

# ANTONELLA PASQUATO

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## CURRENT POSITION

**Marie Curie – fellow - Research, Field: Cellular proteases,; development of novel assays for medical applications**  
**University of Padova – Department of Industrial Engineering, Padova – Italy**

## EDUCATION

|                                                                                |                        |
|--------------------------------------------------------------------------------|------------------------|
| <b>Lab animal experiments training</b><br>University of Lausanne, Switzerland  | 2013                   |
| <b>Advanced Course, Patent Information Search</b><br>WIPO, Geneva, Switzerland | 2008                   |
| <b>PhD, Chemistry</b><br>University of Napoli "Federico II", Italy             | 2002/4                 |
| <b>Specialization, New biology techniques</b><br>University of Padova, Italy   | 2002/3                 |
| <b>Specialization, Cosmetology</b><br>University of Padova, Italy              | 2001/2                 |
| <b>Specialization, Bioethics</b><br>University of Padova, Italy                | 2001/2                 |
| <b>License to practice as a Chemist</b><br>University of Padova, Italy         | 1998 – 2 <sup>nd</sup> |
| <b>Master's degree, Chemistry</b><br>University of Padova, Italy               | 1991/8                 |

## WORK EXPERIENCE

|                                                                                                                                  |                      |
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| <b>Lab head</b><br>Chemical and physical analyses unit<br>Euromark Industries Srl, Padova, Italy                                 | June 2018–April 2021 |
| <b>Senior Research Associate</b><br>Department of Microbiology<br>University Hospital Center University<br>Lausanne, Switzerland | Jan 2009 – Mar 2018  |
| <b>Postdoc</b><br>Biochemical neuroendocrinology Unit<br>Institut de recherches cliniques de Montréal<br>Canada                  | May 2005 – Aug 2008  |
| <b>Researcher Assistant</b><br>Biomaterials Unit, University of Padova, Italy                                                    | Dec 2004 - May 2005  |
| <b>Researcher</b><br>Gastroenterology Unit<br>Hospital "S. Maria di Ca' Foncello"<br>Treviso, Italy                              | Nov 2003 – Apr 2004  |
| <b>Teacher - master's Biomedical Engineering</b><br>University of Padova, Italy                                                  | A.A . 2003/4         |
| <b>Researcher</b><br>Biomaterials Unit<br>University of Padova, Italy                                                            | Mar 2002 – Oct 2003  |
| <b>Teacher of chemistry and chemistry lab</b><br>I.I.S. "Jacopo da Montagnana", Padova, Italy                                    | Oct 2001 – Jun 2002  |
| <b>Teacher in English of chemistry and biology</b><br>Istituto Euroscuola, Padova, Italy                                         | Sep 2000 - May 2001  |
| <b>Post graduate fellowships</b><br>Biomaterials Unit, University of Padova, Italy                                               | Apr 1999 – Aug 2000  |

## COMPETENCES

- Cellular Biology
- Biochemistry
- Peptides
- Enzymology
- High throughput screening
- Drug design

## FIELDS OF RESEARCH

- Enzymology
- proprotein Convertases
- Peptides
- Endocrinology (POMC pathways)
- Virology
- *In vitro* and cell-based HTS assays

## PATENTS

**Pasquato A, Ramos da Palma J, Burri DJ, Kunz S. (2014) Novel sensors and method for high throughput screening, Patent no. UL20250EP**

## LANGUAGES

**Italian**, native  
**English**, fluent written and spoken  
**French**, fluent written and spoken  
**Spanish**, basic written and spoken  
**German**, basic written and spoken

## SKILLS

**Project management**  
project design, writing, and coordination  
investigations planning/execution  
collaborations finding  
**Group management**  
student and postdoc supervision  
supervision for articles and lab books  
collaborations management  
**Scientific communication**  
creation of posters, slideshows  
oral internal /external presentations  
meeting organization  
lab visit organization

