

Joseph Nesme
Postdoc
Microbiology
Postadresse:
Universitetsparken 15
2100
København Ø
E-mail: joseph.nesme@bio.ku.dk
Telefon: +4535336957
Hjemmeside: <https://twitter.com/jnesme>

Ansættelse

Postdoc
Microbiology
Københavns Universitet
København Ø
1 jun. 2017 → nu

Publikationer

Horizontal transmission of a multidrug-resistant IncN plasmid isolated from urban wastewater

Yu, Z., Wang, Q., Pinilla Redondo, Rafael, Madsen, Jonas Stenlørkke, Clasen, K. A. D., Ananbeh, H., Olesen, Asmus Kalckar, Gong, Zhuang, Yang, Nan, Dechesne, A., Smets, B., Nesme, Joseph & Sørensen, Søren Johannes, 2024, I: *Ecotoxicology and Environmental Safety*. 271, 12 s., 115971.

Insights into the circular: The cryptic plasmidome and its derived antibiotic resistome in the urban water systems

Yu, Z., He, Wanli, Klincke, F., Madsen, Jonas Stenlørkke, Kot, Witold, Hansen, Lars Hestbjerg, Quintela-Baluja, M., Balboa, S., Dechesne, A., Smets, B., Nesme, Joseph & Sørensen, Søren Johannes, 2024, I: *Environment International*. 183, 12 s., 108351.

Interspecific interactions facilitate keystone species in a multispecies biofilm that promotes plant growth

Yang, Nan, Røder, Henriette Lyng, Wicaksono, W. A., Wassermann, B., Russel, J., Li, Xuan Ji, Nesme, Joseph, Berg, G., Sørensen, Søren Johannes & Burmølle, Mette, 2024, I: *The ISME Journal*. 18, 1, 15 s.

***Hordeum vulgare* differentiates its response to beneficial bacteria**

Duan, Y., Han, M., Grimm, M., Schierstaedt, J., Imani, J., Cardinale, M., Le Jean, M., Nesme, Joseph, Sørensen, Søren Johannes & Schikora, A., 2023, I: *BMC Plant Biology*. 23, 1, 16 s., 460.

Draft genomes of seven isolates from Danish wastewater facilities belonging to *Pseudomonas*, *Bacillus*, *Pseudochrobactrum*, *Brevundimonas*, and *Pandoraea*

Maccario, Lorrie, Silva, A. F., Nesme, Joseph, Amador Hierro, Cristina Isabel, Sørensen, Søren Johannes, Cooper, V. S. & Røder, Henriette Lyng, 2023, I: *Microbiology resource announcements*. 12, 12, 4 s.

Plasmid permissiveness of wastewater microbiomes can be predicted from 16S rRNA sequences by machine learning

Moradigaravand, D., Li, L., Dechesne, A., Nesme, Joseph, de la Cruz, R., Ahmad, H., Banzhaf, M., Sørensen, Søren Johannes, Smets, B. F. & Kreft, J. U., 2023, I: *Bioinformatics (Oxford, England)*. 39, 7, 11 s.

A novel and affordable bioaugmentation strategy with microbial extracts to accelerate the biodegradation of emerging contaminants in different media

Aguilar-Romero, I., van Dillewijn, P., Nesme, Joseph, Sørensen, Søren Johannes, Nogales, R., Delgado-Moreno, L. & Romero, E., 2022, I: *Science of the Total Environment*. 834, 10 s., 155234.

Biofilm cultivation facilitates coexistence and adaptive evolution in an industrial bacterial community

Henriksen, N. N. S. E., Hansen, Mads Frederik, Kiesewalter, Heiko T., Russel, J., Nesme, Joseph, Foster, K. R., Svensson, B., Øregaard, G., Herschend, J. & Burmølle, Mette, 2022, I: *npj Biofilms and Microbiomes*. 8, 8 s., 59.

Biosolids for safe land application: does wastewater treatment plant size matters when considering antibiotics, pollutants, microbiome, mobile genetic elements and associated resistance genes?

