



Yonghua Li-Beisson (DR1, CEA)

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Nationality: French; Language: Chinese, English and French

URL for lab homepage: <https://www.cite-des-energies.fr/biam/recherche/ebmp/>

Education:

2002: PhD thesis, Lab of Professor Colin Ratledge, University of Hull, England

2012: HDR (Habilitation à Diriger la Recherche), Aix Marseille Université, France

Positions held:

2018 - present: Head of the team “Environment, Bioenergy, Microalgae and Plants” (EBMP)

2018 - present: Head of the platform “HelioBiotec”

2009 - present: Principal investigator, CEA Cadarache, France

2008-2009 Associate Researcher, UMR5200, CNRS, Bordeaux, France

2003–2008 Postdoc Fellow, Lab of Professor John Ohlrogge, Michigan State University, USA

2002-2003 Postdoc Fellow, Department of Plant Science, The University of Oxford, UK

Scientific and Administrative Responsibilities

Elected member of the French National Scientific Committee for Research section 25: “

Biologie intégrative des organismes photosynthétiques et des microorganismes associés” (2025-)

Member of the Editorial Board:

Progress in Lipid Research (since 2025 -)

Advisory board: New Phytologist (2019 -)

Plant Cell (since 2017 -)

Plant Cell and Physiology (since 2016 -)

Host for International Conferences:

- Elected Chair for the Gordon conference on Plant Lipids (2023, Texas)
- Co-host for the French Lipidomique Meeting - GERLI (St Maximin, 2018)
- Co-host for European Symposium on Plant Lipids - ESPL (Marseille, 2019)

Member of the Scientific Committee for International Conferences:

- International Symposium on Plant Lipids (ISPL) (since 2012 – once every 2 years)
- European Symposium on Plant Lipid (ESPL) (since 2017 - once every 2 years)
- Algal Biomass and Biofuel (AlgalBBB): Seattle (2018); online (2020)
- International Solar Fuel Conference (ISF) (since 2021 -; once every 2 years)

Member of the Scientific Committee for the French Lipidomics Group - GERLI (since 2015-)

Member of the Scientific Committee for the French Groupe for the study of membranes - GEM (since 2023-)

Member of the national HCEREs evaluation committee for:

- PCV/IRIG, Grenoble (2020); UMR5200-University Bordeaux (2021); Ifmer, Nantes (2021)

Member of the Scientific Advisory Board (SAB):

- UMR5200-University Bordeaux (2020; 2025)
- Instituto de Bioquímica Vegetal y Fotosíntesis (IBVF) – Seville, Spain (since 2024 -)

Member of the recruitment committee: INRAE (chercheur) 2017; Université Lyon (Professor) 2025

Reviewing for: Science, PNAS, Cell, Nature Genetics, Nature Communication, Development, Plos Genetics, Nature plant, Plant cell, New phytologist, Plant Physiology, The Plant Journal, Plant Physiology and Biochemistry, Progress in Lipid Research, etc

Expert for the evaluation of research grants: NSF-US; Netherland science foundation; DFG grant; Israel national grant; University of Hong Kong; The Israel-US bilateral funds; etc

Member of the jury:

Jury HDR:

- 2017- Juliette JOUHET (Grenoble)
- 2018 - Lionel ULMANN (Université Le Mans)
- 2019 - Florence CORRELEU (Bordeaux)
- 2019 - Maeva SUBILEAU (Montpellier)
- 2022 - Sabine D’Andrea (Versailles)
- 2023 - Amélie Bernard (Bordeaux)
- 2023 - Robert Van Lis (Narbonne)
- 2024 - Alberto Amato (Grenoble)
- 2025 – Pierre Crozet (Sorbonne)
- 2025 – Claire Brehelin (Bordeaux)

Jury PhD These:

- 2017- Glenn Philippe (Nantes); Theo VEAUDOR (CEA Saclay); Claire VILLETTE (Strasbourg)
- 2018- Antoine DELBRUT (Montpellier); Josselin LUPETTE (Grenoble); Milène NITENBERG (Grenoble); Seungjun SHIN (Postech South Korea); Kamil BAKOWSKI (Copenhagen); Harchouni SEDDIK (AMU); Sylvain LAURENT (Lille)
- 2019- Rémi WILLAMME (Belgium); Karla MENESES MONTERO (Montpellier); Nicolas VIGNERON (Toulouse)
- 2020- Francois SEVESTRE (Lille); Moulay SAHAKA (Marseille); Remy MARCELLIN-GROS (Banyuls); Duchesse MBADINGA (Toulouse)
- 2021- Adeline STEWART (PCV, Grenoble); Seung SHIN (PosTEC, Korea); Wendi Levasseur (Saclay, Paris); Julien Lacroux (LBE, INRAE, Narbornne); Gilles Defrel (INSA, Toulouse)
- 2022- Sami Kazaz (IJBP, Versailles); Thibault Geneste (IJBP, Versailles); Yizhong YUAN (PCV, Grenoble); Nolwenn Guéguen (PCV, Grenoble); Amelie Ducloy (IJBP, Versailles)
- 2023 – Clemence Dupont-Thibert (Grenoble) ; Damien Le Moigne (Grenoble) ; Marine Vincent (Saclay) ; Amandyne Linares-Maurizi (Montpellier) ; Romain Perdoux (Marseille) ; Victor Murison (Le Mans) ; Vincent Nieto (Lyon)
- 2024 - Sarah Salomon (CEA Grenoble)
- 2025 – Zongze Wu (Lyon); Lou Lambert (IBPC- Paris); Chems Amari (PCV-Grenoble); Eliora Israelievitch (IBPC Paris); Yannick Sérès (PCV-Grenoble); Abdou Akim Bello (IPMC, Université Cote-d ’Azur)

Member of the PhD follow-up committee (CSI): Josselin Lupette (PCV, Grenoble); Yizhong Yuan (PCV Grenoble); Damien LeMoigne (PCV Grenoble); Victor Murison (Univ. Le Mans); Maria JIMENEZ PALMA (PCV-DRT, Grenoble); Yannick SERES (PCV Grenoble) ; Mariette Gibier (Univ. Sorbonne) ; Matta CARLETTI (PCV, Grenoble) ; Arthur LOUP (Univ. Paris-Sacaly)

Supervision and teaching :

