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Lösningar för hälsa
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1 jan. 2016 → present

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Publikationer

Pressurized hot water extraction (PHWE) of industrial hardwood waste dust: characterization of isolated materials
Nie, Q., Pranovich, A., Korotkova, E., Fatehi, P., Eklund, P. C., Tarasov, D. & Xu, C., feb. 2027, I: Biomass and Bioenergy. 217, 110009.

On the compatibility of lignin derivatives in polylactic acid composites and their 3D printability
Alopaeus, M., Georgs, V., Backman, O., Chrzastowska, J., Eklund, P. C., Pranovich, A. & Xu, C., aug. 2026, I: Industrial Crops and Products. 250, 123989.

Catalytic ozonation of multi-component pharmaceutical mixtures: Kinetic evaluation, molecular interaction, including catalyst structure effects
Tolvanen, P., Nuñez Nuñez, A. F., Duverger, E., Saarinen, N., Shahid, A., Jude Fale, S., Saeid, S., Krakström, M., Kumar, N., Eränen, K., Eklund, P. C., Mikkola, J.-P., Murzin, D. & Salmi, T., 15 maj 2026, I: Applied Catalysis B: Environmental. 385, 126274.

Active lignin stabilization in lignocellulosic biomass fractionation: mechanisms and advancements
Schröder, A., Wu, R., Eklund, P., Grénman, H. & Xu, C., 20 apr. 2026, I: Green Chemistry. 28, 15, s. 6562-6584

Characterization of oat husk soda lignin from a Finnish biorefinery process
Bhadane, R. R., Vähäsalo, L., Xu, C. & Eklund, P. C., 13 okt. 2025, I: Biomass and Bioenergy. 205, 108490.

Lignin-Grafted Poly(n-Butyl Acrylate) Copolymers as Soft Materials for Adhesive Applications: A Comparison of Hardwood, Softwood, and Straw Lignin
Bhadane, R., Backman, O., Uppstu, P., Smått, J.-H., Xu, C. & Eklund, P. C., 14 juli 2025, I: Biomacromolecules. 26, 7, s. 4095-4107 13 s.

SP-LCC — a dataset on the structure and properties of lignin-carbohydrate complexes from hardwood
Alopaeus, M., Stosiek, M., Diment, D., Löfgren, J., Cho, M., Hemming, J., Tirri, T., Pranovich, A., Eklund, P. C., Rigo, D., Balakshin, M., Xu, C. & Rinke, P., 13 juni 2025, I: Scientific Data. 12, 1, 996.

Insights Into Molecular Interactions and Biological Effect of Natural Stilbenoids at The TRPA1 Ion Channel
Saadabadi, A., Rantanen, M., Marimuthu, P., Koivisto, A.-P., Eklund, P. C. & Salo-Ahen, O. M. H., 1 feb. 2025, I: ChemMedChem. 20, 3, e202400501.

Isolation of stilbenoids from fresh knotwood of Scots pine using a high yield method
Saadabadi, A., Korotkova, E. & Eklund, P. C., 1 juli 2024, I: Holzforschung. 78, 7, s. 363-370

Evolution of Self-Assembled Lignin Nanostructure into Dendritic Fiber in Aqueous Biphasic Photocurable Resin for DLP-Printing
Wang, L., Wu, R., Wang, Q., Backman, O., Eklund, P. C., Wang, X. & Xu, C., 21 mars 2024, I: Advanced Functional Materials. 34, 29, 2315679.

Investigating the Effectiveness of Different Porous Nanoparticles as Drug Carriers for Retaining the Photostability of Pinosylvin Derivative
Howaili, F., Saadabadi, A., Mäkilä, E., Korotkova, E., Eklund, P. C., Salo-Ahen, O. M. H. & Rosenholm, J. M., 15 feb. 2024 , I: Pharmaceutics. 16, 2, 17 s., 276.

Stilbenoid compounds inhibit NF-κB-mediated inflammatory responses in the Drosophila intestine
Aalto, A. L., Saadabadi, A., Lindholm, F., Kietz, C., Himmelroos, E., Marimuthu, P., Salo-Ahen, O. M. H., Eklund, P. & Meinander, A., 22 sep. 2023, I: Frontiers in Immunology. 14, 12 s., 1253805.

Template-Directed Polymerization of Binary Acrylate Monomers on Surface-Activated Lignin Nanoparticles in Toughening of Bio-Latex Films
Wang, L., Wang, Q., Rosqvist, E., Smått, J.-H., Yong, Q., Lassila, L., Peltonen, J., Rosenau, T., Toivakka, M., Willför, S., Eklund, P. C., Xu, C. & Wang, X., 14 juni 2023, I: Small. 19, 24, 15 s., 2207085.

