

Amr Kataya

Tenure Track Assistant Professor

amrk@agro.au.dk

+4591723428

Forsøgsvej 1, 4200

dramrkataya@gmail.com

+14033905514

Slagelse, Denmark

Table of Contents

Amr Kataya.....	1
I. Employment History	1
II. Education	2
III. Grants and Awards.....	2
IV. Mobility & Research Visits	2
V. Research, Scholarship, and Creative Activities	3
A. Published Book Chapters	3
B. Refereed Publications	3
C. Conferences	5
D. In-prep and to be submitted manuscripts & Patent.....	7
E. Grants and Proposals	8
F. Other Scholarly and Creative Accomplishments.....	9
VI. Teaching.....	10
A. Courses Taught.....	10
B. Individual Student Guidance & Supervision.....	10
C. Co-Supervision & Mentoring.....	11
C. Educational Certificates and Workshops	11
VII. Courses.....	12
VIII. References	12

Amr Kataya
Tenure Track Assistant Professor
Aarhus University

I. Employment History

Dec. 2025 – Now Slagelse, Denmark	Assistant Professor (Tenure-Track) Department of Agroecology – Crop Genetics and Biotechnology
10/2023 – 04/2025 Lethbridge, AB, Canada	Research Biologist II-Enabling Technologies Agriculture and Agri-food Canada, Lethbridge Research and Development center
09/2020 – 09/2023 Calgary, Alberta, Canada	Research Associate and Sessional Instructor Department of Biological Sciences, University of Calgary <u>I obtained 4 positions through this period:</u> <ul style="list-style-type: none">• Research Associate-Plant Molecular Biologist (Prof. Moorhead).• Research Associate-Plant gene editing specialist (Prof. Samuel) part-time role between 11/2021 to 09/2023• Sessional Instructor (PLBI 403) between 02/2023 to 05/2023• Sessional Instructor (BIOL 453) between 09/2023 to 12/2023.
08/2019 – 08/2020 Columbia, MO, USA	Research Scientist Department of Biochemistry, University of Missouri-Columbia campus Research Scientist position at the group of Prof. Jay Thelen
02/2016 – 07/2019 Stavanger/Norway Calgary/Canada	Researcher-Principal Investigator University of Stavanger/ University of Calgary <ul style="list-style-type: none">• Full-time Researcher/Project manager/Principal Investigator and group leader at the University of Stavanger.• Research mobility to University of Calgary at Prof. Moorhead's lab from July 2017 to April 2019.
02/2012 – 01/2016 Stavanger, Norway	Postdoctoral fellow Centre for Organelle Research, University of Stavanger Two positions at the group of Prof. Cathrine Lillo
10/2007 – 09/2008 Crete, Chania, Greece	Research Assistant Department of Sustainable Agriculture, Mediterranean Agronomic Institute of Chania (MAICh) A work/train scholarship at the laboratory of Dr. Ioannis Livieratos

II. Education

- 09/2008 – 12/2011
Stavanger, Norway
Biological Chemistry | Ph.D.
University of Stavanger
Thesis Title: Identification and functional studies of peroxisome-targeted proteins implicated in plant innate immunity and detoxification
- 10/2006 – 10/2007
Chania, Crete, Greece
Plant Biotechnology | MSc
Mediterranean Agronomic Institute of Chania (MAICh)
Thesis Title: Detection, complete nucleotide sequence and construction of full cDNA clones of Greek isolate of t. chlorosis virus
- 10/2005 – 06/2006
Chania, Crete, Greece
Natural Products and Pl. Biotechnology | Postgraduate Diploma
Mediterranean Agronomic Institute of Chania (MAICh)
- 10/2004 – 06/2005
Ismalia, Egypt
Physiology and Biochemistry | Postgraduate Diploma
University of Suez-Canal
- 10/2000 – 05/2004
Mansoura, Egypt
Chemistry and Biochemistry | Bachelor
University of Mansoura

III. Grants and Awards

- 02/2016
Y. Talent Principal Investigator Grant (USD860K/NOK 7.4 m.)
Norwegian Research Council
<https://app.dimensions.ai/details/grant/grant.4851629>
- 10/2007
Fellowship to work as a post-MSc Intern
Mediterranean Agronomic Institute of Chania (MAICh)
- 10/2005
Full scholarship to complete MSc program
Mediterranean Agronomic Institute of Chania (MAICh)