- **PhD students trained:** (*their current positions*)
 - o Mai Nguyen (2010-2013): *postdoc (after a long maternity break)*
 - o Caroline Cagnon (2014-2017) : *Engineer in industry*
 - o Hugh Goold (2015-2017) : *Researcher at Macquarie University, Australia*
 - o Yuanxue Liang (2016-2019) : *Professor at Jiangsu University, China*
 - o Ismael Torres-Romero (2016-2019) : *Researcher, Switzerland*
 - o Alexandre Six (2021-2024) : *Postdoc, University of Stanford, US*
 - o Ousmane Dao (2019-2024) : *Postdoc, University of York, UK*
 - o Carla Blot (2022 -);
 - o Mattia Cirimelle (2024 -)
- **Postdoc supervised:**
 - o Fantao Kong (2014-2017): *Professor at Dalian University of Technology, China*
 - o Zhongze Li (2021-2023): *Postdoc at CNRS-St Etienne, France*
 - o Minjae Kim (2021-2024): *Professor at Korea Institute of Ocean Science & Technology (KIOST), South Korea*
- **Engineer supervised on industrial grants:**
 - o Boris Mirabella (2014-2016) : *Engineer at Industry Marseille, France*
 - o Serena Testi (2019-2022) : *Engineer at Roscoff, France*
 - o Alexandre Six (2024-2025) : *Postdoc, University of Stanford, US*
- **Master students trained:** Boris Fessler, Caroline Cagnon, Ivan Fergusson, Maxime Bastide
- **Teaching:**
 - o Teach « Lipid Metabolism and Lipid Biotechnology » 4 h per year: in the module « **Plants, Energy and Light** » for Master level at the University of Aix Marseille, France (since 2018-)
 - o Teach “Microalgae as a sustainable source of biomass” Polytec Marseille (2h per year since 2022 -)
 - o Teach “Microalgae and Biofuel” SeaTec, Toulon (2h per year)
 - o “Microalgae and lipid metabolism” Wuhan-AMU joint university (4h per year; since 2022 -)

Publications (peer-reviewed)

*: corresponding author

Published under either the name of Li or Li-Beisson

Research areas and models: Microalgae; Lipid metabolism; Lipid droplet; Starch; Photosynthesis; Plants; Carbon metabolism

Total number: >100; h-factor: 47 (source: web of science); citation >12000

2025:

1. Six A, Chambonnière P, Alvarez P, Fon-Sing S, Lancelon-Pin C, Putaux JL, Sassi JF, **Li-Beisson Y**, Fleury G. (2026) Microalgae, sunlight, and starch: low cell concentration is optimal for outdoor production under nutrient stress. *Bioresour Technol.* 2025 Dec 24;443:133840. doi: 10.1016/j.biortech.2025.133840.

2. **Li-Beisson Y***, Dao O, Kim M. (2025) How microalgae conserve carbon. *Trends Plant Sci.* doi: 10.1016/j.tplants.2025.11.016.
3. Blot C, Bertrand M, Siponen M, **Li-Beisson Y*** (2025) Lipid droplet on the move: remodeling, trafficking and interaction with other organelles. *Journal of Experimental Botany* doi: 10.1093/jxb/eraf501
4. Dao O, Bertrand M, Alseekh S, Veillet F, Auroy P, Nguyen PC, Légeret B, Epting V, Morin A, Cuiné S, Monteil CL, Mackinder LCM, Burlacot A, Krieger-Liszkay A, Weber APM, Fernie AR, Peltier G, **Li-Beisson Y*** (2025) The green algae CO₂ concentrating mechanism and photorespiration jointly operate during acclimation to low CO₂. *Nat Commun.* 17;16(1):5296. doi: 10.1038/s41467-025-60525-7.
5. Zheng J, Wei H, Shi J, Yu L, Luo M, Li Y, **Li-Beisson Y**, Liu J. (2025) A histone demethylase is involved in regulating the transcription factor PSR1 for carbon storage in *Chlamydomonas*. *Plant J.* 122(4):e70230. doi: 10.1111/tpj.70230.
6. Yuan Y, Iannetta AA, Kim M, Sadecki PW, Arend M, Tschila A, Águila Ruiz-Sola M, Kepesidis G, Falconet D, Thevenon E, Tardif M, Brugièrè S, Couté Y, Kleman JP, Sizova I, Schilling M, Jouhet J, Hegemann P, **Li-Beisson Y**, Nikoloski Z, Bastien O, Hicks LM, Petroutsos D. (2025) Phototropin connects blue light perception to starch metabolism in green algae. *Nat Commun.* 2025 Mar 15;16(1):2545. doi: 10.1038/s41467-025-57809-3.
7. Yamaoka Y, Petroutsos D, Je S, Yamano T, **Li-Beisson Y** (2025) Light, CO₂, and carbon storage in microalgae. *Curr Opin Plant Biol.* 84:102696. doi: 10.1016/j.pbi.2025.102696.
8. Li Z, Kim M, da Silva Nascimento JR, Legeret B, Jorge GL, Bertrand M, Beisson F, Thelen JJ, **Li-Beisson Y.*** (2025) Knocking out the carboxyltransferase interactor 1 (CTI1) in *Chlamydomonas* boosted oil content by fivefold without affecting cell growth. *Plant Biotechnol J.* 2025 Jan 29. doi: 10.1111/pbi.14581.
9. Suzuki H, Cuiné S, Légeret B, Wijffels RH, Hulatt CJ, **Li-Beisson Y**, Kiron V. (2025) Phosphorus starvation induces the synthesis of novel lipid class diacylglycerol glucuronide and diacylglycerol-N,N,N-trimethylhomoserine in two species of cold-adapted microalgae *Raphidonema* (Chlorophyta). *Plant J.* 2025 Jan;121(2):e17227. doi: 10.1111/tpj.17227.
10. Dao O, Burlacot A, Buchert F, Bertrand M, Auroy P, Stoffel C, Madireddi SK, Irby J, Hippler M, Peltier G, **Li-Beisson Y.*** (2025) Cyclic and pseudo-cyclic electron pathways play antagonistic roles during nitrogen deficiency in *Chlamydomonas reinhardtii*. *Plant Physiol.* 2024 Dec 23;197(1):kia617. doi: 10.1093/plphys/kiae617.
11. Conrado AC, Lemes Jorge G, Rao RSP, Xu C, Xu D, **Li-Beisson Y**, Thelen JJ. (2025) Evolution of the regulatory subunits for the heteromeric acetyl-CoA carboxylase. *Philos Trans R Soc Lond B Biol Sci.* 2024 Nov 18;379(1914):20230353. doi: 10.1098/rstb.2023.0353.

2024:

12. Torres Romero I, Legeret B, Huleux M, Sorigue D, Damm A, Cuine S, Veillet F, Blot C, Brugièrè S, Couté Y, Garneau MG, Kotapati H, Xin Y, Xu J, Bates PD, Abdou Rachid Thiam AR, Beisson F, **Li-Beisson Y*** (2024). The α/β hydrolase domain-containing protein 1 (ABHD1) acts as a lysolipid lipase and is involved in lipid droplet formation. *National Science Review* 10.1093/nsr/nwae398
13. Kong F, Blot C, Liu K, **Kim M, Li-Beisson Y.** (2024) Advances in algal lipid metabolism and their use to improve oil content. *Curr Opin Biotechnol.* 2024 Jun;87:103130. doi: 10.1016/j.copbio.2024.103130
14. Kim M, Jorge GL, Aschern M, Cuiné S, Bertrand M, Mekhalfi M, Putaux JL, Yang JS, Thelen JJ, Beisson F, Peltier G, **Li-Beisson Y*** (2024) The DYRK1 kinase regulates cell wall degradation in *Chlamydomonas* by inducing matrix metalloproteinase expression. *Plant Cell.* 2024 Oct 14;koae271. doi: 10.1093/plcell/koae271.
15. Zuliani L, Cecchin M, Miotti T, Paloschi M, Cuine S, Cazzaniga S, **Li-Beisson Y**, Ballottari M. (2024) Interplay between CO₂ and light governs carbon partitioning in *Chlamydomonas reinhardtii*. *Physiol Plant.* 2024 Nov-Dec;176(6):e14630. doi: 10.1111/ppl.14630.

