

Acidification by nitrogen metabolism triggers extracellular biopolymer production in an oleaginous yeast
Sepulveda Del Rio Hamacek, Henrique; Tingajeva, Oksana; Ostertag, Katharina; Rekena, Alina; Illarionov, Aleksandr; Jõul, Piia; Monteiro de Oliveira, Paola; de la Caridad Martin-Hernandez, Giselle; Müller, Bettina; Bonturi, Nemailla; Passoth, Volkmar; Lahtvee, Petri-Jaan; Kumar, R. Applied and environmental microbiology 2025 / rt. e00947-25, 23 p
<https://doi.org/10.1128/aem.00947-25> <https://journals.asm.org/doi/10.1128/aem.00947-25>

An Estonian start-up raises €1 million to turn sawdust into food

Tambur, Silver estonianworld.com 2023 [An Estonian start-up raises €1 million to turn sawdust into food](#)

Biotehnoloogia idufirma ÄIO veganrasvad jõuavad peagi eestlaste toidulauale

geenius.ee 2023 [Biotehnoloogia idufirma ÄIO veganrasvad jõuavad peagi eestlaste toidulauale](#)

C/N ratio and carbon source-dependent lipid production profiling in *Rhodotorula toruloides*

Lopes, Helberth Júnior Santos; Bonturi, Nemailla; Kerkhoven, Eduard Johannes; Miranda, Everson Alves; Lahtvee, Petri-Jaan Applied Microbiology and Biotechnology 2020 / p. 2639 - 2649 <https://doi.org/10.1007/s00253-020-10386-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Characterization of potassium, sodium and their interactions effects in yeasts

Illarionov, Aleksandr; Lahtvee, Petri-Jaan; Kumar, Rahul, 1978- bioRxiv 2020 / 16 p. : ill <https://doi.org/10.1101/2020.10.22.350355>

A conundrum of r-protein stability : unbalanced stoichiometry of r-proteins during stationary phase in *Escherichia coli*

Reier, Kaspar; Lahtvee, Petri-Jaan; Liiv, Aivar; Remme, Jaanus mBio 2022 / art. e01873-22 : ill <https://doi.org/10.1128/mbio.01873-22> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The design-build-test-learn cycle for investigating lipid synthesis in oleaginous *Rhodotorula toruloides*

Rekena, Alina; Gavrilovic, Srdjan; Lahtvee, Petri-Jaan The 7th applied synthetic biology in Europe : programme and abstracts 2024 / p. 80 <https://bipeek-resources-onsite-prd.s3.amazonaws.com/54015/ASBE7-Programme-and-Abstract-Book.pdf?v=1730830392>

Detailed analysis of metabolism reveals growth-rate-promoting interactions between *Anaerostipes caccae* and *Bacteroides* spp

Kattel, Anna; Morell, Indrek; Aro, Valter; Lahtvee, Petri-Jaan; Vilu, Raivo; Jöers, Arvi; Nahku, Ranno Anaerobe 2023 / art. 102680 <https://doi.org/10.1016/j.anaerobe.2022.102680> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of a dedicated Golden Gate Assembly Platform (RtGGA) for *Rhodotorula toruloides*

Bonturi, Nemailla; Pinheiro, Marina Julio; Oliveira, Paola Monteiro de; Rusadze, Eka; Eichinger, Tobias; Liudžiute, Gintare; De Biaggi, Giuliano Sabedotti; Brauer, Age; Remm, Mado; Miranda, Everson Alves; Ledesma-Amaro, Rodrigo; Lahtvee, Petri-Jaan Metabolic engineering communications 2022 / art. e00200 <https://doi.org/10.1016/j.mec.2022.e00200> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Eesti iduettevõtte kaasas alternatiivsete õlide ja rasvade loomiseks miljon eurot

toostusuudised.ee 2023 [Eesti iduettevõtte kaasas alternatiivsete õlide ja rasvade loomiseks miljon eurot](#) [Eesti idu sai alternatiivsete õlide ja rasvade loomiseks miljon eurot](#)

Eesti iduettevõtte ÄIO sai investoritelt demotehase ehituseks kuus miljonit eurot

arileht.delfi.ee 2024 [Eesti iduettevõtte ÄIO sai investoritelt demotehase ehituseks kuus miljonit eurot](#)

Eesti teadlane: pikem plaan on väähindada CO2 toiduks

geenius.ee 2023 [Eesti teadlane: pikem plaan on väähindada CO2 toiduks](#)