Wolters, B., Hauschild, K., Blau, K., Mulder, I., Heyde, B. J., Sørensen, Søren Johannes, Siemens, J., Jechalke, S., Smalla, K. & Nesme, Joseph, 2022, I: *Environmental Microbiology*. 24, 3, s. 1573-1589 17 s.

CRISPR-Cas systems are widespread accessory elements across bacterial and archaeal plasmids

Pinilla Redondo, Rafael, Russel, J., Mayo-Muñoz, D., Shah, S. A., Garrett, Roger Antony, Nesme, Joseph, Madsen, Jonas Stenlökke, Fineran, P. C. & Sørensen, Søren Johannes, 2022, I: *Nucleic Acids Research*. 50, 8, s. 4315-4328

Deciphering bacteria associated with a pre-parasitic stage of the root-knot nematode *Meloidogyne hapla* in nemato-suppressive and nemato-conducive soils

Topalović, O., Santos, S. S., Heuer, H., Nesme, Joseph, Kanfra, X., Hallmann, J., Sørensen, Søren Johannes & Vestergård, M., 2022, I: *Applied Soil Ecology*. 172, 9 s., 104344.

Exudates from *Miscanthus x giganteus* change the response of a root-associated *Pseudomonas putida* strain towards heavy metals

Zadel, U., Cruzeiro, C., Raj Durai, A. C., Nesme, Joseph, May, R., Balázs, H., Michalke, B., Płaza, G., Schröder, P., Schloter, M. & Radl, V., 2022, I: *Environmental Pollution*. 313, 13 s., 119989.

Importance of substrate quality and clay content on microbial extracellular polymeric substances production and aggregate stability in soils

Olagoke, F. K., Bettermann, A., Nguyen, P. T. B., Redmile-Gordon, M., Babin, D., Smalla, K., Nesme, Joseph, Sørensen, Søren Johannes, Kalbitz, K. & Vogel, C., 2022, I: *Biology and Fertility of Soils*. 58, 4, s. 435-457 23 s.

IncHI1A plasmids potentially facilitate horizontal flow of antibiotic resistance genes to pathogens in microbial communities of urban residential sewage

Olesen, Asmus Kalckar, Pinilla Redondo, Rafael, Hansen, Mads Frederik, Russel, J., Dechesne, A., Smets, B. F., Madsen, Jonas Stenlökke, Nesme, Joseph & Sørensen, Søren Johannes, 2022, I: *Molecular Ecology*. 31, 5, s. 1595-1608

Influence of sewage sludge stabilization method on microbial community and the abundance of antibiotic resistance genes

Major, N., Jechalke, S., Nesme, Joseph, Goreta Ban, S., Černe, M., Sørensen, Søren Johannes, Ban, D., Grosch, R., Schikora, A. & Schierstaedt, J., 2022, I: *Waste Management*. 154, s. 126-135 10 s.

Long-Term Fertilization Strategy Impacts *Rhizoctonia solani*-Microbe Interactions in Soil and Rhizosphere and Defense Responses in Lettuce

Sommermann, L., Babin, D., Behr, J. H., Chowdhury, S. P., Sandmann, M., Windisch, S., Neumann, G., Nesme, Joseph, Sørensen, Søren Johannes, Schellenberg, I., Rothballer, M., Geistlinger, J., Smalla, K. & Grosch, R., 2022, I: *Microorganisms*. 10, 9, 27 s., 1717.

Metagenomic evidence for co-occurrence of antibiotic, biocide and metal resistance genes in pigs

Li, Xuan Ji, Rensing, C., Vestergaard, G., Arumugam, Mani, Nesme, Joseph, Gupta, S., Brejnrod, A. D. & Sørensen, Søren Johannes, 2022, I: *Environment International*. 158, 10 s., 106899.

Quantification and fate of plasmid-specific bacteriophages in wastewater: Beyond the F-coliphages

He, Z., Parra, B., Nesme, Joseph, Smets, B. F. & Dechesne, A., 2022, I: *Water Research*. 227, 8 s., 119320.