Transformations and antioxidative activities of lignans and stilbenes at high temperatures
Runeberg, P., Ryabukhin, D., Lagerquist, L., Rahkila, J. & Eklund, P., 15 mars 2023, I: Food Chemistry. 404, part B, 134641.

Insect repellent composition and a method of repelling insects
Eriksson, J. (Uppfinnare), Paul, P. (Uppfinnare), Rajendran, S. (Uppfinnare) & Eklund, P. C. (Uppfinnare), 24 nov. 2022, Prioritetsdatum 21 maj 2021

O_2 as initiator of autocatalytic degradation of hemicelluloses and monosaccharides in hydrothermal treatment of spruce
Rissanen, J. V., Lagerquist, L., Eränen, K., Hemming, J., Eklund, P. & Grènman, H., 1 okt. 2022, I: Carbohydrate Polymers. 293, 119740.

Intensification of Hydrothermal Biomass Fractionation with the Help of Oxygen: Kinetics and Modeling
Rissanen, J. V., Lagerquist, L., Hemming, J., Eränen, K., Eklund, P. & Grénman, H., 26 sep. 2022, I: ACS Sustainable Chemistry and Engineering. 10, 38, s. 12808-12816 9 s.

Method for preparation of lignin-based latex for binding and coating applications
Wang, L. (Uppfinnare), Wang, X. (Uppfinnare), Eklund, P. C. (Uppfinnare), Koppolu, R. (Uppfinnare), Toivakka, M. (Uppfinnare) & Xu, C. (Uppfinnare), 23 juni 2022, (Inskickad) Patentnr 20225569 (inskickad), Prioritetsdatum 23 juni 2022

Reductive Catalytic Depolymerization of Semi-industrial Wood-Based Lignin
Lu, X., Lagerquist, L., Eränen, K., Hemming, J., Eklund, P., Estel, L., Leveneur, S. & Grénman, H., 1 dec. 2021, I: Industrial and Engineering Chemistry Research. 60, 47, s. 16827–16838

High recovery of stilbene glucosides by acetone extraction of fresh inner bark of Norway spruce
Saadabadi, A., Ahmed, A., Smeds, A. I. & Eklund, P. C., 1 nov. 2021, I: Holzforschung. 75, 11, s. 1012-1018 7 s.

Wood Extractives of Silver Fir and Their Antioxidant and Antifungal Properties
Vek, V., Kerzic, E., Poljansek, I., Eklund, P., Humar, M. & Oven, P., nov. 2021, I: Molecules. 26, 21

Identification and Quantification of Transformation Products Formed during the Ozonation of the Non-steroidal Anti-inflammatory Pharmaceuticals Ibuprofen and Diclofenac
Kråkström, M., Saeid, S., Tolvanen, P., Kumar, N., Salmi, T., Kronberg, L. & Eklund, P. C., 21 mars 2021, (E-pub före tryck) I: Ozone: Science and Engineering.

Determination of chemical shifts in 6-condensed syringylic lignin model compounds
Lagerquist, L., Rahkila, J. & Eklund, P., 2021, I: Holzforschung.

Fate of antioxidative compounds within bark during storage: A case of Norway spruce logs
Jyske, T., Brännström, H., Sarjala, T., Hellström, J., Halmemies, E., Raitanen, J. E., Kaseva, J., Lagerquist, L., Eklund, P. & Nurmi, J., 15 sep. 2020, I: Molecules. 25, 18, 21 s., 4228.

Occurrence of Antibiotics in Influent and Effluent from 3 Major Wastewater-Treatment Plants in Finland
Kortesmäki, E., R Östman, J., Meierjohann, A., Brozinski, J.-M., Eklund, P. C. & Kronberg, L., sep. 2020, I: Environmental Toxicology and Chemistry. 39, 9, s. 1774–1789

One-pot propargylation and Claisen-type rearrangement for natural lignans matairesinol and α-conidendrin
Riabukhin, D., Lagerquist, L., Rahkila, J. & Eklund, P. C., 22 aug. 2020, I: Chemistry of Heterocyclic Compounds. 56, 7, s. 949-952 4 s.

Tailored thermosetting wood adhesive based on well-defined hardwood lignin fractions
Wang, L., Lagerquist, L., Zhang, Y., Koppolu, R., Tirri, T., Sulaeva, I., von Schoultz, S., Vähäsalo, L., Pranovich, A., Rosenau, T., Eklund, P. C., Willför, S., Xu, C. & Wang, X., 11 aug. 2020, I: ACS Sustainable Chemistry and Engineering. 8 , 35, s. 13517–13526

Synthesis and characterization of metal modified catalysts for decomposition of ibuprofen from aqueous solutions
Saeid, S., Kråkström, M., Tolvanen, P., Kumar, N., Eränen, K., Peurla, M., Mikkola, J. P., Maël, L., Kronberg, L., Eklund, P. & Salmi, T., 14 juli 2020, I: Catalysts. 10, 7, 786.