Estonian food tech startup Äio secures €6 million to turn wood into oils

Tambur, Silver estonianworld.com 2024 [Estonian food tech startup Äio secures €6 million to turn wood into oils](#)

Ethylene glycol metabolism in the oleaginous yeast *Rhodotorula toruloides*

Senatore, Vittorio Giorgio; Rekena, Alina; Mapelli, Valeria; Lahtvee, Petri-Jaan; Branduardi, Paola Applied Microbiology and Biotechnology 2025 / art. 114 <https://doi.org/10.1007/s00253-025-13504-3>

Evaluating the impact of toxicities in hemicellulosic hydrolysates during biotechnological valorisation processes

Lipova, Inna; Axelrud Nunes, Andreia; Bonturi, Nemailla; Lahtvee, Petri-Jaan Conference materials "Youth and modern problems of microbiology and virology" : IV young scientists conference, Kyiv, Ukraine, 15-17 November 2022 : Abstracts book 2022 / p. 15 https://imv.org.ua/wp-content/uploads/2022/12/Conference-materials_2022.pdf

Evaluation of enzyme-constrained genome-scale model through metabolic engineering of anaerobic co-production of 2,3-butanediol and glycerol by *Saccharomyces cerevisiae*

Sjöberg, Gustav; Rekena, Alina; Fornstad, Matilda; Lahtvee, Petri-Jaan; Van Maris, Antonius J. A. Metabolic engineering 2024 / p. 49-59 <https://doi.org/10.1016/j.jmben.2024.01.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Exploring the resilience and stability of a defined human gut microbiota consortium : an isothermal microcalorimetric study

Kattel, Anna; Aro, Valter; Lahtvee, Petri-Jaan; Kazantseva, Jekaterina; Jöers, Arvi; Nahku, Ranno; Belouah, Isma MicrobiologyOpen 2024 / art. e1430 <https://doi.org/10.1002/mbo3.1430> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fat-making microbes for greener and sustainable industry

Shapava, Volha; **Lahtvee, Petri-Jaan;** Blomqvist, Johanna; Passoth, Volkmar; **Bonturi, Nemailla;** Einarsson, Hjörleifur; Sigurðarson, Jens J.; Skugor, Stanko; Varland, Marit Fast track to vision 2030 2023 / p. 112-115 <https://www.nordforsk.org/2023/fast-track-vision-2030>

Genome-scale metabolic modeling reveals metabolic trade-offs associated with lipid production in *Rhodotorula toruloides*

Rekena, Alina; Pinheiro, Marina J.; **Bonturi, Nemailla; Belouah, Isma;** Tammekivi, Eliise; Herodes, Koit; Kerkhoven, Eduard J.; **Lahtvee, Petri-Jaan** PLoS computational biology 2023 / art. e1011009 <https://doi.org/10.1371/journal.pcbi.1011009> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Genome-scale modelling-based discovery of metabolic strategies in oleaginous yeast *Rhodotorula toruloides*

Rekena, Alina; Pinheiro, Marina J.; **Bonturi, Nemailla; Belouah, Isma;** Tammekivi, Eliise; Herodes, Koit; Kerkhoven, Eduard J.; **Lahtvee, Petri-Jaan** 8th conference on physiology of yeasts and filamentous fungi (PYFF8) : abstract book 2023 / p. 47-48 https://efbiotechnology.org/images/uploads/PYFF8_Abstract_book.pdf

Idufirmade konkursil osaleja: meie tehnoloogia aitaks vihmametsasid säästa

Pokk, Priit arileht.delfi.ee 2023 [Idufirmade konkursil osaleja: meie tehnoloogia aitaks vihmametsasid säästa](#)

„Järjekord on ukse taga.“ Suurte plaanidega idufirma on juba lõõnud käed soomlaste Valio ja ameeriklaste Kraft Heinziga Liiva, Siiri [„Järjekord on ukse taga.“ Suurte plaanidega idufirma on juba lõõnud käed soomlaste Valio ja ameeriklaste Kraft Heinziga](#) 2023

Kaheksa uut teneuriprofessorit

Sell, Raivo; Pikas, Ergo; Hints, Olle; Veski, Siim; Lahtvee, Petri-Jaan; Ottis, Rain; Kiviste, Mihkel; Ross, Peeter Mente et Manu 2021 / lk. 48-51 : portr [Mente et Manu 1/2021](#) https://www.ester.ee/record=b1242496*est

Kuus aastat unetuid öid, verd, higi ja pisaraid : TalTechi teadlased on leidnud viisi, kuidas toota saepurust toitu

geenius.ee 2023 [Kuus aastat unetuid öid, verd, higi ja pisaraid: TalTechi teadlased on leidnud viisi, kuidas toota saepurust toitu](#)