IV. Mobility & Research Visits

- 10/2017 – 04/2019
Calgary, AB, Canada
Visiting Researcher-Prof. Greg Moorhead's group
University of Calgary
- 08/2014 – 09/2014
Trondheim, Norway
Visiting scholar-Prof. Geir Slupphaug Proteomics lab
Department of Cancer Research and Molecular Medicine, NTNU, Trondheim, Norway
- 10/2010 – 12/2010
East Lansing, Michigan, United States
Visiting Ph.D. student: Prof. Jianping Hu and Prof. Sheng Yang He
MSU-DOE Plant Research Laboratory, Michigan State University
- 01/2008 – 04/2008
Heraklion, Crete, Greece
Visiting MSc student: Kriton Kalantidis
Institute of Molecular Biology and Biotechnology, Foundation for Research and Technology, University of Heraklion

V. Research, Scholarship, and Creative Activities

A. Published Book Chapters

1. **Kataya, A. R. A.**, Hu, J., Muench, D. G., & Moorhead, G. B. (2020). Plant peroxisomal protein kinases implicated in stress-related responses. In *Protein Kinases and Stress Management in Plants - Functional Genomic Perspective* (pp. 417-432). John Wiley & Sons Inc. <https://doi.org/10.1002/9781119541578.ch22>
2. **Kataya, A. R. A.** (2018). Plant epigenetics: basic research and expectations for crop applications. In *Progress in Food Biotechnology* (pp. 1-13). Bentham Science. <https://doi.org/10.2174/9781681087412118040012>

B. Refereed Publications

1. **Kataya, A. R. A.**, Nascimento, J. R. S., Xu, C., Garneau, M. G., Koley, S., Kimberlin, A., Mooney, B. P., Xu, D., Koo, A. J., Allen, D. K., Bates, P. D., & Thelen, J. J. (2025). Comparative omics reveals unanticipated metabolic rearrangements to deregulated fatty acid synthesis that limit oil accumulation. *Journal of Proteome Research*. <https://doi.org/10.1021/acs.jproteome.4c00947>. SJR: Q1, IF: 5.3
2. Al-Qahtani, W. H., Abdel-Maksoud, M. A., Saleh, I. A., Zomot, N., Almunqedhi, B. M., **Kataya, A. R. A.**, Fahad, S., & Ali, S. (2024). Effects of Phosphorus Sources on Arsenic Stress Mitigation in Wheat via Proline and Antioxidant Pathways. *Journal of Plant Growth Regulation*, 1–18. <https://doi.org/10.1007/s00344-024-11490-w>. SJR: Q1, IF: 3.9
3. Ahsan, N., **Kataya, A. R. A.**, Rao, S. P., Swatek, K. N., Wilson, R. S., Meyer, L. J., TovarMendez, A., Stevenson, S., Fedosejevs, E. T., Maszkowska, J., Dobrowolska, G., Yao, Q., Xu, D., & Thelen, J. J. (2024). Arabidopsis thaliana CPK/SnRK superfamily kinase-client 4 signaling network. *Plants (MDPI)*, 13(11), 1481. <https://doi.org/10.3390/plants13111481>. SJR: Q1, IF: 4.6
4. Kiani, B. H., Sagheer, A., Erum, S., ul Haque, M. I., Okla, M. K., **Kataya, A. R. A.**, & Al-Qahtani, W. H., Abdel-Maksoud, M. A. (2023). Bio-control of rice seed-associated fungal pathogens using green synthesis approaches. *Foodborne Pathogens and Disease*. <https://doi.org/10.1089/fpd.2023.0083>. SJR: Q1, IF: 2.8
5. Ahmad, B., Yousafzai, A. M., Khan, N., Aufy, M., Al Abdulsalam, K. A., **Kataya, A. R.**, & Abdel-Maksoud, M. A. (2023). Dose-dependent anti-hyperglycemic & anti-dyslipidemic potential of aqueous leaves extract of *Typha elephantina* in-vivo and in-vitro. *Saudi Journal of Biological Sciences*, 30(12), 103868. <https://doi.org/10.1016/j.sjbs.2023.103868>. SJR: Q1, IF: 4.4
6. Elshobaky, A., Lillo, C., Hodén, K. P., & **Kataya, A. R. A.** (2023). Protein–protein interactions and quantitative phosphoproteomic analysis reveal potential mitochondrial substrates of protein phosphatase 2A-B ζ holoenzyme. *Plants (MDPI)*, 12(13), 2586. <https://doi.org/10.3390/plants12132586>. SJR: Q1, IF: 4.6
7. **Kataya, A.**, Fedosejevs, E., & Ye, Y. (2023). Editorial: On post-translational mechanisms involved in regulating peroxisome biogenesis, functions, and organelle-crosstalk. *Frontiers in Cell and Developmental Biology, Section Signaling*. <https://doi.org/10.3389/fcell.2023.1136992>. SJR: Q1, IF: 6.3