Catalytic ozonation of the antibiotic sulfadiazine: reaction kinetics and transformation mechanisms
Kråkström, M., Saeid, S., Tolvanen, P., Salmi, T., Eklund, P. C. & Kronberg, L., maj 2020, I: Chemosphere. 247, s. – 125853.

Ozonation of carbamazepine and its main transformation products: Product determination and reaction mechanisms
Kråkström, M., Saeid, S., Tolvanen, P., Kumar, N., Salmi, T., Kronberg, L. & Eklund, P., 25 apr. 2020, I: Environmental Science and Pollution Research. 27, 18, s. 23258-23269 12 s.

Formation of Tetrahydrofurano-, Aryltetralin, and Butyrolactone Norlignans through the Epoxidation of 9-Norlignans
Runeberg, P., Agustin, D. & Eklund, P. C., 5 mars 2020, I: Molecules. 25, 5, s. – 1160.

Enhancement of Norway spruce bark side-streams: Modification of bioactive and protective properties of stilbenoid-rich extracts by UVA-irradiation
Välimaa, A. L., Raitanen, J. E., Tienaho, J., Sarjala, T., Nakayama, E., Korpinen, R., Mäkinen, S., Eklund, P., Willför, S. & Jyske, T., mars 2020, I: Industrial Crops and Products. 145, 112150.

Pt Modified Heterogeneous Catalysts Combined with Ozonation for the Removal of Diclofenac from Aqueous Solutions and the Fate of by-Products
Saeid, S., Kråkström, M., Tolvanen, P., Kumar, N., Eränen, K., Mikkola, J. P., Kronberg, L., Eklund, P., Aho, A., Palonen, H., Perula, M., Shchukarev, A. & Salmi, T., mars 2020, I: Catalysts. 10, 3, 322.

Advanced Oxidation Process for Degradation of Carbamazepine from Aqueous Solution: Influence of Metal Modified Microporous, Mesoporous Catalysts on the Ozonation Process
Saeid, S., Kråkström, M., Tolvanen, P., Kumar, N., Eränen, K., Mikkola, J.-P., Kronberg, L., Eklund, P. C., Peurla, M., Aho, A., Shchukarev, A. & Salmi, T., 2020, I: Catalysts. 10, 1, s. –

9-Norlignans: Occurrence, Properties and Their Semisynthetic Preparation from Hydroxymatairesinol
Eklund, P. C. & Raitanen, J.-E., 2019, I: Molecules. 24, 2, s. – 12 s.

Chemical characterisation of polymerised extractives in bleached birch kraft pulp
Smeds, A., Vähäsalo, L., Rahkila, J., Eklund, P. C. & Willför, S., 2019, I: Holzforschung. 73, 11, s. 1017–1033 17 s.

Oxidative transformations of lignans
Runeberg, P., Brusentsev, Y., Rendon, S. & Eklund, P. C., 2019, I: Molecules. 24, 2, s. –

Structural and thermal analysis of softwood lignins from a pressurized hot water extraction biorefinery process and modified derivatives
Lagerquist, L., Pranovich, A., Sumerskii, I., von Schoultz, S., Vähäsalo, L., Willför, S. & Eklund, P. C., 2019, I: Molecules. 24, 2, s. – 15 s.

Synthesis and Evaluation of Anisomelic acid-like Compounds for the Treatment of HPV-Mediated Carcinomas
Senthilkumar, R., Brusentsev, Y., Paul, P., Marimuthu, P., Cheng, F., Eklund, P. C. & Eriksson, J., 2019, I: Scientific Reports. 9, s. – 20295.

Tsuji–Wacker-Type Oxidation beyond Methyl Ketones: Reacting Unprotected Carbohydrate-Based Terminal Olefins through the "Uemura System" to Hemiketals and α,β-Unsaturated Diketones
Runeberg, P. & Eklund, P. C., 2019, I: Organic Letters. 21, 20, s. 8145–8148

Utilization of P-31 PULCON for Quantitative Hydroxyl Group Determination in Lignin by NMR Spectroscopy
Lagerquist, L., Rahkila, J. & Eklund, P. C., 2019, I: ACS Sustainable Chemistry and Engineering. 7, 9, s. 9002–9006 9 s.

Abatement of amoxicillin and doxycycline in binary and ternary aqueous solutions by gas-phase pulsed corona discharge oxidation
Sokolov, A., Kråkström, M., Eklund, P. C., Kronberg, L. & Louhi-Kultanen, M., 2018, I: Chemical Engineering Journal. 334 , s. 673–681

Characterization of high-molar-mass fractions in a Scots pine (Pinus sylvestris L.) knotwood ethanol extract
Smeds, A., Eklund, P. C. & Willför, S., 2018, I: Holzforschung. 72, 3, s. 201–213 13 s.

