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WORK EXPERIENCE

Facility manager Platform of structural biology, Dept of Biochemistry, Université de Montréal (2018 –)
Management of a scientific research instruments platform, which include three Bruker NEO NMR spectrometers (500, 600 and 700 MHz) and a small-angle X rays scattering system (SEC-SAXS). Consulting and training for academic researchers (students and professors) on structural biology science and techniques.

EDUCATION AND RESEARCH TRAINING

Postdoctoral fellow Structural Biochemistry, Dept of Biochemistry, Université de Montréal (2012 – 2018)
Structural characterization of host-pathogen protein-protein interactions involved in the pathogenicity of Rift Valley fever virus.

Ph.D. Biochemical Parasitology, Institute of Parasitology, McGill University (2006 – 2012)
Thesis work on biophysical characterization of the glycosome biogenesis machinery in the human parasite *Leishmania donovani* and its interaction with the glycosomal membrane.

M.Sc. Biochemical Engineering, Dept of Bioresource Eng, McGill University (2004 – 2006)
Thesis work on flavour-related metabolic by-products formation during fermentation of malt extracts by the yeast *Saccharomyces cerevisiae* and optimization of fermentation parameters in industrial processes related to fuel ethanol production.

B.Sc. Food Chemistry, Dept of Food Science, McGill University (2000 – 2004)

TECHNICAL EXPERTISE

Biophysics

- Protein NMR
- Protein X-ray crystallography
- Small angle X-ray scattering
- Isothermal titration calorimetry
- Fluorescence spectroscopy
- Circular dichroism
- Multi-angle light scattering
- Langmuir troughs

Bioinformatics and programming languages

- Protein homology modelling
- Virtual drug screening
- Linux usage (fluent)
- PyMol scripting (fluent)
- Python programming (intermediate)
- Git version control (intermediate)
- R programming (beginner)

Biochemistry

- Protein expression and purification
- PCR and gene cloning
- High-performance liquid chromatography
- Gas chromatography
- Protein-lipid interactions
- Liposomes and lipid bilayers
- Electrophoresis
- Thin layer chromatography

Bioprocessing and engineering

- Biomass production in large-scale bioreactors
- Yeast desiccation
- Beer fermentation (3 to 150 hL scale)
- Biochemical engineering calculations for bio-processes

SCIENTIFIC PUBLICATIONS

13. Manenda MS, Picard MÈ, Zhang L, **Cyr N**, Zhu X, Barma J, Pascal JM, Couture M, Zhang C, Shi R (2020). "Structural analyses of the group A flavin-dependent monooxygenase PieE reveal a sliding FAD cofactor conformation bridging OUT and IN conformations". *J Biol Chem*. 295: 4709-22.
12. **Cyr N** (2018). "Piercing the lipid raft: the case of *Vibrio cholerae* cytolysin". *Biochem J*. 475: 3917-9.
11. **Cyr N**, Smith TK, Boisselier E, Leroux LP, Kottarampatel AH, Davidsen A, Salesse C, Jardim A (2018). "The hydrophobic region of the *Leishmania* peroxin 14 – requirements for association with a glycosome mimetic membrane". *Biochem J*. 475: 511-529.
10. Lecoq L, Raiola L, Chabot PR, **Cyr N**, Arseneault G, Legault P, Omichinski JG (2017). "Structural characterization of interactions between transactivation domain 1 of the p65 subunit of NF-κB and transcription regulatory factors". *Nucleic Acids Res* 45: 5564-76.
9. van Bergen B*, **Cyr N***, Strasser R, Blanchette M, Sheppard JD, Jardim A (2016). "α,β-Dicarbonyl reduction is mediated by the *Saccharomyces* Old Yellow Enzyme". *FEMS Yeast Res* 16(5). (* equal contribution)
8. **Cyr, N**, de la Fuente C, Lecoq L, Guendel I, Chabot PR, KeHN-Hall K, Omichinski JG (2015). "A ΩXaV motif in the Rift Valley fever virus NSs protein is essential for degrading p62, forming nuclear filaments and virulence". *Proc Natl Acad Sci USA* 112:6021-6.
7. Pilar AV, Strasser R, McLean J, Quinn E, **Cyr N**, Hojjat H, Kottarampatel AH, Jardim A (2014). "Analysis of the *Leishmania* peroxin 7 interactions with peroxin 5, peroxin 14 and PTS2 ligands". *Biochem J* 460:273-282.
6. Dasanayake D, Richaud M, **Cyr N**, Caballero-Franco C, Pitroff S, Finn RM, Ausió J, Luo W, Donnenberg MS, Jardim A (2011). "The N-terminal amphipathic region of the *Escherichia coli* type III secretion system protein EspD is required for membrane insertion and effacement activity". *Mol Microbiol* 81:734-750.
5. Ullman B, **Cyr N**, Choi K, Jardim A (2010). "Acidic residues in the purine binding site govern the 6-oxopurine specificity of the *Leishmania donovani* xanthine phosphoribosyltransferase". *Int J Biochem Cell Biol* 42:253-262.
4. **Cyr N**, Madrid KP, Strasser R, Arousseau M, Finn R, Ausio J, Jardim A (2008). "*L. donovani* PEX14 undergoes a marked conformational change following association with PEX5". *J Biol Chem* 283:31448-31499.
3. **Cyr N**, Blanchette M, Price SP and Sheppard, JD (2007). "Vicinal diketone production and amino acid uptake by two active dry lager yeasts during beer fermentation". *J Am Soc Brew Chem* 65:138-144.
2. van Bergen B, Strasser R, **Cyr N**, Sheppard JD, Jardim A (2006). "α,β-dicarbonyl reduction by *Saccharomyces* D-arabinose dehydrogenase". *Biochim Biophys Acta* 1760:1636-1645.
1. van Zandycke S, Ahlgren S, Bourdaudhui G, **Cyr N**, De Nicola R, Fujita A, Kelly G, Logsdon D, McLean D, Pachello C (2005). "Method for measurement of yeast vitality". *J Am Soc Brew Chem* 63:205-208.