8. **Kataya, A.**, Mitchell, S., Etman, R., Samuel, M., & Moorhead, G. B. (2022). Peroxisomal protein phosphatase PP2A-B' theta interacts with and piggybacks SINA-like 10 E3 ligase into peroxisomes. *Biochemical and Biophysical Research Communications*. <https://doi.org/10.1016/j.bbrc.2022.12.083>. SJR: Q1, IF: 3.5
9. **Kataya, A. R. A.**, Gautam, N., Jamshed, M., Muench, D. G., Samuel, M. A., & Moorhead, G. B. (2022). Identification of Arabidopsis protein kinases that harbor functional type 1 peroxisomal targeting signals. *Frontiers in Cell and Developmental Biology, Section Signaling*. <https://doi.org/10.3389/fcell.2022.745883>. SJR: Q1, IF: 6.3
10. **Kataya, A. R. A.**, Elshobaky, A., Heidari, B., Feyissa, D., Thelen, J. J., & Lillo, C. (2020). Multi-targeted trehalose-6-phosphate phosphatase I harbors a novel peroxisomal targeting signal type 1 and is essential for flowering and development. *Planta*, 251, 98. <https://doi.org/10.1007/s00425-020-03389-z>. SJR: Q1, IF: 4.3
11. **Kataya, A. R. A.**, Muench, D. G., & Moorhead, G. B. (2019). A framework to investigate peroxisomal protein phosphorylation in Arabidopsis. *Trends in Plant Science*, 24(4), 366-381. <https://doi.org/10.1016/j.tplants.2018.12.002>. SJR: Q1, IF: 20.5
12. White-Gloria, C., Marritt, K., Johnson, J., **Kataya, A. R. A.**, Vahab, A., & Moorhead, G. B. (2018). Protein kinases and phosphatases of the plastid and their potential role in starch metabolism. *Frontiers in Plant Science*, 9, 1032. <https://doi.org/10.3389/fpls.2018.01032>. SJR: Q1, IF: 5.6
13. Creighton, M. T., Koltun, A., **Kataya, A. R. A.**, Grødem, J. M., Averkina, I. O., Heidari, B., & Lillo, C. (2017). Methylation of protein phosphatase 2A – influence of regulators and environmental stress factors. *Plant, Cell & Environment*, 40, 2347–2358. <https://doi.org/10.1111/pce.13038>. SJR: Q1, IF: 6.3
14. **Kataya, A.R.A.**, Creighton, M.T., Napitupulu, T.P., Sætre, C., Ruoff, P., & Lillo, C. (2017). Platinum Sensitive 2 Like impacts growth, root morphology, seed set, and stress responses. *PLOS One*, 12(7), e0180478. <https://doi.org/10.1371/journal.pone.0180478>. SJR: Q1 / IF: 3.7
15. Creighton, M.T., Sanmartin, M., **Kataya, A.R.A.**, Sanchez-Serrano, J.J., & Lillo, C. (2017). Light regulation of nitrate reductase by catalytic subunits of protein phosphatase 2A. *Planta*. <https://doi.org/10.1007/s00425-017-2726-4>. SJR: Q1 / IF: 4.3
16. **Kataya, A.R.A.**, Schei, E., & Lillo, C. (2015). Towards understanding peroxisomal phosphoregulation in Arabidopsis thaliana. *Planta*, 243(3), 699-717. <https://doi.org/10.1007/s00425-015-2439-5>. SJR: Q1 / IF: 4.3
17. **Kataya, A.R.A.**, Heidari, B., & Lillo, C. (2015). Protein phosphatase 2A regulatory subunits affecting plant innate immunity, energy metabolism, and flowering time - joint functions among B' subfamily members. *Plant Signaling & Behavior*. <https://doi.org/10.1080/15592324.2015.1026024>. SJR: Q2 / IF: 2.8
18. **Kataya, A.R.A.**, Schei, E., & Lillo, C. (2015). MAPK phosphatase 1 harbors a novel PTS1 and targets peroxisomes upon stressful conditions. *Journal of Plant Physiology*, 179, 12-20. <https://doi.org/10.1016/j.jplph.2015.03.002>. SJR: Q1 / IF: 4.3
19. **Kataya, A.R.A.**, Heidari, B., Hagen, L., Kommedal, R., Slupphaug, G., & Lillo, C. (2015). Protein phosphatase 2A holoenzyme is targeted to peroxisomes by piggybacking and positively affects peroxisomal beta-oxidation. *Plant Physiology*, 167, 493-506. <https://doi.org/10.1104/pp.114.254409>. SJR: Q1 / IF: 8
20. Lillo, C., **Kataya, A.R.A.**, Heidari, B., Creighton, M., Nemie-Feyissa, D., Ginbot, Z., & Jonassen, E.M. (2014). Protein phosphatases PP2A, PP4, and PP6 – mediators and regulators in development and in responses to environmental cues. *Plant Cell and Environment*. <https://doi.org/10.1111/pce.12364>. SJR: Q1 / IF: 6.4