Handheld colorimeter as quality control tool for inkjet printed flexible levothyroxine doses for pediatric use
Wickström, H., Broos, A., Nyman, J., Kortesmäki, E., Eklund, P. C., de Beer, T., Preis, M., Sandler, N., Salunke, S. (Redaktör) & Tuleu, C. (Redaktör), 2018, I: International Journal of Pharmaceutics. 536, 2, s. 508–509

Non-thermal gas-phase pulsed corona discharge for lignin modification
Sokolov, A., Lagerquist, L., Eklund, P. C. & Louhi-Kultanen, M., 2018, I: Chemical Engineering and Processing. 126, s. 141–149 9 s.

Structural analysis of lignin isolated from a novel biorefinery process and identification of condensed structures using 2D NMR
Lagerquist, L., Eklund, P. C., Eichhorn, S. J. (Redaktör) & Roman, M. (Redaktör), 2018

Structural characterization of birch lignin isolated from a pressurized hot water extraction and mild alkali pulped biorefinery process
Lagerquist, L., Pranovich, A., Smeds, A., von Schoultz, S., Vähäsalo, L., Rahkila, J., Kilpeläinen, I., Tamminen, T., Willför, S. & Eklund, P. C., 2018, I: Industrial Crops and Products. 111, s. 306–316 11 s.

Compounds for use for treatment of HPV-induced carcinoma
Eriksson, J. (Uppfinnare), Paul, P. (Uppfinnare), Rajendran, S. (Uppfinnare), Eklund, P. C. (Uppfinnare), Cheng, F. (Uppfinnare) & Brusentsev, Y. (Uppfinnare), 2017, Patentnr 3179998 (europa), Prioritetsdatum 17 aug. 2015

Chemical characterization of high-molar-mass fractions in a Norway spruce knotwood ethanol extract
Smeds, A., Eklund, P. C. & Willför, S., 2016, I: Phytochemistry. 130, s. 207–217

Synthesis of chiral phosphorous and phosphoric acid derivatives from the lignans matairesinol and conidendrin
Brusentsev, Y. & Eklund, P. C., 2016, I: Synlett. 27, 18, s. 2557–2560

Transforming undergraduate students into junior researchers: oxidation–reduction sequence as a problem-based case study
Saloranta-Simell, T., Lönnqvist, J.-E. & Eklund, P. C., 2016, I: Journal of Chemical Education. 93, 5, s. 841–846 6 s.

Composite films of nanofibrillated cellulose and O-acetyl galactoglucomannan (GGM) coated with succinic esters of GGM showing potential as barrier material in food packaging
Kisonen, V., Prakobna, K., Xu, C., Salminen, A., Mikkonen, K. S., Valtakari, D., Eklund, P. C., Seppälä, J., Tenkanen, M. & Willför, S., 2015, I: Journal of Materials Science. 50, 8, s. 3189–3199 11 s.

Synthesis and applications of diphosphine ligands derived from the lignan hydroxymatairesinol
Brusentsev, Y. & Eklund, P. C., 2015, I: Catalysis Today. 241 Part B, s. 260–263

The effect of density functional dispersion correction (DFT-D3) on lignans
Sandberg, T. & Eklund, P. C., 2015, I: Computational and Theoretical Chemistry. 1067, s. 60–63 4 s.

Cationised O-acetyl galactoglucomannans: synthesis and characterisation
Kisonen, V., Xu, C., Eklund, P. C., Lindqvist, H., Sundberg, A., Pranovich, A., Sinkkonen, J., Vilaplana, F. & Willför, S., 2014, I: Carbohydrate Polymers. 99, s. 755–764

O-acetyl galactoglucomannan esters for barrier coatings
Kisonen, V., Xu, C., Bollström, R., Hartman, J., Rautkoski, H., Nurmi, M., Hemming, J., Eklund, P. C. & Willför, S., 2014, I: Cellulose. 21, 6, s. 4497–4509 13 s.

Rational evaluation of the utilization of PEG-PEI copolymers for the facilitation of silica nanoparticulate systems in biomedical applications.
Sen Karaman, D., Gulin-Sarfraz, T., Hedström, G., Duchanoy, A., Eklund, P. C. & Rosenholm, J., 2014, I: Journal of Colloid and Interface Science. 418, s. 300–310

Targeted allylation and propargylation of galactose-containing polysaccharides in water
Leppänen, A.-S., Xu, C., Parikka, K., Eklund, P. C., Sjöholm, R., Brumer, H., Tenkanen, M. & Willför, S., 2014, I: Carbohydrate Polymers. 100, s. 46–54

Amphiphilic Spruce Galactoglucomannan Derivatives Based on Naturally-Occurring Fatty Acids
Dax, D., Eklund, P. C., Hemming, J., Sarfraz, J., Backman, P., Xu, C. & Willför, S., 2013, I: BioResources. 8, 3, s. 3771–3790 20 s.