Metabolic engineering of *Rhodotorula toruloides* for astaxanthin production using Golden Gate Assembly Platform

Lipova, Inna; Gavrilovic, Srdjan; **Bonturi, Nemailla; Lahtvee, Petri-Jaan** Yeast 2023 : ICYGMB31 : 31st International Conference on Yeast Genetics and Molecular Biology, Florence, Italy, 20-25 august, 2023 : Book of abstracts 2023 / p. 257 <https://files.spazioweb.it/ed/08/ed0856fe-fa38-4015-93c9-561144f5b608.pdf>

Metabolic regulation of acetyl-CoA and NADPH production pathways in *Rhodotorula Toruloides*

Rekena, Alina; Gavrilovic, Srdjan; Lahtvee, Petri-Jaan Metabolic Engineering 16 (ME16) : conference proceedings 2025 / art. 706872 <https://aiche.confex.com/aiche/me16/meetingapp.cgi/Paper/706872>

Metabolism control in 3D-printed living materials improves fermentation

Butelmann, Tobias; Priks, Hans; Parent, Zoel; Johnston, Trevor G.; Tamm, Tarmo; Nelson, Alshakim; **Lahtvee, Petri-Jaan; Kumar, Rahul, 1978-** ACS Applied Bio Materials 2021 / p. 7195-7203 <https://doi.org/10.1021/acsabm.1c00754> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multi-omics approach to study the growth efficiency and amino acid metabolism in *Lactococcus lactis* at various specific growth rates

Lahtvee, Petri-Jaan; Adamberg, Kaarel; Arike, Liisa; Nahku, Ranno; Aller, Kadri; Vilu, Raivo Microbial cell factories 2011 / Article no. 12 <https://microbialcellfactories.biomedcentral.com/articles/10.1186/1475-2859-10-12>

Petri-Jaan Lahtvee: pikem plaan on väärindada CO2 toiduks

Lahtvee, Petri-Jaan Mente et Manu 2023 / lk. 14-19 : fot https://www.ester.ee/record=b1242496*est

Potassium and sodium salt stress characterization in the yeasts *Saccharomyces cerevisiae*, *Kluyveromyces marxianus*, and *Rhodotorula toruloides*

Illarionov, Aleksandr; **Lahtvee, Petri-Jaan; Kumar, Rahul, 1978-** Applied and Environmental Microbiology 2021 / art. e03100-20 <https://doi.org/10.1128/AEM.03100-20> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Production and characterization of an exopolysaccharide from an oleaginous yeast

Hamacek, Henrique Sepulveda Del Rio; Tingajeva, Oksana; **Lahtvee, Petri-Jaan; Kumar, Rahul, 1978-** Baltic Polymer Symposium 2025 : 23d International Scientific Conference BPS 2025“Baltic Polymer Symposium 2025” : Book of abstracts 2025 / p.

Protein turnover forms one of the highest maintenance costs in *Lactococcus lactis*

Lahtvee, Petri-Jaan; Seiman, Andrus; **Arike, Liisa;** **Adamberg, Kaarel;** **Vilu, Raivo** Microbiology 2014 / p.1501-1512 : ill
<https://doi.org/10.1099/mic.0.078089-0> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Puidust valguni: TalTechi ja Fibenoli koostöös sündis põnev biotehnoloogiline protsess, mille abil saab puidujäätmetest kas või toitu toota!

digi.geenius.ee 2025 <https://digi.geenius.ee/blogi/teadus-ja-tulevik/puidust-valguni-taltech-i-ja-fibenoli-koostoo-sundis-ponev-biotehnoloogiline-protsess-mille-abil-saab-puidujaatmetest-kasvoi-toitu-toota/>

Pärm ja kohalik saepuru annavad vegantoidule liha meki

Sarv, Mari Öö novaator.err.ee 2023 [Pärm ja kohalik saepuru annavad vegantoidule liha meki](#)

Quantitative omics-level analysis of growth rate dependent energy metabolism in *Lactococcus lactis* = Kvantitatiivsetel oomika-meetoditel põhinev kasvuerikiirusest sõltuv *Lactococcus lactis*'e energiametabolismi analüüs

Lahtvee, Petri-Jaan 2012 https://www.ester.ee/record=b2931362*est

Quantitative systems biology analysis of lipid-producing yeast *Rhodotorula toruloides* cultivation