Broad Dissemination of Plasmids across Groundwater-Fed Rapid Sand Filter Microbiomes

Pinilla Redondo, Rafael, Olesen, Asmus Kalckar, Russel, J., de Vries, L. E., Christensen, L. D., Musovic, S., Nesme, Joseph & Sørensen, Søren Johannes, 2021, I: *mBio*. 12, 6, 13 s., e0306821.

Comparative Genomics of Novel *Agrobacterium* G3 Strains Isolated From the International Space Station and Description of *Agrobacterium tomkonis* sp. nov.

Singh, N. K., Lavire, C., Nesme, Joseph, Vial, L., Nesme, X., Mason, C. E., Lassalle, F. & Venkateswaran, K., 2021, I: *Frontiers in Microbiology*. 12, 15 s., 765943.

Distinct rhizomicrobiota assemblages and plant performance in lettuce grown in soils with different agricultural management histories

Babin, D., Sommermann, L., Chowdhury, S. P., Behr, J. H., Sandmann, M., Neumann, G., Nesme, Joseph, Sørensen, Søren Johannes, Schellenberg, I., Rothballer, M., Geistlinger, J., Smalla, K. & Grosch, R., 2021, I: FEMS Microbiology Ecology. 97, 4, 21 s., fiab027.

EMBRACE-WATERS statement: Recommendations for reporting of studies on antimicrobial resistance in wastewater and related aquatic environments

Hassoun-Kheir, N., Stabholz, Y., Kreft, J-U., de la Cruz, R., Dechesne, A., Smets, B. F., Romalde, J. L., Lema, A., Balboa, S., García-Riestra, C., Torres-Sangiao, E., Neuberger, A., Graham, D., Quintela-Baluja, M., Stekel, D. J., Graham, J., Pruden, A., Nesme, J., Sørensen, S. J., Hough, R. & 1 flere, Paul, M., 2021, I: One Health. 13, 9 s., 100339.

Emergent bacterial community properties induce enhanced drought tolerance in *Arabidopsis*

Yang, Nan, Nesme, Joseph, Røder, Henriette Lyng, Li, Xuan Ji, Zuo, Zhangli Thomsen, Petersen, Morten, Burmølle, Mette & Sørensen, Søren Johannes, 2021, I: npj Biofilms and Microbiomes. 7, 11 s., 82.

Extended-Spectrum β -Lactamase and Carbapenemase Genes are Substantially and Sequentially Reduced during Conveyance and Treatment of Urban Sewage

Li, L., Nesme, Joseph, Quintela-Baluja, M., Balboa, S., Hashsham, S., Williams, M. R., Yu, Z., Sørensen, Søren Johannes, Graham, D. W., Romalde, J. L., Dechesne, A. & Smets, B. F., 2021, I: Environmental Science & Technology. 55, 9, s. 5939-5949 11 s.

Identification of Beneficial Microbial Consortia and Bioactive Compounds with Potential as Plant Biostimulants for a Sustainable Agriculture

Tabacchioni, S., Passato, S., Ambrosino, P., Huang, L., Caldara, M., Cantale, C., Hett, J., Del Fiore, A., Fiore, A., Schlüter, A., Sczyrba, A., Maestri, E., Marmioli, N., Neuhoﬀ, D., Nesme, J., Sørensen, S. J., Aprea, G., Nobili, C., Presenti, O., Giovannetti, G. & 4 flere, Giovannetti, C., Pihlanto, A., Brunori, A. & Bevivino, A., 2021, I: Microorganisms. 9, 2, 23 s., 426.

Impact of Long-Term Organic and Mineral Fertilization on Rhizosphere Metabolites, Root-Microbial Interactions and Plant Health of Lettuce

Windisch, S., Sommermann, L., Babin, D., Chowdhury, S. P., Grosch, R., Moradtalab, N., Walker, F., Höglinger, B., El-Hasan, A., Armbruster, W., Nesme, Joseph, Sørensen, Søren Johannes, Schellenberg, I., Geistlinger, J., Smalla, K., Rothballer, M., Ludewig, U. & Neumann, G., 2021, I: Frontiers in Microbiology. 11, 26 s., 597745.