16. Peltier G, Stoffel C, Findinier J, Madireddi SK, Dao O, Epting V, Grossman A, **Li-Beisson Y**, Burlacot A* (2024). Green algae CO₂ capture is powered by alternative electron pathways of photosynthesis. *Plant Cell*, doi: 10.1093/plcell/koae143
17. Miao R*, Légeret B, Cuine S, Burlacot A, Lindblad P, **Li-Beisson Y**, Beisson F, Peltier G* (2024). Alka(e)nes contribute to membrane lipid homeostasis and resilience of photosynthesis to high light in cyanobacteria. *Plant physiology* doi: <https://doi.org/10.1101/2023.12.11.571064>
18. A. Six, A. Dimitriades-Lemaire, C. Lancelon-Pin, J.-L. Putaux, D. Dauvillée, D. Petroutsos, P. Alvarez Diaz, J.-F. Sassi, Y. Li-Beisson, G. Fleury (2024) Red light induces starch accumulation in *Chlorella vulgaris* without affecting photosynthesis efficiency, unlike abiotic stress. *Algal Research - Biomass, Biofuels and Bioproducts* .
19. Leyland B, Novichkova E, Dolui AK, Jallet D, Daboussi F, Legeret B, Li Z, **Li-Beisson Y**, Boussiba S, Khozin-Goldberg I. (2023) Acyl-CoA binding protein is required for lipid droplet degradation in the diatom *Phaeodactylum tricornutum*. *Plant Physiol.* doi: 10.1093/plphys/kiad525.
20. Six A, Dauvillée D, Lancelon-Pin C, Dimitriades-Lemaire A, Compadre A, Dubreuil C, Alvarez P, Sassi JF, **Li-Beisson Y**, Putaux JL, Le Moigne N, Fleury G. (2024) From raw microalgae to bioplastics: Conversion of *Chlorella vulgaris* starch granules into thermoplastic starch. *Carbohydr Polym.* 2024 Oct 15;342:122342. doi: 10.1016/j.carbpol.2024.122342.

2023:

21. Luzarowska U, Ruß AK, Joubès J, Batsale M, Szymański J, P Thirumalaikumar V, Luzarowski M, Wu S, Zhu F, Endres N, Khedhayir S, Schumacher J, Jasinska W, Xu K, Correa Cordoba SM, Weil S, Skirycz A, Fernie AR, Li-Beisson Y, Fusari CM, Brotman Y. (2023) Hello darkness, my old friend: 3-KETOACYL-COENZYME A SYNTHASE4 is a branch point in the regulation of triacylglycerol synthesis in *Arabidopsis thaliana*. *Plant Cell*. 35(6):1984-2005.

2022:

22. Peter J, Huleux M, Spaniol B, Sommer F, Neunzig J, Schroda M, **Li-Beisson Y**, Philippart K*. (2022) Fatty acid export (FAX) proteins contribute to oil production in the green microalga *Chlamydomonas reinhardtii*. *Front Mol Biosci*. doi: 10.3389/fmolb.2022.939834.
23. Choi BY, Shim D, Kong F, Auroy P, Lee Y, **Li-Beisson Y**, Lee Y, Yamaoka Y*. (2022) The *Chlamydomonas* transcription factor MYB1 mediates lipid accumulation under nitrogen depletion. *New Phytol*. 2022 Jul;235(2):595-610.
24. Harchouni S, England S, Vieu J, Aouane A, Citerne S, Legeret B, **Li-Beisson Y**, Menand B*, Field B*. (2022) Guanosine tetraphosphate (ppGpp) accumulation inhibits chloroplast gene expression and promotes super grana formation in the moss *Physcomitrium* (*Physcomitrella*) patens. *New Phytol*
25. Burlacot A, Dao O, Auroy P, Cuiné S, **Li-Beisson Y**, PELTIER G* (2022) Alternative electron pathways of photosynthesis drive the algal CO₂ concentrating mechanism. *Nature* (in press)
26. **Yonghua Li-Beisson** (2022) Editorial feature: Meet the PCP editor—Yonghua Li-Beisson. *Plant Cell Physiol*, Oxford University Press (OUP), pp.1-3.
27. Dao O, Kuhnert F, Weber APM., Peltier G, **Li-Beisson Y*** (2022) Physiological functions of malate shuttles in plants and algae. *TIPS*, Elsevier, 2021.
28. Avilan L, Lebrun R, Puppo C, Citerne S, Cuiné S, **Li-Beisson Y**, Menand B, Field B*, Gontero B* (2022) ppGpp influences protein protection, growth and photosynthesis in *Phaeodactylum tricornutum*. . *New Phytol* 230 (4), pp.1517-1532
29. Bai F, Yu L, Shi J, **Li-Beisson Y**, Liu J. (2022) Long-chain acyl-CoA synthetases activate fatty acids for lipid synthesis, remodeling and energy production in *Chlamydomonas*. *New Phytol*, Wiley, 233(2):823-837.

2021:

30. Sorigué D., Hadjidemetriou K., Blangy S., Gotthard G., Bonvalet A., Coquelle N., Samire P., Aleksandrov A., Antonucci L., Benachir A., Boutet S., Byrdin M., Cammarata M., Carbajo S., Cuiné S., Doak R. B., Foucar L., Gorel A., Grünbein M., Hartmann E., Hienerwadel R., Hilpert M., Kloos M., Lane T. J., Légeret B., Legrand P., **Li-Beisson Y.**, Moulin S.L.Y., Nurizzo D., Peltier G., Schirò G., Shoeman R. L., Sliwa M., Solinas X., Zhuang B., Barends T. R. M., Colletier J.-P., Joffre M., Royant A., Berthomieu C.*, Weik M.*, Domratcheva T.*, Brettel K., Vos M. H.*, Schlichting I.*, Arnoux P.*, Müller P.*, Beisson F* (2021). Mechanism and dynamics of fatty acid photodecarboxylase. *Science*, 372 (6538), pp.eabd5687.
31. Dufourcq-Sekatcheff E, Cuine S, **Li-Beisson Y**, Quevarec L, Richaud M, et al.. (2021) Deciphering Differential Life Stage Radioinduced Reproductive Decline in *Caenorhabditis elegans* through Lipid Analysis. *Int J Mol Sci, MDPI*, 22, pp.10277.
32. Moulin S, Beyly A, Cuiné S, Blangy S, Légeret B, Floriani M, Burlacot A, Sorigué D, **Li-Beisson Y**, Peltier G, Beisson F* (2021) Fatty acid photodecarboxylase is an ancient photoenzyme responsible for hydrocarbon formation in the thylakoid membranes of algae. *Plant Physiol* 186 (3), pp.1455-1472
33. **Li-Beisson Y***, Kong F, Wang P, Lee Y, Kang B-H. (2021) The disassembly of lipid droplets in *Chlamydomonas*. *New Phytol*, Wiley, 2021, 231, 1359-1364.
34. Gong Y, Kang NK, Kim YU, Wang Z, Wei L, Xin Y, Shen C, Wang Q, You W, Lim JM, Jeong SW, Park YI, Oh HM, Pan K, Poliner E, Yang G, **Li-Beisson Y**, Li Y, Hu Q, Poetsch A, Farre EM, Chang YK, Jeong WJ, Jeong BR, Xu J (2020) The NanDeSyn database for Nannochloropsis systems and synthetic biology. *Plant J* 104(6):1736-1745.