21. Chowdhary, G., **Kataya, A.R.A.**, Lingner, T., & Reumann, S. (2012). Non-canonical peroxisome targeting signals: identification of novel PTS1 tripeptides and characterization of enhancer elements by computational permutation analysis. *BMC Plant Biology*, 12, 142. <https://doi.org/10.1186/1471-2229-12-142>. SJR: Q1 / IF: 6.3
22. Lingner, T., **Kataya, A.R.A.**, & Reumann, S. (2012). Experimental and statistical post-validation of positive example EST sequences carrying peroxisome targeting signals type 1 (PTS1). *Plant Signaling & Behavior*, 7(2), 263-268. <https://doi.org/10.4161/psb.18720>. SJR: Q2 / IF: 2.8
23. Lingner, T., **Kataya, A.R.A.**, Antonicelli, G.E., Benichou, A., Nilssen, K., Chen, X.Y., Siemsen, T., Morgenstern, B., Meinicke, P., & Reumann, S. (2011). Identification of novel plant peroxisomal targeting signals by a combination of machine learning methods and in vivo subcellular targeting analyses. *Plant Cell*, 23, 1556-1572. <https://doi.org/10.1105/tpc.111.084095>. SJR: Q1 / IF: 12
24. **Kataya, A.R.A.** & Reumann, S. (2009). Arabidopsis glutathione reductase 1 is dually targeted to peroxisomes and the cytosol. *Plant Signaling & Behavior*, 5(2), 171-175. <https://doi.org/10.4161/psb.5.2.10527>. SJR: Q2 / IF: 2.8
25. **Kataya, A.R.A.**, Suliman, M.N.S., Kalantidis, K., & Livieratos, I.C. (2009). Cucurbit yellow stunting disorder virus p25 is a suppressor of post-transcriptional gene silencing. *Virus Research*, 145, 48-53. <https://doi.org/10.1016/j.virusres.2009.06.010>. SJR: Q1 / IF: 5
26. **Kataya, A.R.A.**, Stavridou, E., Farhan, K., & Livieratos, I. (2008). Nucleotide sequence analysis and detection of a Greek isolate of Tomato chlorosis virus. *Plant Pathology*, 57, 819-824. <https://doi.org/10.1111/j.1365-3059.2008.01845.x>. SJR: Q1 / IF: 2.7

C. Conferences

1. **Amr Kataya**, Greg Moorhead, and Marcus Samuel. Regulation of fatty acid β -oxidation: a potential target for biotechnology and agriculture applications. Plant Biology 2022, Portland, Oregon, the USA (9-13 July 2022) (Oral Presentation)
2. **Amr Kataya**, Sierra Mitchell, Marcus Samuel, and Greg Moorhead. An emerging Peroxisomal Phospho-Regulatory Network in Arabidopsis thaliana. PEROxisome Interaction and Communication online conference (15-17 March 2022) (Oral Presentation).
3. Thu Nguyen, Thanh-Hao Nguyen, **Amr Kataya**, Sigrun Reumann. A peroxisomal sub-family of Arabidopsis NDR1 homologs: Molecular characterization of a novel targeting pathway and the proteins' functions in plant immunity. PEROxisome Interaction and Communication online conference (15-17 March 2022).
4. **Amr R. A. Kataya**, Sierra Mitchell, Marcus Samuel, Greg Moorhead. Identifying the substrates of the peroxisomal PP2A holoenzyme. CSPB/WRM 2021 Virtual Meeting, Canada. (Oral presentation)
5. **Amr R. A. Kataya**, Sierra Mitchell, Greg Moorhead. Construction of a Peroxisomal Phospho-Regulatory Network. Biological Sciences Graduate Symposium 2021 Virtual Meeting, University of Calgary, Canada. (Oral presentation)
6. **Amr R. A. Kataya**, Devang Mehta, Nitija Gautam, Laurent Brechenmacher, R. Glen Uhrig, and Greg Moorhead. The role of phosphorylation in regulating peroxisome-oil bodies crosstalk during germination. CSPB/SCBV 2020 Virtual Meeting, Canada. (Oral presentation)