## PUBLICATIONS

1. **Pasquato A**, Palazzi L, Roulin A, Polverino de Laureto P, Cendron L (2020) Neuropeptides  $\gamma 2/\gamma 3$ -MSH,  $\alpha$ -MSH/ACTH and Neurotensin exhibit different degradation patterns as a function of the length of their bioactive species, *Journal of Peptide Science*, under revision
2. Low K, Ducrest A, San-Jose LM, Simon C, Uva V, Seidah NG, **Pasquato A**, Kunz S, Roulin A (2020) Molecular Evolution of the proopiomelanocortin system in Barn owl species, *PLOS ONE* (accepted)
3. Low K, Harges K, Fedeli C, Seidah NG, Constam DB, **Pasquato A**, Steinmetzer T, Roulin A, Kunz S. (2019) A novel cell-based sensor detecting the activity of individual basic proprotein convertase. *FEBS J.* 286(22): 4597-4620
4. **Pasquato A**, Fernandez AH, Kunz S, (2018) Studies of Lassa Virus cell entry. *Methods Mol. Biol.* 1604: 135-155
5. **Pasquato A**, Kunz S. (2016) Novel drug discovery approaches for treating arenavirus infections. *Expert. Opin. Drug Discov.* 11 (4): 383-93
6. Da Palma JR, Cendron L, Seidah NG, **Pasquato A**, Kunz S. (2015) Mechanism of folding and activation of Subtilisin Kexin Isozyme-1 (SKI-1)/site-1 Protease (S1P). *J. Biol. Chem.* 291(5): 2055-66
7. Oppliger J, da Palma JR, Burri DJ, Bergeron E, Khatib AM, Spiropoulou CF, **Pasquato A**, Kunz S. (2015) A Molecular sensor to characterize Arenavirus envelope glycoprotein cleavage by Subtilisin Kexin Isozyme1/ Site 1 Protease. *J. Virol.* 90(2): 705-14
8. Da Palma JR, Burri DJ, Oppliger J, Salamina M, Cendron L, de Laureto PP, Seidah NG, Kunz S, **Pasquato A**, (2014) Zymogen activation and subcellular activity of subtilisin kexin isozyme 1/site 1 protease. *J. Biol. Chem.* 289(52): 35743-56
9. Sommerstein R., Ramos da Palma J, Olschlager S, Berghaler A, Barba L, Lee B.P.-L. **Pasquato A**, Flaz L. (co-last authors) (2014) Evolution of recombinant LCMV/Lassa virus in vivo highlights the importance of GPC cytosolic tail in persistence. *J. Virol.* 88(15):8340-8.
10. **Pasquato A**, Kunz S. (2013) The lectin ERGIC-53 goes viral, *Cell Host Microbe*, 14(5) 485-7.
11. Goncalves AR, Moraz ML, **Pasquato A**, Helenius A, Lozach PY, Kunz S.(2013) Role of DC-SIGN in Lassa virus entry into human dendritic cells. *J. Virol.* 87(21):11504-15.
12. Burri DJ, Ramos da Palma J, Seidah NG, Zanotti G, Cendron L, **Pasquato A**, Kunz S. (2013) Differential recognition of Old World and New World arenavirus envelope glycoproteins by subtilisin kexin isozyme 1 (SKI-1)/site 1 protease (S1P). *J. Virol.* 87(11):6406-14.
13. Moraz ML, Pythoud C, Turk R, Rothenberger S, **Pasquato A**, Campbell KP, Kunz S. (2012), Cell entry of Lassa virus induces tyrosine phosphorylation of dystroglycan, *Cell Microbiology*.12078.
14. Burri D, **Pasquato A**, Ramos da Palma J, Igonet S, Oldstone MB, Kunz S. (2012), The role of proteolytic processing and the stable signal peptide in expression of the Old World arenavirus envelope glycoprotein ectodomain, *Virology*, 436(1):127-33.
