

SCIENTIFIC CURRICULUM VITAE

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Scientific topics: *Study of the biochemical mechanisms involved in cellular signalling by the identification of peptides and proteins (ligands, receptors and intracellular effectors), as well as their post-translational modifications and proteic partners.*

List of international publications

1. Communi D., Takazawa K. and Erneux C. Lys-197 and Asp-414 are critical residues for binding of ATP/Mg²⁺ by rat brain inositol 1,4,5-*tris*phosphate 3-kinase. (1993) *Biochem. J.* **291**, 811-816.
2. Communi D., Vanweyenbergh V. and Erneux C. Purification and biochemical properties of a high-molecular-mass inositol 1,4,5-*tris*phosphate 3-kinase isoenzyme in human platelets. (1994) *Biochem. J.* **298**, 669-673.
3. D'Santos C.S., Communi D., Ludgate M., Vanweyenbergh V., Takazawa K. and Erneux C. Identification of high molecular weight forms of inositol 1,4,5-*tris*phosphate 3-kinase in rat thymus and human lymphocytes. (1994) *Cell. Signalling* **6**, 335-344.
4. Vanweyenbergh V., Communi D., D'Santos C.S. and Erneux C. Tissue and cell specific expression of inositol 1,4,5-*tris*phosphate 3-kinase isoenzymes. (1995) *Biochem. J.* **306**, 429-435.
5. Erneux C., Vanweyenbergh V., De Smedt F. and Communi D. Involvement of inositol lipids and their products of hydrolysis in cellular signaling. (1995) *Médecine/Sciences* **11**, 240-246.
6. Communi D., Lecocq R., Vanweyenbergh V. and Erneux C. Active site labelling of inositol 1,4,5-*tris*phosphate 3-kinase A by phenylglyoxal. (1995) *Biochem. J.* **310**, 109-115.
7. Communi D., Vanweyenbergh V. and Erneux C. Molecular study and regulation of D-*myo*-inositol 1,4,5-*tris*phosphate 3-kinase. (1995) *Cell. Signalling* **7**, 643-650.

8. Erneux C., De Smedt F., Moreau C., Rider M. and Communi D.
Production of recombinant Type I inositol 1,4,5-*tris*phosphate 5-phosphatase in *Escherichia coli*: lack of phosphorylation by protein kinase C. (1995) *Eur. J. Biochem.* **234**, 598-602.
9. Communi D., Lecocq R. and Erneux C. Arg-343 and Arg-350 are two active site residues involved in substrate binding by human Type I D-*myo*-inositol 1,4,5-*tris*phosphate 5-phosphatase. (1996) *J. Biol. Chem.* **271**, 11676-11683.
10. Communi D. and Erneux C. Identification of an active site cysteine in human Type I D-*myo*-inositol 1,4,5-*tris*phosphate 5-phosphatase by chemical modification and site-directed mutagenesis. (1996) *Biochem. J.* **320**, 181-186.
11. Drayer L., Pessesse X., De Smedt F., Communi D., Moreau C. And Erneux C. The family of inositol and phosphatidylinositol polyphosphate 5-phosphatases. (1997) *Biochem. Soc. Trans.* **24**, 1001-1005.
12. Communi D., Vanweyenberg V. and Erneux C. Inositol 1,4,5-*tris*phosphate 3-kinase A is activated by receptor activation through a calcium:calmodulin-dependent protein kinase II mechanism. (1997) *EMBO J.* **16**, 1943-1952.
13. Erneux C., Govaerts C., Communi D. and Pessesse X. The diversity and possible functions of the inositol polyphosphate 5-phosphatases. (1998) *Biochem. Biophys. Acta* **55345**, 1-15.
14. Erneux C., De Smedt F. and Communi D. The control mechanisms of inositol 1,4,5-*tris*phosphate by its own metabolism. (1998) *Cell Biol. Int.* **22**, 372.