Computational Chemistry Studies of LIGNOLs
Sandberg, T., Eklund, P. C. & Hotokka, M., 2013, I: Lecture Notes in Computer Science. 7782, s. 553–557 5 s.

Corrigendum to "The antimicrobial effects of wood-associated polyphenols on food pathogens and spoilage organisms." [Int. J. Food Microbiol. 164 (2013) 99-107]
Plumed-Ferrer, C., Väkeväinen, K., Komulainen, H., Rautiainen, M., Smeds, A., Raitanen, J.-E., Eklund, P., Willför, S., Alakomi, H.-L., Saarela, M. & von Wright, A., 2013, I: International Journal of Food Microbiology. 166, 1, s. 163

Evaluation of selective extraction methods for recovery of polyphenols from pine
Fang, W., Hemming, J., Reunanen, M., Eklund, P. C., Conde Pineiro, E., Poljanšek, I., Oven, P. & Willför, S., 2013, I: Holzforschung. 67, 8, s. 843–851 9 s.

Synthesis and structural analysis of sterically hindered chiral 1,4-diol ligands derived from the lignan hydroxymatairesinol
Brusentsev, Y., Sandberg, T., Hotokka, M., Sjöholm, R. & Eklund, P. C., 2013, I: Tetrahedron Letters. 54, 9, s. 1112–1115 4 s.

Synthesis of sterically hindered chiral 1,4-diols from different lignan-based backbones
Brusentsev, Y., Hänninen, M. M. & Eklund, P. C., 2013, I: Synlett. 24, 18, s. 2423–2426

Targeted Functionalization of Spruce O-Acetyl Galactoglucomannans-2,2,6,6-Tetramethylpiperidin-1-oxyl-oxidation and Carbodiimide-Mediated Amidation
Leppänen, A.-S., Xu, C., Eklund, P., Lucenius, J., Österberg, M. & Willför, S., 2013, I: Journal of Applied Polymer Science. 130, 5, s. 3122–3129 8 s.

The antimicrobial effects of wood-associated polyphenols on food pathogens and spoilage organisms.
Plumed-Ferrer, C., Väkeväinen, K., Komulainen, H., Rautiainen, M., Smeds, A., Raitanen, J.-E., Eklund, P. C., Willför, S., Alakomi, H.-L., Saarela, M. & von Wright, A., 2013, I: International Journal of Food Microbiology. 164, 1, s. 99–107

The antitumor lignan Nortrachelogenin sensitizes prostate cancer cells to TRAIL-induced cell death by inhibition of the Akt pathway and growth factor signaling.
Peuhu, E., Paul, Preethy, P., Holmbom, Eklund, P. C., Sjöholm, R. & Eriksson, J., 2013, I: Biochemical Pharmacology. 86 , 5, s. 571–583

Chemical characterization of polymerized products formed in the reactions of matairesinol and pinoresinol with the stable radical 2,2-diphenyl-1-picrylhydrazyl
Smeds, A. I., Eklund, P. C., Monogioudi, E. & Willfor, S. M., mars 2012, I: Holzforschung. 66, 3, s. 283-294

Antithrombotic properties of sulfated wood-derived galactoglucomannans
Doliska, A., Willför, S., Strnad, S., Ribitsch, V., Stana Kleinschek, K., Eklund, P. C. & Chunlin, X., 2012, I: Holzforschung. 66, 2, s. 149–154 6 s.

Conformational Solvation Studies of LIGNOLs with Molecular Dynamics and Conductor-Like Screening Model
Sandberg, T., Eklund, P. C. & Hotokka, M., 2012, I: International Journal of Molecular Sciences. 13, 8, s. 9845–9863 19 s.

Content, composition, and stereochemical characterisation of lignans in berries and seeds
Smeds, A., Eklund, P. C. & Willför, S., 2012, I: Food Chemistry. 134, 4, s. 1991–1998 8 s.

Hydrophobication and characterisation of O-acetyl-galactoglucomannan for papermaking and barrier applications
Kisonen, V., Eklund, P. C., Auer, M., Sjöholm, R., Pranovich, A., Hemming, J., Sundberg, A., Aseyev, V. & Willför, S., 2012, I: Carbohydrate Research. 352, s. 151–158

Identification of new lignans in Norway spruce knotwood extracts
Smeds, A., Cesková, I., Eklund, P. C. & Willför, S., 2012, I: Holzforschung. 66, 5, s. 553–567 15 s.