Rekena, Alina; Pinheiro, Marina Julio; **Pals, Kristjan;** **Belouah, Isma;** **Bonturi, Nemailla;** **Gavrilovic, Srdjan;** Kerkhoven, Eduard Johannes; **Lahtvee, Petri-Jaan** FEBS3+ Baltics : Biochemistry at the Fore Line : Abstract Book 2025 / p. 69 [FEBS3+ Abstract Book \(PDF\)](#)

Quasi steady state growth of *Lactococcus lactis* in glucose-limited acceleration stat (A-stat) cultures

Adamberg, Kaarel; **Lahtvee, Petri-Jaan;** **Valgepea, Kaspar;** **Abner, Kristo;** **Vilu, Raivo** Antonie van Leeuwenhoek 2009 / 3, p. 219-226 <https://pubmed.ncbi.nlm.nih.gov/19184516/>

The role of ATP citrate lyase, phosphoketolase, and malic enzyme in oleaginous *Rhodotorula toruloides*

Rekena, Alina; **Pals, Kristjan;** **Gavrilovic, Srdjan;** **Lahtvee, Petri-Jaan** Applied microbiology and biotechnology 2025 / art. 77
<https://doi.org/10.1007/s00253-025-13454-w>

Saepuruvõie võib jõuda kodukööki

Imeline Teadus 2023 / lk. 20 : fot https://www.ester.ee/record=b2747925*est

Screening and growth characterization of non-conventional yeasts in a hemicellulosic hydrolysate

Monteiro de Oliveira, Paola; Aborneva, Daria; **Bonturi, Nemailla;** **Lahtvee, Petri-Jaan** Frontiers in bioengineering and biotechnology 2021 / art. 659472 <https://doi.org/10.3389/fbioe.2021.659472>

Specific growth rate dependent transcriptome profiling of *Escherichia coli* K12 MG1655 in accelerostat cultures

Nahku, Ranno; **Valgepea, Kaspar;** **Lahtvee, Petri-Jaan;** **Erm, Sten;** **Abner, Kristo;** **Adamberg, Kaarel;** **Vilu, Raivo** Journal of biotechnology 2010 / 1, p. 60-65 <https://www.sciencedirect.com/science/article/pii/S0168165609004726>

Steady state growth space study of *Lactococcus lactis* in D-stat cultures

Lahtvee, Petri-Jaan; **Valgepea, Kaspar;** **Nahku, Ranno;** **Abner, Kristo;** **Adamberg, Kaarel;** **Vilu, Raivo** Antonie van Leeuwenhoek 2009 / 4, p. 487-496 <https://pubmed.ncbi.nlm.nih.gov/19603284/>

Süvatehnoloogiate alternatiivsed arengutrajektoorid ja nende tähendus Eestile : lõpparuanne

Koppel, Kaupo; Kuusik, Alar; Arrak, Kadri; **Raik, Jaan;** **Niidu, Allan;** **Kõks, Kertu-Liis;** **Lahtvee, Petri-Jaan** 2023
<https://media.voog.com/0000/0037/5345/files>

Systems biology approach reveals that overflow metabolism of acetate in *Escheria coli* is triggered by carbon catabolite repression of acetyl-CoA synthetase

Valgepea, Kaspar; **Adamberg, Kaarel;** **Nahku, Ranno;** **Lahtvee, Petri-Jaan;** **Arike, Liisa;** **Vilu, Raivo** BMC systems biology 2010 / p. 166 <https://pubmed.ncbi.nlm.nih.gov/21122111/>

TalTechi hargettevõtte kaasas miljon eurot

Mente et Manu 2023 / lk. 10 https://www.ester.ee/record=b1242496*est

Tartu ülikooli teadlased said kahe rahvusvahelise tippkeskuse arendamiseks 60 miljonit eurot

delfi.ee 2023 [Tartu ülikooli teadlased said kahe rahvusvahelise tippkeskuse arendamiseks 60 miljonit eurot](#)

Thermodynamics-based model-driven discovery of metabolic strategies in oleaginous yeast *Rhodotorula toruloides*

Rekena, Alina; Smith, Edward N.; Heinemann, Matthias; **Lahtvee, Petri-Jaan** Metabolic Engineering 15 (ME15) : conference proceedings 2023 / Art. 52 <https://aiche.confex.com/aiche/me15/meetingapp.cgi/Paper/659438>

Toidutehnoloogia iduettevõtte ÄIO kaasab demotehase ehituseks kuus miljonit eurot

Uuendusliku tehnoloogiaga jätkusuutlikuma toidu-ja kosmeetikatööstuse poole

Aunap, Sigrid Eesti Päevaleht 2023