15. Communi D., Dewaste V. and Erneux C. Calcium:calmodulin-dependent protein kinase II and protein kinase C-mediated phosphorylation and activation of D-*myo*-inositol 1,4,5-*tris*phosphate 3-kinase B in astrocytes. (1999) *J. Biol. Chem.* **274**, 14734-14742.
16. Kotani M., Detheux M., Vandenbogaerde A., Communi D., Vanderwinden J.M., Le Poul E., Brezillon S., Tyldesley R., Suarez-Huerta N., Vandeput F., Blanpain C., Schiffmann S.N., Vassart G. and Parmentier M. The metastasis-suppressor gene KiSS-1 encodes kisspeptins, the natural ligands of the orphan G protein-coupled receptor GPR54. (2001) *J. Biol. Chem.* **276**, 34631-34638.
17. Communi D., Gevaert K., Demol H., Vandekerckhove J. and Erneux C. A novel receptor-mediated regulation mechanism of type I inositol polyphosphate 5-phosphatase by calcium:calmodulin-dependent protein kinase II phosphorylation. (2001) *J. Biol. Chem.* **276**, 38738-38747.
18. Marteau F., Le Poul E., Communi Da., Communi Di., Labouret C., Savi P., Boeynaems J.-M. and Suarez Gonzalez N. Pharmacological characterization of the human P2Y₁₃ receptor. (2003) *Mol. Pharmacol.* **64**, 104-112.
19. Autiero M., Waltenberger J., Communi Di., Kranz A., Moons L., Lambrechts D., Kroll J., Plaisance S., De Mol M., Bono F., Kliche S., Fellbrich G., Ballmer-Hofer K., Maglione D., Mayr-Beyrle U., Dewerchin M., Dombrowski S., Stanimorovic D., Van Hummelen P., Dehio C., Hicklin D. J., Persico G., Herbert J.-M., Communi Da., Shibuya M., Collen D., Conway E. M. and Carmeliet P. Role of PlGF in the intra- and intermolecular cross talk between the VEGF receptors Flt1 and Flk1. (2003) *Nature Medicine* **9**, 936-943.

20. Wittamer V., Franssen J.-D., Vulcano M., Mirjolet J.-F., Le Poul E., Migeotte I., Brézillon S., Tyldesley R., Blanpain C., Detheux M., Mantovani A., Sozzani S., Vassart G., Parmentier M. and Communi D. Specific recruitment of antigen-presenting cells by chemerin, a novel processed ligand from human inflammatory fluids. (2003) *J. Exp. Med.* **198**, 977-985.
21. Wittamer V., Grégoire F., Robberecht P., Vassart G., Communi D. and Parmentier M. The C-terminal nonapeptide of mature chemerin activates the chemerin receptor with low nanomolar potency. (2004) *J. Biol. Chem.* **279**, 9956-9962.
22. Delpierre G., Vertommen D., Communi D., Rider M.H. and Van Schaftingen E. Identification of fructosamine residues deglycated by fructosamine-3-kinase in human hemoglobin. (2004) *J. Biol. Chem.* **279**, 27613-27620.
23. Li X., Tjwa M., Moons L., Fons P., Noel A., Ny A., Zhou J.M., Lennartsson J., Ji H., Lutun A., Ponten A., Devy L., Bouche A., Oh H., Manderveld A., Blacher S., Communi D., Savy P., Bono F., Dewerchin M., Foidart J.M., Autiero M., Herbert J.M., Collen D., Heldin C.H., Eriksson U. and Carmeliet P. Revascularization of ischemic tissues by PDGF-CC via effects on endothelial cells and their progenitors. (2005) *J. Clin. Invest.* **115**, 118-127.
24. Migeotte I., Riboldi E., Franssen J.-D., Grégoire F., Loison C., Wittamer V., Detheux M., Robberecht P., Costagliola S., Vassart G., Sozzani S., Parmentier M. and Communi D. Identification and characterization of an endogenous chemotactic ligand specific for FPRL2. (2005) *J. Exp. Med.* **201**, 83-93.
25. Vermi W., Riboldi E., Wittamer V., Gentili F., Luini W., Marrelli S., Vecchi A., Franssen J.-D., Communi D., Massardi L., Sironi M., Mantovani A., Parmentier M., Facchetti F. and Sozzani S. Role of the chemoattractant receptor ChemR23 in directing

the migration of myeloid and plasmacytoid dendritic cells to lymphoid organs and inflamed skin. (2005) *J. Exp. Med.* **201**, 509-515.