CONTRIBUTIONS AT CONFERENCES

Oral presentations

2015	American Society for Virology annual conference, London ON, Canada.
2015	AÉCSBUM annual retreat, St-Hippolyte QC, Canada.
2012	Centre for Host-Parasite Interactions annual conference, Laval QC, Canada
2011	Centre for Host-Parasite Interactions annual conference, Ste-Anne-de-Bellevue QC, Canada
2011	Interdisciplinary Graduate Students Research Symposium, Montréal QC, Canada
2010	British Society for Parasitology, Cardiff, Wales, United Kingdom
2010	Centre for Host-Parasite Interactions annual conference, Montréal QC, Canada
2009	Association Francophone pour le Savoir (ACFAS), Ottawa, ON, Canada
2009	Centre for Host-Parasite Interactions annual conference, Montréal QC, Canada
2008	Montreal Structural Biology Meeting, Île-Bizard QC, Canada
2008	Centre for Host-Parasite Interactions annual conference, Montréal QC, Canada
2005	Canadian Society for Chemical Engineering, Toronto ON, Canada

Poster presentations

2014	Groupe de Recherche Axé sur la Structure des Protéines, Montréal QC, Canada
2012	PROTEO Annual Symposium, Sherbrooke QC, Canada
2012	British Society for Parasitology, Glasgow, Scotland, United Kingdom
2011	Kinetoplastid Molecular Cell Biology Meeting, Woods Hole MA, United States
2009	Groupe de Recherche Axé sur la Structure des Protéines, Montréal QC, Canada
2006	American Society of Brewing Chemists, Palm Springs CA, United States

OTHER ACADEMIC ACTIVITIES

Teaching

2016	Faculty lecturer at Université Sainte-Anne for a 3 credits molecular biology course
2012	Teacher's assistant for a Bioinformatics in Molecular Parasitology Workshop at McGill University. Funded in part by Paravac (European Commission FP7) and the Québec government (MDEIE program)
2005 – 2012	Teacher's assistant for various undergraduate and graduate courses at McGill University: Bi-thermodynamics, Structural bioinformatics, Biochemistry I, Biotechnology laboratory II.
2006 – 2010	Lecturer at John Abbott College for the course Principles of industrial fermentation in the Faculty of Continuing Education.

Student Governance

2007 – 2011	Elected council member of the Post-graduate Student Society (PGSS) of McGill University
2008 – 2010	Member of the PGSS External Affairs Committee
2009 – 2010	Member of the PGSS Nominating Committee
2001 – 2004	Elected member of the Food Science Association Committee

RESEARCH FELLOWSHIPS

2016	Groupe de Recherche sur la Structure des Protéines Postdoctoral award
2012	Centre for Host-Parasite Interactions Bridging fund
2006 – 2009	Fonds québécois de la recherche sur la nature et les technologies Doctoral research fellowship
2004 – 2006	Fonds québécois de la recherche sur la nature et les technologies Masters research fellowship
2003, 2004	Natural Sciences and Engineering Research Council of Canada Undergraduate industrial research fellowship (partnership with Lallemand Inc.)

AWARDS

- Best poster presentation, PROTEO symposium (2012)
- Best oral presentation, CHPI2011 conference, Centre for Host-Parasite Interactions (2011)
- CHPI travel fellowship, Centre for Host-Parasite Interactions (2010, 2011, 2012)
- GREAT travel award, McGill University, Travel award for international conference (2010, 2011)
- Jane Rich Foundation Scholarship, Jane Rich Foundation (2003)
- CIFST Prize, Canadian Institute of Food Science and Technology (2002)
- Firmenich Millennium Scholarship in Food Science, Firmenich of Canada (2001)

MEDIA COVERAGE

- “Promouvoir le cyclisme à l’UdeM”, *Quartier Libre*, 2017.
- “Jouez : 4500 km en un an!”, *Presse21*, 2017.
- “Des chercheurs auraient détecté un « talon d’Achille de virus à fièvres hémorragiques »”, *Carrefour Science et Santé* (Voice of America Afrique), 2015.
- “Endiguer les fièvres hémorragiques une fois pour toutes”, *UdeM Nouvelles*, 2015.
- “Rift Valley fever virus’ proteins imitate human DNA repair factors”, *MedicalXpress*, 2015.
- “Rift Valley Virus: NMR clues”, *spectroscopyNOW*, 2015.
- “Drug target for Ebola-like viruses identified”, *The Economic Times*, 2015.

COMMUNITY INVOLVEMENT

2022-	Secretary for the MontreAlers Homebrew club, a group of passionate amateur beer brewers dedicated to support this hobby by organizing competitions, hosting meetings and fostering connections with the craft brewing industry.
2015-	Bicycle mechanic and teacher (volunteer) for Biciklo, a bicycle cooperative at the Université de Montréal where we educate students on bicycle mechanics and how to repair their own.
2015-2018	Écoleader for Université de Montréal. Implementation of the program Éco-Labo in my laboratory, an environmentally responsible management program.
2006-2012	President-elect for the non-profit organization Pro-Vert Sud-Ouest, which manage the Éco-centres in Montréal, as well as offering various environment-related educational activities to the public mainly in the borough Le Sud-Ouest in Montréal.