Studies Related to Norway Spruce Galactoglucomannans: Chemical Synthesis, Conformation Analysis, NMR Spectroscopic Characterization, and Molecular Recognition of Model Compounds
Ekholm, F. S., Ardá, A., Eklund, P. C., André, S., Gabius, H.-J., Jiménez-Barbero, J. & Leino, R., 2012, I: Chemistry - A European Journal. 18, 45, s. 14392–14405 14 s.

Syntheses and applications of chirally pure phosphine ligands from the natural lignan hydroxymataresinol
Brusentsev, Y. & Eklund, P. C., 2012, I: Abstracts of Papers of the American Chemical Society. 243, s. – 1 s.

Targeted modification of galactose-containing polysaccharides
Leppänen, A.-S., Xu, C., Parikka, K., Eklund, P. C., Tenkanen, M. & Willför, S., 2012, I: Abstracts of Papers of the American Chemical Society. 243, s. – 1 s.

Carboxymethylated spruce galactoglucomannans: preparation, characterisation, dispersion stability, water-in-oil emulsion stability, and sorption on cellulose surface
Xu, C., Eckerman, C., Smeds, A., Reunanen, M., Eklund, P. C., Sjöholm, R. & Willför, S., 2011, I: Nordic Pulp and Paper Research Journal. 26, 2, s. 167–178 12 s.

Isomerism of [Cu-64-NOTA-Bn]-Labeled Radiotracers: Separation of Two Complex Isomers and Determination of Their Interconversion Energy Barrier Using Ion Pair Chromatography
Schlesinger, J., Rajander, J., Ihalainen, J. A., Ramesh, D., Eklund, P. C., Fagerholm, V., Nuutila, P. & Solin, O., 2011, I: Inorganic Chemistry. 50, 10, s. 4260–4271 12 s.

Lignans as food constituents with estrogen and antiestrogen activity
Aehle, E., Müller, U., Eklund, P. C., Willför, S., Sippl, W. & Dräger, B., 2011, I: Phytochemistry. 72, 18, s. 2396–2405

Structural analysis of sterically hindered 1,4-diols from the naturally occurring lignan hydroxymatairesinol a quantum chemical study
Sandberg, T., Brusentsev, Y., Eklund, P. C. & Hotokka, M., 2011, I: International Journal of Quantum Chemistry. 111, 15, s. 4309–4317 9 s.

Acetylation and characterization of spruce (Picea abies) galactoglucomannans
Xu, C., Leppänen, A.-S., Eklund, P. C., Holmlund, P., Sjöholm, R., Sundberg, K. & Willför, S., 2010, I: Carbohydrate Research. 345, 6, s. 810–816 7 s.

A short semi-synthesis and complete NMR-spectroscopic characterization of the naturally occurring lignan glycoside matairesinol 4,4 '-di-O-beta-D-diglucoside
Ekholm, F. S., Eklund, P. C. & Leino, R., 2010, I: Carbohydrate Research. 345, 13, s. 1963–1967 5 s.

Lignans and Norlignans Inhibit Multidrug Resistance Protein 1 (MRP1/ABCC1)-mediated Transport
Wróbel, A., Eklund, P. C., Bobrowska-Hägerstrand, M. & Hägerstrand, H., 2010, I: Anticancer Research. 30, 11, s. 4423–4428 6 s.

Metal-mediated allylation of enzymatically oxidized methyl alpha-D-galactopyranoside
Leppänen, A.-S., Niittymäki, O., Parikka, K., Tenkanen, M., Eklund, P. C., Sjöholm, R. & Willför, S., 2010, I: Carbohydrate Research. 345, 18, s. 2610–2615 6 s.

A novel and efficient synthesis of highly oxidized lignans by a methyltrioxorhenium/hydrogen peroxide catalytic system. Studies on their apoptogenic and antioxidant activity
Bernini, R., Gualandi, G., Crestini, C., Barontini, M., Cristina Belfiore, M., Willför, S., Eklund, P. C. & Saladino, R., 2009, I: Bioorganic and Medicinal Chemistry. 17, 15, s. 5676–5682 7 s.

A selective de-O-methylation of guaiacyl lignans to corresponding catechol derivatives by 2-iodoxybenzoic acid (IBX). The role of the catechol moiety on the toxicity of lignans
Bernini, R., Barontini, M., Mosesso, P., Pepe, G., Willför, S. M., Sjöholm, R. E., Eklund, P. C. & Saladino, R., 2009, I: Organic and Biomolecular Chemistry. 7, 11, s. 2367–2377 11 s.