2020:

35. Burlacot A, **Li-Beisson Y**, Peltier G* (2020). Membrane inlet mass spectrometry at the crossroads of photosynthesis, biofuel, and climate research. *Plant Physiol* 183(2):451.
36. Cahoon Eb, **Li-Beisson Y*** (2020). Plant unusual fatty acids: learning from the less common. *Curr Opin Plant Biol*. 55:66.
37. Burlacot A, Burlacot F, **Li-Beisson Y**, Peltier G* (2020). Membrane inlet mass spectrometry: a powerful tool for algal research. *Front in Plant Sci* 11:1302.
38. Burlacot A, Richaud P, Gosset A, **Li-Beisson Y**, Peltier G* (2020). Algal photosynthesis converts nitric oxide into nitrous oxide. *Proc Natl Acad Sci USA* 117(5):2704.
39. **Li-Beisson Y**, Carrière F. (2020). Biogenesis and fate of lipid droplets. *Biochimie* 169:1-2.
40. Torres-Romero I, Kong F, Légeret B, Beisson F, Peltier G, **Li-Beisson Y*** (2020). *Chlamydomonas* cell cycle mutant *credc5* over-accumulates starch and oil. *Biochimie* 169:54.
41. Lee J, Yamaoka Y, Kong F, Cagnon C, Beyly-Adriano A, Jang S, Gao P, Kang BH, **Li-Beisson Y***, Lee Y* (2020) The phosphatidylethanolamine-binding protein DTH1 mediates degradation of lipid droplets in *Chlamydomonas reinhardtii*. *Proc Natl Acad Sci USA* 117(37):23131-23139.

2019:

42. Cecchin M, Marcolungo L, Rossato M, Girolomoni L, Cosentino E, Cuine S, **Li-Beisson Y**, Delledonne M, Ballottari M (2019). *Chlorella vulgaris* genome assembly and annotation reveals the molecular basis for metabolic acclimation to high light conditions. *Plant J* 100(6):1289-1305.
43. Yamaoka Y, Shin S, Choi By, Kim H, Jang S, Kajikawa M, Yamano T, Kong F, Légeret B, Fukuzawa H, **Li-Beisson Y**, Lee Y (2019). The bZIP1 transcription factor regulates lipid remodeling and contributes to ER stress management in *Chlamydomonas reinhardtii*. *Plant Cell* 31(5):1127.

44. Findinier J, Laurent S, Duchêne T, Roussel X, Lancelon-Pin C, Cuiné S, Putaux JL, **Li-Beisson Y**, D'hulst C, Wattebled F, Dauvillée D (2019). Deletion of BSG1 in *Chlamydomonas reinhardtii* leads to abnormal starch granule size and morphology. *Sci Rep* 9(1):1990.
45. **Li-Beisson Y***, Thelen JJ, Fedosejevs E, Harwood JL (2019). The lipid biochemistry of eukaryotic algae. *Prog Lipid Res* 74:31.
46. Burlacot A, Peltier G, **Li-Beisson Y*** (2019) Subcellular energetics and carbon storage in *Chlamydomonas*. *Cells* 8(10):1154.
47. Moulin S, Légeret B, Blangy S, Sorigué D, Burlacot A, Auroy P, **Li-Beisson Y**, Peltier G, Beisson F* (2019). Continuous photoproduction of hydrocarbon drop-in fuel by microbial cell factories. *Sci Rep* 9(1):13713
48. **Li-Beisson Y***, Wada H (2019). Plant and algal lipids set sail for new horizons. *Plant Cell Physiol* 60(6):1161.
49. Warakanont J*, **Li-Beisson Y**, Benning C (2019). LIP4 is involved in triacylglycerol degradation in *Chlamydomonas reinhardtii*. *Plant Cell Physiol* 60(6):1250.
50. Liang Y, Kong F, Torres-Romero I, Burlacot A, Cuine S, Légeret B, Billon E, Brotman Y, Alseekh S, Fernie Ar, Beisson F, Peltier G, **Li-Beisson Y*** (2019). Branched-chain amino acid catabolism impacts triacylglycerol homeostasis in *Chlamydomonas reinhardtii*. *Plant Physiol* 179(4):1502.
51. Kong F, Yamaoka Y, Ohama T, Lee Y, **Li-Beisson Y*** (2019). Molecular genetic tools and emerging synthetic biology strategies to increase cellular oil content in *Chlamydomonas reinhardtii*. *Plant Cell Physiol* 60(6):1184.
52. Brzezowski P, Ksas B, Havaux M, Grimm B, Chazaux M, Peltier G, Johnson X, Alric J* (2019) The function of PROTOPORPHYRINOGEN IX OXIDASE in chlorophyll biosynthesis requires oxidised plastoquinone in *Chlamydomonas reinhardtii*. *Commun Biol* 2019, 2:159.
53. Liang Y, Kong F, Torres-Romero I, Burlacot A, Cuine S, Légeret B, Billon E, Brotman Y, Alseekh S, Fernie AR, Beisson F, Peltier G, **Li-Beisson Y**. (2019) Branched-Chain Amino Acid Catabolism Impacts Triacylglycerol Homeostasis in *Chlamydomonas reinhardtii*. *Plant Physiol*. 2019 Apr;179(4):1502-1514.
54. Kong F, Yamaoka Y, Ohama T, Lee Y, **Li-Beisson Y**. (2019) Molecular Genetic Tools and Emerging Synthetic Biology Strategies to Increase Cellular Oil Content in *Chlamydomonas reinhardtii*. *Plant Cell Physiol*.
55. **Li-Beisson Y**, Thelen JJ, Fedosejevs E, Harwood JL. (2019) The lipid biochemistry of eukaryotic algae. *Prog Lipid Res*.