15. Burri DJ, Pasqual G, Rochat C, Seidah NG, **Pasquato A**, Kunz S. (2012) Molecular characterization of the processing of arenavirus envelope glycoprotein precursors by subtilisin kexin isozyme-1/site-1 protease. *J Virol*, 86(9):4935-46.
16. **Pasquato A**, Rochat C, Burri DJ, Pasqual G, de la Torre JC, Kunz S. (2012) The small molecule subtilisin kexin isozyme-1/site-1 protease inhibitor PF-429242 shows broad anti-arenaviral activity and combinatorial effects with ribavirin. *Virology*. 423(1):14-22.
17. Burri DJ, Ramos da Palma J, Kunz S. **Pasquato A**. (2012) The envelope glycoprotein of arenaviruses, *Viruses*, 4(10):1844-2416 - Review.
18. **Pasquato A**, Burri DJ, Kunz S. (2012) Current drug discovery strategies against arenavirus infections, *Expert reviews*, 10(11):1297-309 - Review.
19. Essalmani R, Zaid A, Marcinkiewicz J, Chamberland A, Pasquato A, Seidah NG, Prat A (2008) In vivo functions of the proprotein convertase PC5/6 during mouse development: Gdf11 is a likely substrate. *Proc Natl Acad Sci U S A.* 15: 5750-5.
20. Pasquato A, Seidah NG. (2008) The H5N1 Influenza Variant Fujian-Like Hemagglutinin Selected Following Vaccination Exhibits a Compromised Furin Cleavage: Neurological Consequences of Highly Pathogenic Fujian H5N1 Strains. *J Mol Neurosci.* 35: 339-43.
21. Mayer G, Hamelin J, Asselin MC, **Pasquato A**, Marcinkiewicz E, Tang M, Tabibzadeh S, Seidah NG. (2008) The regulated cell surface zymogen activation of the proprotein convertase PC5A directs the processing of its secretory substrates. *J Biol Chem.* 283: 2373-84.
22. **Pasquato A**, Dettin M, Basak A, Gambaretto R, Tonin L, Seidah NG, Di Bello C. (2007) Heparin enhances the furin cleavage of HIV-1 gp160 peptides. *FEBS Lett.* 581: 5807-13.
23. **Pasquato A**, Pullikotil P, Asselin MC, Vacatello M, Paolillo L, Ghezzi F, Basso F, Di Bello C, Dettin M, Seidah NG. (2006) The proprotein convertase SKI-1/S1P. In vitro analysis of Lassa virus glycoprotein-derived substrates and ex vivo validation of irreversible peptide inhibitors. *J Biol Chem.* 281: 23471-81.
24. Falcigno L, Oliva R, D'Auria G, Maletta M, Dettin M, **Pasquato A**, Di Bello C, Paolillo L. (2004) Structural investigation of the HIV-1 envelope glycoprotein gp160 cleavage site 3: role of site-specific mutations. *Chembiochem.* 5:1653-61.
25. Dettin M, **Pasquato A**, Scarinci C, Zanchetta M, De Rossi A, Di Bello C. (2004) Anti-HIV activity and conformational studies of peptides derived from the C-terminal sequence of SDF-1. *J Med Chem.* 47: 3058-64.
26. Oliva R, Falcigno L, D'Auria G, Dettin M, Scarinci C, **Pasquato A**, Di Bello C, Paolillo L. (2003) Structural investigation of the HIV-1 envelope glycoprotein gp160 cleavage site, 2: relevance of an N-terminal helix. *Chembiochem.* 4: 727-33
27. Dettin M, Zanchetta M, **Pasquato A**, Borrello M, Piatier-Tonneau D, Di Bello C, De Rossi A. (2003) CCR5 N-terminus peptides enhance X4 HIV-1 infection by CXCR4 up-regulation. *Biochem Biophys Res Commun.* 307: 640-6.
28. Dettin M, Conconi MT, Gambaretto R, **Pasquato A**, Folini M, Di Bello C, Parnigotto PP. (2002) Novel osteoblast-adhesive peptides for dental/orthopaedic biomaterials. *J Biomed Mater Res.* 60: 466-71.