Pinobatol - a novel spirodienone sesquineolignan
Sinkkonen, J., Liimatainen, J., Karonen, M., Wiinamaki, K., Eklund, P. C., Sjoholm, R. & Pihlaja, K., 2009, I: Planta Medica. 75, 9, s. 927–927 1 s.

Structural Investigation of Biologically Active Phenolic Compounds Isolated from European Tree Species
Redzynia, I., Ziólkowska, N. E., Majzner, W. R., Willför, S., Sjöholm, R., Eklund, P. C. & Bujacz, G., 2009, I: Molecules. 14 , 10, s. 4147–4158 12 s.

Effect of the extraction method on the lignan yield from different plant materials
Willför, S., Holmbom, B., Eklund, P. C., Sjoholm, R. & Smeds, A., 2008, I: Planta Medica. 74, 9, s. 918–918 1 s.

Identification of lignans by liquid chromatography-electrospray ionization ion-trap mass spectrometry
Eklund, P. C., Josefin Backman, M., Kronberg, L., Smeds, A. & Sjöholm, R., 2008, I: Journal of Mass Spectrometry. 43, 1, s. 97–107 11 s.

Semisynthesis and cytotoxicity of some guaiacyl type 9-norlignans
Eklund, P. C. & Sjöholm, R., 2008, I: Planta Medica. 74, 9, s. 1146–1146 1 s.

Antioxidant flavonoids from knotwood of Jack pine and European aspen
Neacsu, M., Eklund, P. C., Sjöholm, R., P. Pietarinen, S., O. Ahotupa, M., Holmbom, B. & Willför, S., 2007, I: European Journal of Wood and Wood Products. 65, 1, s. 1–6 6 s.

A Sesquineolignan with a Spirodienone Structure from Pinus sylvestris L.
Dr., J. S., JaanaLiimatainen, Karonen, M., Wiinamäki, K., Eklund, P. C., Sjöholm, R. & Prof. Dr., K. P., 2007, I: Angewandte Chemie International Edition. 46, 22, s. 4148–4150 3 s.

Quantification of a broad spectrum of lignans in cereals, oilseeds, and nuts
Smeds, A., Eklund, P. C., Sjöholm, R., Willför, S., Nishibe, S., Deyama, T. & Holmbom, B., 2007, I: Journal of Agricultural and Food Chemistry. 55, 4, s. 1337–1346 10 s.

Rhamnosylation of lignans by a Streptomyces strain
Eklund, P. C., Holmström, T., Al-Ubaydy, L., Sjöholm, R. & Hakala, J., 2006, I: Tetrahedron Letters. 47, 10, s. 1645–1648 4 s.

The plant lignans matairesinol and secoisolariciresinol administered to Min mice do not protect against intestinal tumor formation
Pajari, A.-M., Smeds, A., Oikarinen, S. I., Eklund, P. C., Sjöholm, R. & Mutanen, M., 2006, I: Cancer Letters. 233, 2, s. 309–314 6 s.

Bioactive phenolic substances in industrially important tree species. Part 4: Identification of two new 7-hydroxy divanillyl butyrolactol lignans in some spruce, fir, and pine species
Willför, S., Eklund, P. C., Sjöholm, R., Reunanen, M., Sillanpää, R., von Schoultz, S., Hemming, J., Nisula, L. & Holmbom, B., 2005, I: Holzforschung. 59, 4, s. 413–417 5 s.

Chemical studies on antioxidant mechanisms and the free radical scavenging properties of Lignans
Eklund, P. C., Långvik, O., Wärnå, J., Salmi, T., Willför, S. & Sjöholm, R., 2005, I: Organic and Biomolecular Chemistry. 2005, 3, s. 3336–3347

Hydrogenolysis of hydroxymatairesinol over carbon-supported palladium catalysts
Markus, H., Mäki-Arvela, P., Kumar, N., Kul'kova, N. V., Eklund, P. C., Sjöholm, R., Holmbom, B., Salmi, T. & Murzin, D., 2005, I: Catalysis Letters. 103, 1-2, s. 125–131 7 s.

New lignans identified in softwoods
Willför, S., Eklund, P., Sundell, F., Smeds, A., Reunanen, M., Von Schoultz, S., Sjöholm, R., Sillanpää, R., Nisula, L. & Holmbom, B., 2005, I: Appita Annual Conference. 3, s. 421-425 5 s.

Pinoresinol-lariciresinol reductases with different stereospecificity from Linum album and Linum usitatissimum
von Heimendahl, C. B. I., Schäfer, K. M., Eklund, P. C., Sjöholm, R., Schmidt, T. J. & Fuss, E., 2005, I: Phytochemistry. 66 , 11, s. 1254–1263 10 s.