Importance of microbial communities at the root-soil interface for extracellular polymeric substances and soil aggregation in semiarid grasslands

Bettermann, A., Zethof, J. H. T., Babin, D., Cammeraat, E. L. H., Solé-Benet, A., Lázaro, R., Luna, L., Nesme, Joseph, Sørensen, Søren Johannes, Kalbitz, K., Smalla, K. & Vogel, C., 2021, I: Soil Biology & Biochemistry. 159, 14 s., 108301.

Kin discrimination promotes horizontal gene transfer between unrelated strains in *Bacillus subtilis*

Stefanic, P., Belcijan, K., Kraigher, B., Kostanjšek, R., Nesme, Joseph, Madsen, Jonas Stenlørkke, Kovac, J., Sørensen, Søren Johannes, Vos, M. & Mandic-Mulec, I., 2021, I: Nature Communications. 12, 11 s., 3457.

Metagenomic analysis of a keratin-degrading bacterial consortium provides insight into the keratinolytic mechanisms

Kang, D., Huang, Y., Nesme, Joseph, Herschend, J., Jacquiod, S., Kot, Witold, Hansen, Lars Hestbjerg, Lange, L. & Sørensen, Søren Johannes, 2021, I: Science of the Total Environment. 761, 9 s., 143281.

Reduced tillage, cover crops and organic amendments affect soil microbiota and improve soil health in Uruguayan vegetable farming systems

Cerecetto, V., Smalla, K., Nesme, Joseph, Garaycochea, S., Fresia, P., Sørensen, Søren Johannes, Babin, D. & Leoni, C., 2021, I: FEMS Microbiology Ecology. 97, 3, 14 s., fiab023.

Root exposure to apple replant disease soil triggers local defense response and rhizoplane microbiome dysbiosis

Balbín-Suárez, A., Jacquiod, S., Rohr, A. D., Liu, B., Flachowsky, H., Winkelmann, T., Beerhues, L., Nesme, Joseph, Sørensen, Søren Johannes, Vetterlein, D. & Smalla, K., 2021, I: FEMS Microbiology Ecology. 97, 4, 14 s., fiab031.

Soil microbial legacies differ following drying-rewetting and freezing-thawing cycles

Meisner, A., Snoek, B. L., Nesme, Joseph, Dent, E., Jacquioud, S., Classen, A. T. & Priemé, Anders, 2021, I: The ISME Journal. 15, 4, s. 1207-1221 15 s.

***Salmonella* persistence in soil depends on reciprocal interactions with indigenous microorganisms**

Schierstaedt, J., Jechalke, S., Nesme, Joseph, Neuhaus, K., Sørensen, Søren Johannes, Grosch, R., Smalla, K. & Schikora, A., 2020, I: Environmental Microbiology. 22, 7, s. 2639-2652 14 s.

Changes induced by heavy metals in the plant-associated microbiome of *Miscanthus x giganteus*

Zadel, U., Nesme, Joseph, Michalke, B., Vestergaard, G., Plaza, G. A., Schröder, P., Radl, V. & Schloter, M., 2020, I: Science of the Total Environment. 711, 10 s., 134433.

Comparison of antibiotic-resistant bacteria and antibiotic resistance genes abundance in hospital and community wastewater: A systematic review

Hassoun-Kheir, N., Stabholz, Y., Kreft, J., de la Cruz, R., Romalde, J. L., Nesme, Joseph, Sørensen, Søren Johannes, Smets, B. F., Graham, D. & Paul, M., 2020, I: Science of the Total Environment. 743, 11 s., 140804.

Composted sewage sludge influences the microbiome and persistence of human pathogens in soil

Major, N., Schierstaedt, J., Jechalke, S., Nesme, Joseph, Ban, S. G., Černe, M., Sørensen, Søren Johannes, Ban, D. & Schikora, A., 2020, I: Microorganisms. 8, 7, 14 s., 1020.

Construction of Simplified Microbial Consortia to Degrade Recalcitrant Materials Based on Enrichment and Dilution-to-Extinction Cultures

Kang, D., Jacquioud, S., Herschend, J., Wei, S., Nesme, Joseph & Sørensen, Søren Johannes, 2020, I: Frontiers in Microbiology. 10, 10 s., 3010.