2018:

56. Kong F, Burlacot A, Liang Y., Legeret B, Alseek S, Brotman Y, Fernie A, Krieger-Liszkay A, Beisson F, Peltier G, **Li-Beisson Y*** (2018). Interorganelle communication: peroxisomal malate dehydrogenase 2 connects lipid catabolism to photosynthesis through redox coupling in *Chlamydomonas*. *Plant Cell*, 30:1824
57. Hanchi M, Thibaud MC, Légeret B, Kuwata K, Pochon N, Beisson F, Cao A, Cuyas L, David P, Doerner P, Ferjani A, Lai F, **Li-Beisson Y**, Mutterer J, Philibert M, Raghothama KG, Rivasseau C, Secco D, Whelan J, Nussaume L, Javot H. (2018) The phosphate fast-responsive genes PECP1 and PPsPase1 affect phosphocholine and phosphoethanolamine content. *Plant Physiol*. 176: 2943
58. Kong F, Romero IT, Warakanont J, **Li-Beisson Y*** (2018) Lipid catabolism in microalgae. *New Phytol*. 218: 1340
59. Sorigé D, Légeret B, Cuiné C, Blangy S, Moulin S, Billon E, Richaud P, Brugière S, Couté Y, Nurizzo D, Muller P, Brettel K, Pignol D, Arnoux P, **Li-Beisson Y**, Peltier G, Beisson F (2017). An algal photoenzyme converts fatty acids to hydrocarbons. *Science* 357: 903
60. Kong F, **Li-Beisson Y** (2018). Identification of Insertion Site by RESDA-PCR in *Chlamydomonas* Mutants Generated by AphVIII Random Insertional Mutagenesis. *Bio-protocols*.

2017:

61. **Li-Beisson Y**, Neunzig J, Lee, Y, Philippar K (2017). Plant membrane-protein mediated intracellular traffic of fatty acids and acyl lipids. *Curr Opin Plant Biol* 40: 138
62. Kong F, Liang Y, Légeret B, Beyly-Adriano A, Blangy S, Haslam R, Napier J, Beisson F, Peltier G, **Li-Beisson Y*** (2017) Chlamydomonas carries out fatty acid β -oxidation in ancestral peroxisomes using a bona fide acyl-CoA oxidase. *The Plant J*. 90: 358
63. Lee EJ, Oh M, Hwang JU, **Li-Beisson Y**, Nishida I, Lee Y (2017). Seed-specific overexpression of the pyruvate transporter BASS2 increased oil content in Arabidopsis seeds. *Frontiers in Plant Science* 8:194
64. Findinier J, Tuncay H, Schulz-Raffelt M, Spriet C, Duchene T, Szydlowski N, **Li-Beisson Y**, Peltier G, D'Hulst C, Watted F, Dauvillée D (2017) Mutation in the MEX1 gene of Chlamydomonas leads to impaired starch mobilization without maltose accumulation. *J. Exp. Botany* 68:5177

2016:

65. Légeret B, Schulz-Raffelt M, Nguyen HM, Auroy P, Beisson F, Peltier G, Blanc G, **Li-Beisson Y*** (2016) Lipidomic and transcriptomic analyses of *Chlamydomonas reinhardtii* under heat stress unveil a direct route for the conversion of membrane lipids into storage lipids. *Plant, Cell & Environment* 39:834
66. Schulz-Raffelt M, Chochois V, Auroy P, Cuiné S, Billon E, Dauvillée D, **Li-Beisson Y**, Peltier G (2016) Hyper-accumulation of starch and oil in a *Chlamydomonas* mutant affected in a plant-specific DYRK kinase. *Biotechnology for Biofuels* 9:1
67. Li N, Xu C, **Li-Beisson Y**, Philippar K (2016) Fatty acid and lipid transport in plant cells. *Trends in Plant Science* 21: 145 (invited review)
68. Yamaoka Y, Achard D, Jang S, Legeret B, Kamisuki S, Ko D, Schulz-Raffelt M, Kim Y, Song WY, Nishida I, **Li-Beisson Y***, Lee Y* (2016) Identification of a *Chlamydomonas* plastidial 2-lysophosphatidic acid acyltransferase and its use to engineer microalgae with increased oil content. *Plant Biotechnology Journal* 14:2158
69. **Li-Beisson Y**, Verdier G., Xu L, Beisson F. (2016) Cutin and suberin polyesters. In *Encyclopedia of life science eLS* John Wiley & Sons, Ltd
70. Yang WL, Pollard M, **Li-Beisson Y**, Ohlrogge J (2016) Quantitative analysis of glycerol in *Arabidopsis* dicarboxylic acid-rich cutins provides new insights into cutin structure. *Phytochemistry* 130:159
71. Goold HD, Nguyen HM, Kong F, Beyly-Adriano A, Legeret B, Billon E, Cuine S, Beisson F, Peltier G, **Li-Beisson Y*** (2016) Whole genome re-sequencing identifies a quantitative trait locus repressing carbon reserve accumulation during optimal growth in *Chlamydomonas reinhardtii*. *Scientific Report* 6: 25209
72. **Li-Beisson Y***, Nakamura Y, Harwood J (2016) Lipids: from chemical structures, biosynthesis, and analyses to industrial applications. *Subcellular Biochemistry* 86: 1-18
73. Goold HD, Cuiné S, Légeret B, Liang Y, Brugière S, Auroy P, Javot H, Tardif M, Jones BJ, Beisson F, Peltier G, **Li-Beisson Y*** (2016) Saturating light induces sustained accumulation of oil primarily stored in lipid droplets of plastidial origin in *Chlamydomonas reinhardtii*. *Plant Physiology* 171:2406.
74. Sorigué D, Légeret B, Cuiné S, Morales P, Mirabella B, Guedeney G, **Li-Beisson Y**, Jetter R, Peltier G, Beisson F (2016) Microalgae synthesize hydrocarbons from long-chain fatty acids via a light-dependent pathway. *Plant Physiology* 171:2393

2015:

75. **Li-Beisson Y***, Beisson F, Riekhof W (2015) Metabolism of acyl-lipids in *Chlamydomonas reinhardtii*. *The Plant Journal* 82:504 (invited review)

76. Kim H, Jang S, Kim S, Yamaoka Y, Hong D, Song WY, Nishida I, **Li-Beisson Y**, Lee Y (2015) The small molecule fenpropimorph rapidly converts chloroplast membrane lipids to triacylglycerols in *Chlamydomonas reinhardtii*. *Frontiers in Microbiology* 6 :54
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78. Goold H, Beisson F, Peltier G, **Li-Beisson Y*** (2015) Microalgal lipid droplets: composition, diversity, biogenesis and functions. *Plant Cell Reports* 34 :545 (invited review)

2014:

79. **Li-Beisson Y**, Peltier G, Knörzer P, Happe T, and Hemschemeier A (2014) Hydrogen and biofuel production in the chloroplast, in *Plastid Biology* edited by Theg SM/Wollman FA
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81. Cagnon C, Mirabella B, Nguyen HM, Beyly-Adriano A, Bouvet S, Cuiné S, Beisson F, Peltier G, **Li-Beisson Y*** (2013) Development of a forward genetic screen to isolate oil mutants in the green microalga *Chlamydomonas reinhardtii*. *Biotechnology for Biofuels* 6:178