A new lariciresinol-type butyrolactone lignan derived from hydroxymatairesinol and its identification in spruce wood
Eklund, P. C., Willför, S. M., Smeds, A. I., Sundell, F. J., Sjöholm, R. E. & Holmbom, B. R., 2004, I: Journal of Natural Products.

Oligolignans in Norway spruce and Scots pine knots and Norway spruce stemwood
Willför, S., Reunanen, M., Eklund, P. C., Sjöholm, R., Kronberg, L., Fardim, P., Pietarinen, S. & Holmbom, B., 2004, I: Holzforschung. 58, 4, s. 345–354 10 s.

The molecular structure and some properties of hydroxymatairesinol. An ab initio study
Taskinen, A., Eklund, P. C., Sjöholm, R. & Hotokka, M., 2004, I: Journal of Molecular Structure: THEOCHEM. 677, 1-3, s. 113–124 12 s.

Antioxidant Activity of Knotwood Eextractives and Phenolic Compounds of Selected Tree Species
Willför, S. M., Ahotupa, M. O., Hemming, J. E., Reunanen, M. H. T., Eklund, P. C., Sjöholm, R. E., Eckerman, C. S. E., Pohjamo, S. P. & Holmbom, B. R., 2003, I: Journal of Agricultural and Food Chemistry. 51, 26, s. 7600–7606 7 s.

Knots in trees - a new rich source of lignans
Holmbom, B., Eckerman, C., Eklund, P. C., Hemming, J., Nisula, L., Reunanen, M., Sjöholm, R., Sundberg, A., Sundberg, K. & Willför, S., 2003, I: Phytochemistry Reviews. 2, 3, s. 331–340

Synthesis of (-)-Matairesinol, (-)-Enterolactone, and (-)-Enterodiol from the Natural Lignan Hydroxymatairesinol
Eklund, P. C., Lindholm, A., Mikkola, J.-P., Smeds, A., Lehtilä, R. & Sjöholm, R., 2003, I: Organic Letters. 5, 4, s. 491–493 3 s.

Synthetic transformation of hydroxymatairesinol from Norway spruce (Picea abies) to 7-hydroxysecoisolariciresinol, (+)-lariciresinol and (+)-cyclolariciresinol
Eklund, P. C., Sillanpää, R. & Sjöholm, R., 2002, I: Journal of the Chemical Society, Perkin Transactions 1. 16, s. 1906–1910 5 s.

Aktiviteter

Lignin Workshop 2025: "Lignin to X – Challenges and Potential"
Xu, C. (Organisatör), Grénman, H. (Organisatör), Eklund, P. C. (Organisatör) & Zhang, H. (Organisatör)
20 aug. 2025 → 21 aug. 2025

Hamid Ardeshiri Lordejani
Salo-Ahen, O. (Värd) & Eklund, P. C. (Värd)
20 apr. 2024 → 31 dec. 2024

Gabriel Burlaud
Eklund, P. C. (Värd)
4 apr. 2022 → 17 juni 2022

Marleny Caceres
Eklund, P. C. (Värd)
23 jan. 2022 → 30 jan. 2022

Projekt

Bio4all
Grénman, H. (Ansvarig forskare), Hupa, L. (CoPI) & Eklund, P. C. (CoPI)
Business Finland
01/03/24 → 30/08/26

CIMANET: Circular Materials Bioeconomy Doctoral Education Network
Xu, C. (Ansvarig forskare), Grénman, H. (CoPI), Eklund, P. C. (Ansvarig forskare) & Toivakka, M. (Ansvarig forskare)
01/08/24 → 31/12/27

D2V: From Dust to Value - Circular bio-based residues
Xu, C. (Ansvarig forskare), Eklund, P. C. (CoPI), Wang, L. (CoI), Tarasov, D. (CoI), Nie, Q. (CoI) & Bhadane, R. R. (CoI)
Business Finland
01/09/23 → 31/05/27

LigninReSurf: Novel Fiber Surfaces Functionalized by Lignins Refined and Engineered from Finnish Biorefinery Processes
Xu, C. (Ansvarig forskare) & Eklund, P. C. (Ansvarig forskare)
Business Finland
01/01/21 → 31/12/23

Depoly2ols: Tailored polyphenols and polyols from fractionation and depolymerization of biorefinery lignins
Grénman, H. (Ansvarig forskare), Xu, C. (CoPI) & Eklund, P. C. (CoPI)
Business Finland
01/01/24 → 31/12/26

Merits in teaching and pedagogical competence and leadership

2015-2019Head of teaching in Natural Sciences (utbildningslinjeansvarig)
2018-2023Head of the master program in chemistry (magisterprogramansvarig)
2015-2019Member of the board of education at Åbo Akademi University

Pedagogical training:University pedagogics (25 credits)
Supervision: Phd-Students 6; M.Sc. Thesis 23; B.Sc. Thesis 28