7. **Amr R. A. Kataya**, Douglas G. Muench, and Greg B Moorhead. Post-translational modification by phosphorylation in Arabidopsis peroxisomes: findings and putative impacts. Open Peroxisome meeting 2018, Groningen, Netherlands (25-26 October 2018). (Poster)
8. **Amr R. A. Kataya**, Greg Moorhead. Identifying peroxisomal phospho-substrates and building a framework to study peroxisomal phospho-regulation. PlantBiology2018, Montreal, Canada (13-18 July 2018). (Poster)
9. **Amr R. A. Kataya**. Constructing knowledge framework to study peroxisomal phosphoregulation. 2018 Keystone Symposia Conference A4: Plant Signaling: Molecular Pathways and Network Integration, Tahoe City, California, USA, 21-25 January 2018. (Poster)
10. Christian Falter, Delphine Crape, A.Schatt, **Amr R. A. Kataya**, Sigrun Reumann. Characterization of Arabidopsis thaliana immune-associated nucleotide-binding protein 12 (AtIAN12). Botanikertagung 2017 (Plant Research in a Changing World), Kiel, Germany (17-21 September 2017). (Poster)
11. Nguyen Binh Anh Thu, C. Falter, **Amr R. A. Kataya**, Sigrun Reumann. Subcellular targeting and expression analyses of peroxisomal NDR1 homologs under abiotic and biotic stress conditions. Botanikertagung 2017 (Plant Research in a Changing World), Kiel, Germany (17-21 September 2017)
12. Averkina, Irina Orestovna; Creighton, Maria Terese; Nemie-Feyissa, Dugassa; **Amr R. A. Kataya**; Lillo, Cathrine (2017). Protein phosphatase 2A activity in various Arabidopsis mutants. BioCat; 2017-06-12 - 2017-06-14.
13. **Amr R. A. Kataya**, Ahmed Elshobaky, Edit Schei, Cathrine Lillo. Trehalose-6-phosphate phosphatase I harbors a novel peroxisomal signal and is implicated in abiotic stress and development. ICAR: Arabidopsis Research in 2017 Beyond, St. Louis, MO, USA (19-23 June 2017) (Poster)
14. Ahmed Elshobaky, Cathrine Lillo, **Amr R. A. Kataya**. Investigating the role of PP2A-B' in regulating energy metabolism in mitochondria. NorPlantBio, Hamar, Norway (21-22 June 2017)
15. **Amr R. A. Kataya**. Organelle-mediated reversible phosphorylation: players identification and functional implications. Norwegian Plant Biology 2016 in Trondheim, Norway (15-17 June 2016). (Oral presentation)
16. **Amr R. A. Kataya**, Edit Schei, and Cathrine Lillo. Peroxisomal protein phosphatases: identifications and biotic stress implications. Plant Biotic Stresses Resistance Mechanism II, Vienna, Austria (2-4 July 2015). (Oral present.)
17. Mallesham Bulle, **Amr R. A., Kataya**, Behzad Heidari, and Cathrine Lillo. Investigating protein phosphatase 2A regulatory subunits: from subcellular localization to abiotic stress implications. Plant Abiotic Stress Tolerance III, Vienna, Austria (29 June-1 July 2015). (Poster)
18. Delphine Crape, Kirsti Sørhagen, **Amr R. A. Kataya**, and Sigrun Reumann. Pathogen-inducible peroxisomal proteins mediating disease resistance. Open European Peroxisome meeting, Neuss, Germany (9-11 September 2014).
19. Piotr Lisik, **Amr R. A. Kataya**, Sigrun Reumann. Survival protein SurE-like phosphatase/nucleotidase- novel stress-responsive protein of peroxisomes. Open European Peroxisome meeting, Neuss, Germany (9-11 September 2014)
20. Kirsti Sørhagen, **Amr R. A. Kataya**, Chimuka Mwaanga, and Sigrun Reumann. The role of peroxisomes in plant immunity. Open European Peroxisome meeting, Neuss, Germany (9-11 September 2014)