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82. **Li-Beisson Y***, Shorrosh B, Beisson F, Andersson M, et al. (2013) Acyl-lipid metabolism: in *The Arabidopsis Book*, Rockville, MD: American Society of Plant Biologists 11:e0161
83. Kim S, Kim H, Ko D, Yamaoka Y, Otsuru M, Kawai-Yamada M, Ishikawa T, Oh HM, Nishida I, **Li-Beisson Y**, Lee Y (2013) Rapid induction of lipid droplets in *Chlamydomonas reinhardtii* and *Chlorella vulgaris* by Brefeldin A. *Plos One* 8:e81978
84. Delrue F, **Li-Beisson Y**, Setier P-A, Sahut C, Roubaud A, Froment A-K, Peltier G (2013) Comparison of various microalgae liquid biofuel production pathways based on energetic, economic and environmental criteria. *Bioresource technology* 136:205
85. Yang W, Simpson JP, **Li-Beisson Y**, Beisson F, Pollard M, Ohlrogge JB (2013). A land-plant specific glycerol-3-phosphate acyltransferase family in Arabidopsis: substrate specificity, sn-2 preference and evolution. *Plant Physiol* 160: 638
86. **Li-Beisson Y*** and Peltier G (2013) Third-generation biofuels: current and future research on microalgal lipid biotechnology *OCL (Oléagineux, Corps Gras Lipides)* 20(6) D606 (invited review)

2012:

87. **Li-Beisson Y*** (2012) Triacylglycerol biosynthesis in eukaryotic microalgae - the biological basis for a sustainable 3rd generation biofuel. *Lipid Library*, American Society of Oil Chemist (AOCS), edited by William Bill Christie. (invited review)
88. Beisson F, **Li-Beisson Y** and Pollard M (2012) Solving the puzzles of cutin and suberin polymer biosynthesis. *Curent Opinion in Plant Biology* 15:329 (invited review)

2011:

89. Nguyen HM, Baudet M, Cuiné S, Adriano JM, Barthe D, Billion E, Bruley C, Beisson F, Peltier G, Ferro M, **Li-Beisson Y*** (2011) Proteomic profiling of oil-bodies isolated from the unicellular green microalga *Chlamydomonas reinhardtii*: with focus on proteins involved in lipid metabolism. *Proteomics* 11:4266
90. Siaut M, Cunié S, Cagnon C, Fessler B, Nguyen M, Carrier P, Beyly A, Beisson F, Triantaphylidès C, **Li-Beisson Y*** and Peltier G (2011) Oil accumulation in the model green

alga *Chlamydomonas reinhardtii*: characterization, variability between common laboratory strains and relationship with starch reserves. *BMC Biotechnology*, 11:7

91. **Li-Beisson Y*** (2011) Cutin and Suberin. In: *Encyclopedia of Life Sciences (ELS)*, John Wiley & Sons, Ltd: Chichester (*invited review*)

202-2010: mostly on plants

92. **Li-Beisson Y***, Shorrosh B, Beisson F, Andersson M, et al. (2010) Acyl lipid metabolism: in *The Arabidopsis Book*, Rockville, MD: American Society of Plant Biologists
93. Manas-Fernandez A, **Li-Beisson Y**, Alonso, DL and Garcia-Maroto F (2010) Cloning and molecular characterization of a glycerol-3-phosphate O-acyltransferase (GPAT) gene from *Echium* (Boraginaceae) involved in the biosynthesis of cutin polyesters. *Planta* 232 :987
94. Yang W, Pollard M, **Li-Beisson Y**, Beisson F, Feig M, Ohlrogge J (2010) A distinct type of glycerol-3-phosphate acyltransferase with *sn*-2 preference and phosphatase activity producing 2-monoacylglycerol. *Proc Natl Acad Sci USA* 107:12040
95. Stork J, Harris D, Williams B, Griffiths J, Haughn G, Beisson F, **Li-Beisson Y**, Mendu V, DeBolt S (2010) Cellulase synthase9 serves a non-redundant role in secondary cell wall synthesis in the radial wall of Arabidopsis epidermal testa cells. *Plant Physiology* 153:580
96. **Li-Beisson Y**, Pollard M, Sauveplane V, Pinot F, Ohlrogge J and Beisson F (2009) Nanoridges that characterize the surface morphology of flowers require the synthesis of cutin polyester. *Proc Natl Acad Sci USA*, 106:22008
97. Molina I, **Li-Beisson Y**, Beisson F, Ohlrogge J and Pollard M (2009) Identification of an Arabidopsis feruloyl-CoA transferase required for suberin synthesis. *Plant Physiology* 151:1317
98. **Li Y*** and Beisson F (2009) The biosynthesis of cutin and suberin as an alternative source of enzymes for the production of bio-based chemicals and materials. *Biochimie* 91: 685
99. DeBolt S, Scheible W, Schrick K, Auer M, Beisson F, Bischoff V, Bouvier-Navé P, Carroll A, Hematy K, **Li Y**, Milne J, Nair M, Schaller H, Zemla M and Somerville C (2009) Mutations in UDP-glucose:sterol-glucosyltransferase in Arabidopsis cause transparent testa phenotype and suberization defect in seeds. *Plant Physiology* 151:78
100. Pollard M, Beisson F, **Li Y** and Ohlrogge J (2008) Building lipid barriers: biosynthesis of cutin and suberin. *Trends in Plant Sciences* 13:236 (*invited review*)
101. **Li Y**, Beisson F, Koo A, Molina I, Pollard M and Ohlrogge J (2007) Identification of acyltransferases required for cutin biosynthesis and production of cutin with suberin-like monomers. *Proc Natl Acad Sci USA* 104:18339
102. **Li Y**, Beisson F, Ohlrogge J and Pollard M (2007) Monoacylglycerols are components of root waxes and can be produced in the aerial cuticle by ectopic expression of a suberin-associated acyltransferase. *Plant Physiology* 144:1267
103. Beisson F*, **Li Y***, Bonaventure G, Pollard M and Ohlrogge J (2007) The acyltransferase GPAT5 is required for synthesis of suberin in seed coat and root of Arabidopsis. *Plant Cell* 19:1
104. **Li Y**, Beisson F, Pollard M and Ohlrogge J (2006) Oil content of Arabidopsis seeds: the influence of seed anatomy, light and plant-to-plant variation. *Phytochemistry* 67:904
105. **Li Y**, Adams IP, Wynn JP and Ratledge C (2005) Cloning and characterisation of a gene encoding a malic enzyme involved in anaerobic growth in *Mc circinelloides*. *Mycological Research* 109:461
106. Song Y, Wynn JP, **Li Y**, Granham D and Ratledge C (2001) A pre-genetic study of the isoforms of malic enzyme associated with lipid accumulation in *Mucor circinelloides*. *Microbiology* 147:1507
107. Wynn JP, Hamid AA, **Li Y** and Ratledge C (2001) Biochemical events leading to the diversion of carbon into storage lipids in the oleaginous fungi *Mucor circinelloides* and *Mortierella alpine*. *Microbiology* 147:2857

Other (not peer-reviewed publications):