Metal-induced bacterial interactions promote diversity in river-sediment microbiomes

Cyriaque, V., Géron, A., Billon, G., Nesme, Joseph, Werner, J., Gillan, D. C., Sørensen, Søren Johannes & Wattiez, R., 2020, I: F E M S Microbiology Ecology. 96, 6, 12 s., f1aa076.

Plasmids persist in a microbial community by providing fitness benefit to multiple phylotypes

Li, L., Dechesne, A., Madsen, Jonas Stenlække, Nesme, Joseph, Sørensen, Søren Johannes & Smets, B. F., 2020, I: I S M E Journal. 14, 5, s. 1170-1181 12 s.

Prokaryotic Community Composition and Extracellular Polymeric Substances Affect Soil Microaggregation in Carbonate Containing Semiarid Grasslands

Zethof, J. H. T., Bettermann, A., Vogel, C., Babin, D., Cammeraat, E. L. H., Solé-Benet, A., Lázaro, R., Luna, L., Nesme, Joseph, Woche, S. K., Sørensen, Søren Johannes, Smalla, K. & Kalbitz, K., 2020, I: Frontiers in Environmental Science. 8, 19 s., 51.

Rhizosphere microbial communities associated to rose replant disease: links to plant growth and root metabolites

Yim, B., Baumann, A., Grunewaldt-Stöcker, G., Liu, B., Beerhues, L., Zühlke, S., Sapp, M., Nesme, Joseph, Sørensen, Søren Johannes, Smalla, K. & Winkelmann, T., 2020, I: Horticulture Research. 7, 16 s., 144.

Rose replant disease: detailed analyses of plant reactions, root endophytes and rhizosphere microbial communities

Baumann, A., Yim, B., Grunewaldt-Stöcker, G., Liu, B., Beerhues, L., Sapp, M., Nesme, Joseph, Sørensen, Søren Johannes, Smalla, K. & Winkelmann, T., 2020, I: Acta Horticulturae. 1283, s. 97-104 8 s.

Characterization of Extracellular Biosurfactants Expressed by a *Pseudomonas putida* Strain Isolated from the Interior of Healthy Roots from *Sida hermaphrodita* Grown in a Heavy Metal Contaminated Soil

Bernat, P., Nesme, Joseph, Paraszkiwicz, K., Schloter, M. & Plaza, G., 2019, I: Current Microbiology. 76, 11, s. 1320-1329 10 s.

Fate of CMY-2-Encoding Plasmids Introduced into the Human Fecal Microbiota by Exogenous *Escherichia coli*

Anjum, M., Madsen, Jonas Stenl kke, Nesme, Joseph, Jana, B., Wiese, M., Jasinskyte, D., Nielsen, Dennis Sandris, S rensen, S ren Johannes, Dalsgaard, Anders, Moodley, Arshnee, Bortolaia, V. & Guardabassi, Luca, 2019, I: Antimicrobial Agents and Chemotherapy. 63, 5, 13 s., e02528-18.

Improvement of pesticide removal in contaminated media using aqueous extracts from contaminated biopurification systems

Romero, I. A., van Dillewijn, P., Nesme, Joseph, S rensen, S ren Johannes & Romero, E., 2019, I: Science of the Total Environment. 691, s. 749-759 11 s.

Oral administration of antibiotics increased the potential mobility of bacterial resistance genes in the gut of the fish *Piaractus mesopotamicus*

S enz, J. S., Marques, T. V., Barone, R. S. C., Cyrino, J. E. P., Kublik, S., Nesme, Joseph, Schloter, M., Rath, S. & Vestergaard, G., 2019, I: Microbiome. 7, s. 1-14 24.

Estimating the Transfer Range of Plasmids Encoding Antimicrobial Resistance in a Wastewater Treatment Plant Microbial Community

Li, L., Dechesne, A., He, Z., Madsen, Jonas Stenl kke, Nesme, Joseph, S rensen, S ren Johannes & Smets, B. F., 8 maj 2018, I: Environmental Science & Technology Letters. 5, 5, s. 260-265 6 s.