21. Marit Larsen, **Amr R. A. Kataya**, Chimuka Mwaanga, Kirsti Sørhagen, and Sigrun Reumann. Peroxisome targeting of alternatively spliced pathogen defense proteins. PlantBio, National Plant Biology Conference Tromsø, Norway (7-8 November 2013).
22. **Amr R. A. Kataya**, Behzad Heidari, and Cathrine Lillo. B' regulatory subunit of protein phosphatase 2a is involved in peroxisomal fatty acid -oxidation, flowering, and plant innate immunity. SPS conference: plant signaling in a changing environment, Evry, France (4-6 July 2013). (Poster)
23. **Amr R. A. Kataya**, Chimuka Mwaanga, and S. Reumann. The role of peroxisome-targeted NDR1/HIN1 Like (NHL) proteins in pathogen defence. International conference on plant peroxisome research, Minneapolis, Minnesota, USA 21-25 August 2011, SPPS, Stavanger, Norway (11 August 2011). (Poster)
24. **Amr R. A. Kataya** and Sigrun Reumann. Identification of novel peroxisomal defense-related proteins. 2nd annual NorMIC meeting, Stavanger, Norway (12/11-13/11 2009). (Oral presentation)
25. Gerardo E. Antonicelli, Thomas Lingner, **Amr R. A. Kataya**, Aline Benichou, Peter Meinicke, and Sigrun Reumann. Development of SVM-based prediction algorithms for plant peroxisomal PTS1 proteins by a novel iterative approach integrating computational science and experimental cell biology. International workshop on plant peroxisomes. Edinburgh, Scotland, UK (30/6 2009).
26. **Amr R. A. Kataya** and Sigrun Reumann. Plant peroxisomal detoxification reactions mediated by glutathione dependent enzymes. 20th ICAR, Edinburgh, Scotland, UK (30/6-4/7 2009). (Poster)
27. **Amr R. A. Kataya**, Kalantidis, K. Livieratos, I. C. Molecular studies on members of the genus Crinivirus. 14th Panhellenic Phytopathological Conference, 34pp, Nafplion, Peloponnesus, Greece 7-10 October 2008.

D. In-prep and to be submitted manuscripts & Patent

1. High-Resolution Transcriptome Mapping Reveals Dynamic Regulation of Primary Metabolism and Signaling through the Wheat Circadian Rhythm (Agriculture Canada)
2. Truncation of wheat baby boom enhance transformation rate of wheat (Agriculture Canada)
3. Cisgenesis of two leaf rust resistance genes (Agriculture Canada)
4. Amr Kataya, Pankaj Purwar and Marcus Samuel. Method of modifying fatty acid profile of the canola oil. Patent is ready and to be submitted by Farmers Legacy Biotech
5. Amr Kataya, Rasha Etman, Pankaj Purwar and Marcus Samuel. Seed-specific overexpression of two and six heterologous thioesterases and acyl transferases yields comparable production of saturated fatty acids in arabidopsis and canola seeds. To be submitted by Prof. Samuel
6. Amr R. A. Kataya, Marcus A. Samuel,...and Greg B. Moorhead. Multiomics and functional approaches help to identify a role for phosphorylation for peroxisome-oil body crosstalk (Young Talent grant)
7. Amr Kataya,...Quantitative TMT-phosphoproteomics and yeast PP interactions give insights on the role of POL-like phosphatase 3 in peroxisomes (young Talent grant)

8. Amr Kataya,... Altering phosphorylation status of the peroxisomal PEX14 membrane protein modulates pex14-knockout associated phenotypes while impacting seed coat pigmentation (Young Talent grant)
9. Amr Kataya,... Quantitative label-free phosphoproteomics analysis of the pex14 knockout mutant reveals impact on cellular phosphorylation status (Young Talent grant)
10. Amr Kataya, Jose J Sánchez-Serrano, Cathrine Lillo. Quantitative TMT-phosphoproteomics analysis of the double mutant pp2a.c2c5 unveils insights into potential PP2A substrates (Young Talent grant)
11. Amr Kataya,... Discovery of beta-oxidation enzymes as interacting partners of the B^{theta} subunit of protein phosphatase 2A (Young Talent grant)
12. Amr Kataya,... Greg Moorhead. Activating beta-oxidation leads to enhancing peroxule dynamics and plant development (Young Talent grant)
13. Behzad Heidari, Cathrine Lillo, Amr R. A. Kataya. Identifying the regulatory role of trehalose-6-phosphate phosphatase in flowering time and nitrate reductase activity. (Young Talent grant)

E. Grants and Proposals

E1. As Principal Investigator

Project 1 **Title of Project:** Signalling via reversible phosphorylation in organelles
Agency/Company: The Research Council of Norway
Total Dollar Amount: 860,240
Role: PI
Collaborators: Cathrine Lillo, Greg Moorhead, Harvey Miller
Period of Contract: 2/1/2016 – 7/30/2019
Candidate's Share: ~100% (\$860K)