- Editor for the book “**Lipids in Plant and Algae Development**” (Nakamura Y and **Li-Beisson Y**, eds., Springer 2016).
- Beisson F, **Li-Beisson Y**, Peltier G, Finazzi G, Maréchal E, Chauvat F, Delrue F, Froment AK, Blet V (2012). Des microalgues pour la production de biocarburants. *Clefs CEA*
- **Li-Beisson Y*** and Peltier G (2011). Biocarburants: le défi des microalgues. *Pour la Science* issue 78 (in French)

Patents :

- Schulz-Raffelt M, Chochois V, **Li-Beisson Y**, Peltier G (2014) Green microalgae lacking a functional DYRK-1 gene, for use for production of feedstock (7/05/2014 EP14305673.7).
- Ohlrogge J, Beisson F, **Li Y**, Pollard M (2007). Engineered plant extracellular lipids using acyltransferases and fatty acid omega-oxidases (PCT/US2008/067887).
- **Li Y**, Beisson F, Pollard M and Ohlrogge J (2006). Acyltransferases for altering lipid production on plants (PCT/US2007/014690).
- Ohlrogge J, Ruuska S, **Li Y** (2011). F-Box protein targeted plant oil production. United States Patent 7,915,480 (PCT/US2006/037111).

International and National Conferences, and Institutional Seminars

Invited keynote presentations:

1. Polyester Biosynthesis as a Source of Fatty Acid Hydroxylases and Acyltransferases with New Substrate Specificities. **19th International Symposium on Plant Lipids (ISPL)** Carines, Australia (2010)
2. Biosynthesis and function of plant cuticular polyesters. **1st Gordon Conference (Plant Lipids: Structure, Metabolism & Function)**, USA (2009)
3. Oil synthesis in the green microalga *Chlamydomonas reinhardtii* – a proteomic approach. **5th European Symposium on Plant Lipids**, Poland (2011)
4. Lipid biosynthesis in *Chlamydomonas reinhardtii*. **4th Asian Symposium on Plant Lipids**, Hong Kong (2011)
5. A forward genetic approach toward unravelling factors critical for oil metabolism in the model green alga *Chlamydomonas reinhardtii*. **20th International Symposium on Plant Lipids (ISPL)**, Spain (2012)
6. Screens, mutants, and –omics approaches toward understanding of lipid metabolic pathways in microalgae. **5th Asian Symposium on Plant Lipids**, South Korea (2013)
7. Genetic approaches to unravel lipid metabolism in the model alga *Chlamydomonas reinhardtii*. **Plant Lipid Metabolic Network and Switching**, Japan (2013)
8. Genetic and lipidomic approaches in deciphering lipid metabolism in *Chlamydomonas*. **Gordon Conference (Plant Lipids: Structure, Metabolism & Function)**, USA (2013)
9. Orientation of cellular metabolism toward oil production in microalgae: stress and genetics. **The 9th Plasticity and Integrity of Genomes Conference**, France (2013)
10. Lipid metabolism in the green microalga *Chlamydomonas reinhardtii*: current research and future challenges. **The French Photosynthetic Society Meeting**, France (2013)
11. Dissecting oil metabolism in *Chlamydomonas* using genetic and lipidomic approaches. **3rd European Symposium on Microbial Lipids**, Germany (2014)
12. Study of oil turnover in the model green microalga *Chlamydomonas reinhardtii*. **7th European Symposium on Plant Lipids**, U.K. (2015)

13. Advances in biosynthesis and degradation of lipids in microalgae. **22nd International Symposium on Plant Lipids (ISPL)**, Germany (2016)
14. Microalgae biofuel: from genomics, genetics to energy dense molecules. **The 9th Asia-Pacific Conference on Algal Biotechnology (APCAB)**, Bangkok, Thailand (2016)
15. Control of TAG synthesis in microalgae. **The 7th Asian Symposium in Plant Lipids (ASPL)**, Taipei, Taiwan (2017)
16. Regulation of oil synthesis. **The 9th Algal BBB meeting**, Seattle, USA (2018)
17. Increasing lipid productivity: importance of the connection between lipid catabolism and chloroplast metabolism in *Chlamydomonas reinhardtii*. **The 23rd International Symposium on Plant Lipids (ISPL)**, Yokohama, Japan 2018
18. TAG Production in Microalgae: Carbon and Energetic Aspects. **Gordon Conference (Plant Lipids: Structure, Metabolism & Function)**, USA (2019)
19. The role of inter-organelle communication on lipid metabolism. Regulation of oil synthesis. The 10th Algal BBB meeting (2021) by Zoom
20. Inter-Organellar Signaling and Algal Lipid Metabolism. **The plant organelle signaling workshop** by Zoom (2021)
21. Exploring lipid metabolism for a sustainable bio-economy. **Plant Synthetic Biology Conference** (2022) Barcelona, Spain
22. Exploring algal lipid metabolism for a sustainable economy **EPSO Plant Science Seminar series**
23. Lipid droplet remodeling in the green microalga *Chlamydomonas reinhardtii*. **3rd Lipid droplet conference** (2023), Wageningen, Netherland
24. Lipid droplet homeostasis in the green microalga *Chlamydomonas reinhardtii*. **9th Asian Society of Plant Lipids**. (2023) Seoul, South Korea
25. Exploring algal lipid metabolism for a sustainable bioeconomy – with a focus on ‘lipid droplet. **Green Christmas Session**, an international conference with the theme "Photosynthetic microorganisms for sustainable development." 2023 – *online only*
26. Exploring algal photosynthesis and lipid metabolism for lipid-derived fuels. **10th European Symposium on Plant Lipids (2023)**, Amsterdam, Netherlands
27. Microalgae as sources for a sustainable bioeconomy - **Japanese Society of Plant Physiologists** march 2024, Kobe, Japan
28. Current progress in our understanding of lipid metabolism in microalgae. **Bielefeld conference** 2024, Bielefeld, Germany
29. Microalgae as cell factories for lipid production ? **4^{èmes} Rencontres académie-industrie du CNC**, Maison du Chimie, Paris 2024
30. Explore algal lipid metabolism for biotechnology? **Gordon Research Conference** 2025 (Los Angeles, USA)
31. “Exploring algal lipid metabolism for food and feed” **5th International Conference OBSIDIAN** – Plant productivity and food security, 23-25 June, Polland
32. Recent progress on algal lipid metabolism. **International Symposium on Plant Lipids**, 5-10th July 2026 Malaga, Spain
33. Algal lipids for a sustainable bioeconomy. **International conference on algae and sustainability**, 26-28th July 2026, Nanchang, China

Invited departmental seminars:

34. Lipid metabolism in the green model microalga *Chlamydomonas reinhardtii*. **Chonnam National University**, Chonnam, South Korea (2011)
35. Unravelling lipid metabolism in green microalgae using *Chlamydomonas reinhardtii* as a model. **POSTECH**, South Korea (2011)

