein (PrP) fragment, an integral component of the PrP region required for infectivity, is the major amyloid protein

in Gerstmann-Sträussler-Scheinker disease A117V. *J. Biol. Chem.* 276, 6009-6015 (2001).

- Puoti G., Rossi G., Giaccone G., Awan T., **Lievens P.M.-J.**, Defanti C.A., Tagliavini F. and Bugiani O. Polymorphism at codon 129 of PRNP affects the phenotypic expression of Creutzfeld-Jakob disease linked to E200K mutation. *Ann. Neurol.* 48(2), 269-270 (2000).
- Piccardo P., Dlouhy S. R., **Lievens P. M.-J.**, Young K., Bird T. D., Nochlin D, Dickson D.W, Vinters H. V., Zimmermann T.R., Mackenzie I. R, Kish S. J, Ang L. C., De Carli C., Pocchiari M., Brown P., Gibbs C. Jr., Gajdusek D.C., Bugiani O., Tagliavini F. and Ghetti B. Phenotypic variability of Gerstmann-Sträussler-Scheinker disease associated with prion protein heterogeneity. *J. Neuropathol. Exp. Neurol.* 57, 979-988 (1998).
- Jiménez-Huete A., **Lievens P. M.-J.**, Vidal R., Piccardo P., Ghetti B., Tagliavini F., Frangione B. and Prelli F. Endogenous proteolytic cleavage of normal and disease-associated isoforms of the human prion protein in neural and non-neural tissues. *Am. J. Pathol.* 153, 1561-1572 (1998).
- Bovolenta C., Testolin L., Benussi L., **Lievens P. M.-J.** and Liboi E.. Positive selection of apoptosis-resistant cells correlates with activation of dominant-negative STAT5. *J. Biol. Chem.* 273, 20779-20784 (1998).
- Liberati C., Ronchi A., **Lievens P. M.-J.**, Ottolenghi S. and Mantovani R. NF-Y organizes the γ -globin CCAAT boxes region. *J. Biol. Chem.* 273, 16880-16889 (1998).
- **Lievens P. M.-J.**, Tufarelli C., Donady J. J., Stagg A. and Neufeld E. J.. CASP, a novel, highly conserved alternative-splicing product of the CDP/cut/cux gene, lacks cut-repeat and homeo DNA binding domains and interacts with full-length CDP in vitro. *Gene* 197, 73-81 (1997).
- Tagliavini F., McArthur R. A., Canciani B., Giaccone G., Porro M., Bugiani M., **Lievens P. M.-J.**, Bugiani O., Peri E., Dall'Ara P., Rocchi M., Poli G., Forloni G., Bandiera T., Varasi M., Suarato A., Cassutti P., Cervini M.A., Larsen J., Salmona M. and Post C. Effectiveness of anthracyclines against experimental prion disease in syrian hamsters. *Science* 276, 1119-1122 (1997).
- Diomede L., Sozzani S., Luini W., Algeri M., Chiesa R., **Lievens P. M.-J.**, De Gioia L., Bugiani O., Forloni G., Tagliavini F. and Salmona M. Activation effects of a prion protein fragment [PrP 106-126] on human leukocytes. *Biochem. J.* 320, 563-570 (1996).
- **Lievens P. M.-J.**, Donady J. J., Tufarelli C. and Neufeld E. J. Repressor activity of CCAAT Displacement protein in HL-60 myeloid leukemia cells. *J. Biol. Chem.* 270, 12745-12750 (1995).

- Scherer S. W., Neufeld E. J., **Lievens P. M.-J.**, Orkin S. H. and Tsui L. C. Regional localization of the CCAAT displacement protein gene (CUTL1) to 7q22 by analysis of somatic cell hybrids. *Genomics* 5, 695-696 (1993).
- Neufeld E.J., Skalnik D.G., **Lievens P. M.-J.**, Orkin S.H. Human CCAAT displacement protein is homologous to the Drosophila homeoprotein, *cut*. *Nature Genetics* 1, 50-55 (1992).
- Carsana A., Merola M., Costanzo C., Maffei L., **Lievens P. M.-J.**, Furia A., Palmieri M. Protein-DNA interactions in the 5'-flanking region of the bovine pancreatic ribonuclease gene. *Biochim. Biophys. Acta* 1171, 147-152 (1992).
- Pozzi G., Musmanno R.A., **Lievens P. M.-J.**, Oggioni M.R., Plevani P., Manganelli R. Method and parameters for genetic transformation of *Streptococcus sanguis* Challis. *Res. Microbiol.* 141: 659-670 (1990).