Project 2 **Title of Project:** Investigating protein phosphatases as part of the
Young talent PI project
Agency/Company: The Research Council of Norway
Total Dollar Amount: 60K
Role: PI
Collaborators: Cathrine Lillo, Greg Moorhead
Period of Contract: 8/1/2017 – 4/14/2019
Candidate's Share: ~100% (\$60K)

E2. As Senior Personnel or Contributor

2022 Development of coconut oil-like seed oil through heterologous
expression of thioesterases in Arabidopsis
Mitacs_Funded (Canada/[Verifier: Prof. M. Samuel/FLB])

2021 Employing heterologous thioesterases and acyl transferases
expression for the development of coconut-like canola seed-oil
Mitacs_Funded (Canada/ [Verifier: Prof. M. Samuel/FLB])

E3. Pending Proposals

Development of a higher α -linolenic acid (ALA)-canola seed oil, which will be an important value-added trait for the Canadian canola industry, CO-PI

Drafted (Canada/ [Verifier: Prof. M. Samuel])

Regulating Peroxisome Biogenesis and Fatty Acid β -oxidation by Protein Phosphorylation, PI

Drafted ERC Consolidator Grant

E4. Proposals Submitted but Not Funded

2018

Title of Project: Investigating Peroxisomal Phospho-Regulation, Researcher Project/Forskerprosjekt - FRIMEDBIO

Agency/Company: The Research Council of Norway

Total Amount: 10 million NOK

Role: PI

Collaborators: Cathrine Lillo, Greg Moorhead

F. Other Scholarly and Creative Accomplishments

Editorial role	07/2021 – 02/2023	Guest Associate Editor Frontier in Cell and Developmental Biology Research Topic: Post-Translational Mechanisms Involved in Regulating Peroxisome Biogenesis, Functions and Organelle-Crosstalk
Editorial role	11/2022 – 12/2023	Guest Associate Editor Plants/MDPI Research Topic: Post-translational mechanisms implicated in stress-related responses and plant-pathogen interactions.
Grant reviewer	2022 – 2023 Poland	National Science Centre Poland Panel NZ1 (Molecular Biology, structural Biology, biotechnology)
Session chair	2021	CSPB-WRM/Canada Chair for Concurrent session 2: Brassica systems and Judge for students' oral Presentations
Session Chair	2022	Plant Biology 2022/Portland-USA Chair of the concurrent session "Novel applications of Biochemistry and Metabolism" and Judge for students' poster presentations
Reviewer Editor/Reviewer		Journal of Experimental Botany Plants Journal/MDPI Frontiers in cell and developmental biology Frontiers in plant science Springer-Plant Growth Regulation Plant Cell Reports Journal of Integrative Plant Biology

Acta Biochimica Polonica
 Physiologia Plantarum

Invited Speaker	2021	1- Dept. of Agroecology, Aarhus University, Forsøgsvej 1
	2019	2- Cell Biology Dep.t, Medical School, University of Alberta
	2018	3- Plant Department, Michigan State University

VI. Teaching

A. Courses Taught

1-	BIOL 453- Plants in their Environment	Winter 2023, University of Calgary, Canada	~ 100 students
2-	PLBI 403 - Plant Physiology	Fall 2023, University of Calgary, Canada	72 students
3-	PLBI 543 - Plant Signaling and Development	Winter 2023, University of Calgary, Canada	12 students

B. Individual Student Guidance & Supervision

Master Students	2016-2017	<ol style="list-style-type: none"> 1. Masters project entitled Investigating DNA free genome editing in Arabidopsis with pre-assembled CRISPR-CAS9 ribonucleoproteins and transcripts. 2. Masters project entitled Targeted mutagenesis of peroxisomal protein phosphatases using CRISPR-CAS9 approach. 3. Masters project entitled Employing CRISPR-CAS9 approach for DNA free editing of Solanum Lycopersicum genome with pre-assembled CRISPRCAS9
Postdoctoral	2016-2018	Dr. El-Shobaky "studying the role of mitochondrial PP2A complex in energy metabolism" and research assistant (M. Harris) at University of Stavanger, Norway
Techs	2018-2019	Two research assistants "Dr. Sayantan Banerjee" and "Nitija Gautam" working on protein-protein interactions of protein phosphatase 2A and reverse genetics of peroxisomal protein kinases, respectively at UofC, Canada
Biotech-Intern	03/2022 – 11/2022 Calgary, Canada	Farmers Legacy Biotech/University of Calgary Industry partner (Farmers Legacy Biotech)-internship for Plant Biologist "Rasha Etman" to establish transformation of heterologous expression in Arabidopsis and canola plants at UofC, Canada.