36. Lipid Metabolism in Microalgae- Current progress and future directions. **Martin Luther University Halle-Wittenberg**, Germany (2012)
37. Biofuel from microalgae - current and future challenges for research. **Nouvelle Technologies pour le Energies (NTE-DRT)**, France (2012)
38. Current approaches to unravel oil biosynthesis in microalgae using *Chlamydomonas reinhardtii* as a model. **NREL-CEA joint meeting, USA** (2012)
39. Unravelling the networks of oil metabolism in green microalgae using *Chlamydomonas reinhardtii* as a model. **CEA/DSV Bioenergy Conference**, France (2012)
40. Current lipid research at CEA Cadarache France. **Shizuoka University**, Shizuoka, Japan (2013)
41. A forward genetic screen to isolate oil mutants in the green microagla *Chlamydomonas reinhardtii*, current research and future challenges, **POSTECH**, South Korea (2013)
42. Lipid research on the 3rd generation biofuel from microalgae at CEA Cadarache. **South West University**, China (2014)
43. Screens, mutants, and –omics approaches toward understanding lipid metabolic pathways in the alga *Chlamydomonas reinhardtii*. **Ludwig Maximillian’s University**, Germany (2014)
44. Lipid biosynthesis and homeostasis in the model green microalga *Chlamydomonas reinhardtii*. Tianjin Institute of Industrial Biotechnology, **Chinese Academy of Science**, Tianjin, China (2015)
45. Lipid biosynthesis and homeostasis in the model microalga *Chlamydomonas reinhardtii* - With focus on forward genetic approach. Opening ceremony for **Centre for Lipid Research, Zibo**, China (2015)
46. Lipid metabolism in the model microalga *Chlamydomonas reinhardtii*. **Georg-August-Universität Göttingen**, Goettingen, Germany (2015)
47. Current research on lipids in CEA Cadarache -With focus on forward genetic approaches. **University Paris Sud**, Orsay, France (2015)
48. Microalgae biofuel: from genomics, genetics to energy dense molecules. **University of Kaiserslautern**, Germany (2016)
49. Current research on algae biofuel at CEA Cadarache. **Institute of Hydrobiology, Chinese Academy of Science, Wuhan, China** (2016)
50. Re-orientation of cellular metabolism toward oil synthesis in green microalgae: stress and genetics. **Centre for Algal Research, Beijing, China** (2016)
51. Connecting lipid catabolism to photosynthesis and chloroplast metabolism. **Donald Danforth Center**, St Louis, USA (June 2018).
52. Connecting lipid catabolism to photosynthesis and chloroplast metabolism. **University of Copenhagen**, Denmark (July 2018).
53. Lipid catabolism and photosynthesis. **Hanyang University**, Seoul, South Korea (July 2018)
54. Reverse coupling from peroxisome to chloroplast defines chloroplast metabolism. **POSTECH**, Pohang, South Korea (July 2018)
55. Interaction of lipid catabolism and photosynthesis, **Saarland University**, Germany (2019)
56. TAG synthesis in *Chlamydomonas reinhardtii*, **Potsdam Maxi Planck, Golm**, South Korea (2019)
57. Current research on microalgae bioenergy at CEA Cadarache. **CNRS/Univeristy of Toulouse 3 – Paul Sabatier**, Toulouse, France (2019)
58. Lipid biosynthesis in the green microalga *Chlamydomoans reinhardtii*. **University of Beijing**, Beijing (2019)
59. Regulation of lipid synthesis in photosynthetic organisms. **Chinese Academy of Science - Qingdao, Wuhan** (2019)
60. The multiple functions of lipids from physiology to biotechnological applications. **Zhengzhou Institute of Technology**, Zhengzhou, China (2019)
61. Lipid biosynthesis and regulation in microalgae. **INRA Versaille**, 2020
62. Research on lipids in microalgae at CEA Cadarache. **University of Verona**, Italy (2020)
63. The role of lipids during environmental adaptation. **Suzuoka University**, Japan (2023)
64. Microalgae as cell factories for production of lipid-derived products. **Huazhong Agriculture University** (2024)

65. Explore algal lipid metabolism for a sustainable bioeconomy and environmental remediation. **Hanan Univeristy, China** (China, 2024)
66. Understanding of lipid metabolism in microalgae (2024) **Chinese Academy of Science-Wuhan, China** (2024)
67. Explore algal lipid metabolism for biotechnology (2025) **University of California, Berkely, USA**
68. Progress in understanding of lipid metabolism in the green microalga *Chlamydomonas reinhardtii*. **Carnegie Institution for Science, USA**
69. Light, CO₂ and lipid metabolism in microalgae. (2025) **University of Uppsala, Sweden**
70. Explore the use of microalgae for biotechnology (2025) **Zhejiang University, China**
71. Algal lipids for food, feed and fuel? What's the path forward? (2025) **Yangzhou University, China**

Contributed talks at international meetings:

72. A member of an orphan family of cytochrome P450 monooxygenases is required for the synthesis of hydroxy fatty acids in plants. **5th Lipidomics Meeting (GERLI)**, France (2008)
73. Characterization of an acyltransferase mutant of *Arabidopsis* with altered seed coat lipid metabolism. **National Plant Lipid Cooperative Meeting (NPLC)**, USA (2005)
74. Glycerol 3-phosphate acyltransferase 5 is involved in suberin synthesis. **Plant Research Lab-DOE, Michigan State University, USA** (2007)
75. Initiation of lipid biosynthesis in oleaginous fungi. "New Concepts in Lipid Research" **National meeting of SCI/RSC Lipid Group**, London, UK (2001)
76. Deciphering TAG accumulation in *Chlamydomonas* using a proteomic approach. **15th International Conference on Chlamydomonas**, Germany (2012)
77. Dissecting oil metabolism in *Chlamydomonas* using genetic and lipidomic approaches. **3rd European Symposium on Microbial Lipids**, Hamburg (2014)
78. Oil synthesis in the green microalga *Chlamydomonas reinhardtii* – a proteomic approach. **5th European Symposium on Plant Lipids**, Poland (2011)
79. Enriching algal biomass in energy content – lessons learnt from the model *Chlamydomonas reinhardtii*. **The 5th International CeBiTech Research Conference**, Belefield, Germany (2017)
80. Connecting lipid catabolism to photosynthesis and chloroplast metabolism. **16th Chlamydomonas meeting**, Washington DC, USA (June 2018).
81. Lipid metabolism in microalgae in response to a changing environment. **Eurofed lipid congress**, (October 2021)
82. Algal peroxisome and its role in metabolism, photosynthesis and CO₂ assimilation. **2021 Perico workshop** (march 2022)
83. Current understanding of lipid droplet biogenesis in microalgae. **The 26th International Symposium on Plant Lipids** (July, 2023)

Other:

1. Research on Microalgae at CEA Cadarache. **AlgainProvence workshop, France (2019)**
2. Biological assimilation, conversion and storage of CO₂: for fuels, chemicals, and better environment. **Joint CEA-CAS workshop, online** (2020)
3. Lipid biosynthesis in green algae. Colloquium **Wuhan-AMU, online** (2020)