C. Co-Supervision & Mentoring

Ph.D. Students	2017-2021	PhD by Irina Averkina entitled Protein phosphatase 2A as a regulator and mediator of beneficial plant-microbe interactions
Master Students	2016-2017	1. Masters project by Toga Pangihotan Napitupulu in a project entitled protein phosphatase 4 reverse genetics: Investigation of the Physiological Function of Protein Phosphatase 4 (PP4) in Arabidopsis thaliana
	2013-2014	2. Masters project by Edit Schei entitled Identification of peroxisomal phosphatases using bioinformatics and in-vivo subcellular localization.
	2013-2014	3. Masters project by Maria Terese Creighton, University of Stavanger, entitled Protein phosphatase 2A (PP2A) phosphatase activator (PTPA) in Arabidopsis thaliana.
	2010-2011	4. Masters project by Chimuka Mwaanga, University of Stavanger, entitled Identification and expression analysis of peroxisome-targeted defense proteins mediating innate immunity in the model plant Arabidopsis thaliana.
Undergraduate	2017-2018	1. Mentoring two bachelor's projects at the UofC, Calgary/Canada in a project entitled identifications of chloroplast phosphatase substrates
	2008-2009	2. Three undergraduate students in projects related to the identification of new peroxisomal proteins using in vivo verification studies.
Postdoctoral	2013-2014	1. Researcher grant-IS-MOBIL by Malleshm Bulle in a project entitled functions of regulatory B" subunits of protein phosphatase 2A. 2. Postdoc grant research by Zekarias Ginbot entitled Investigating the role of protein phosphatase-4 in Arabidopsis thaliana

C. Educational Certificates and Workshops

1. **Certificate in University Teaching and Learning** from the Taylor Institute for Teaching and Learning, University of Calgary, Canada. This is equivalent to one year studying teaching and learning strategies.
2. Certificate in Theories and Issues in Postsecondary Teaching and Learning, Canada
3. Certificate in Developing Your Teaching Dossier, Canada
4. Certificate in Learning Spaces and Digital Pedagogy Program, Canada
5. Certificate in Emerging Teachers Development, Canada
6. Certificate in SoTL Foundations Program, Canada

VII. Courses

04/2020	Software Carpentry: R Workshop
Columbia, United States	University of Missouri
07/2019	Proteomics Bioinformatics course
Cambridge, United Kingdom	World Genome Campuses (1 week)
03/2018	Research Leadership
Oslo, Norway	Research Council of Norway
06/2017	Data Carpentry workshop
St. Louis, MO, USA	Danforth Plant Science Center
06/2017	ATAC-seq workshop
St. Louis, MO, USA	Danforth Plant Science Center
04/2017	Dissemination of research to public
Oslo, Norway	Research Council of Norway
05/2014	Bioinformatics of Proteomics (1 week)
Bergen, Norway	BioProt-Bergen, Proteomics Unit, University of Bergen
02/2013	Radiation and radiation safety
Stavanger, Norway	University of Stavanger
03/2011	Presentation skills
Stavanger, Norway	University of Stavanger

VIII. References

+1 (403) 220-6238,
moorhead@ucalgary.ca

+ 1 573-884-1325,
thelenj@missouri.edu

+47 51831875,
cathrine.lillo@uis.no

+1 403-360-5207,
john.laurie@agr.gc.ca

+1(517) 432-4620,
huji@msu.edu

+1 (403) 210-6459,
msamuel@ucalgary.ca

+1 (403) 220-7935,
dmuench@ucalgary.ca

+1 403-393-5337,
andre.laroche@AGR.GC.CA

Prof. Gregory Moorhead

University of Calgary
Collaborator (2017-2019)-PI (2020-2023)

Prof. Jay Thelen

University of Missouri-Columbia, Missouri, USA
PI (2019-2020)

Prof. Cathrine Lillo

University of Stavanger
PI (2012-2016)

Dr. John Laurie

Agriculture and Agri-Food Canada (AAFC)
PI (Oct. 2023-now)

Prof. Jianping Hu

MSU-DOE, East Lansing, MI, USA
PI (2010)-Collaborator (2019)

Prof. Marcus Samuel

University of Calgary
Collaborator (2018-2019)-PI (2021-2023)

Prof. Douglas Muench

University of Calgary
Collaborator (2018-2023)

Dr. Andre Laroche

Agriculture and Agri-food Canada

Dec 04, 2025

jcsedbr@ilstu.edu,
+1 (309) 438-3374

Project collaborator (Oct. 2023-now)
Prof. John C. Sedbrook
Illinois State University
Collaborator (2023-2024)