

Research Articles

26. Barshakh I, **Elleuche S*** (2016) Is it possible to optimize the protein production yield by the generation of homomultimeric fusion enzymes? SpringerPlus 5:316
25. Rizk M, Antranikian G, **Elleuche S*** (2016) Influence of linker length variations on the biomass-degrading performance of heat-active enzyme chimeras. Mol. Biotechnol. 58:268-279
24. Neddersen M, **Elleuche S*** (2015) Fast and reliable production, purification and characterization of heat-stable, bifunctional enzyme chimeras. AMB Express 5:33
23. von der Heyde A, Lockhauserbäumer J, Uetrecht C, **Elleuche S*** (2015) A hydrolase-based reporter system to uncover the protein splicing performance of an archaeal intein. Appl. Microbiol. Biotechnol. 99:7613-7624
22. **Elleuche S**, Qoura F, Lorenz U, Rehn T, Brück T, Antranikian G (2015) Cloning, expression and characterization of the recombinant cold-active type-I pullulanase from *Shewanella arctica*. J Mol Catal B Enz 116:70-77
21. Rizk M, **Elleuche S***, Antranikian G (2015) Generating bifunctional fusion enzymes composed of heat-active endoglucanase (Cel5A) and endoxylanase (XylT). Biotechnol Lett 37:139-145
20. Qoura F, **Elleuche S**, Brück T, Antranikian G (2014) Purification and characterization of a cold-adapted pullulanase from a psychrophilic bacterial isolate. Extremophiles 18:1095-1102
19. Marquardt T, von der Heyde A, **Elleuche S*** (2014) Design and establishment of a vector system that enables production of multifusion proteins and easy purification by a two-step affinity chromatography approach. J. Microbiol. Meth. 105:47-50
18. Lehneck R, **Elleuche S**, Pöggeler S (2014) The filamentous ascomycete *Sordaria macrospora* can survive in ambient air without carbonic anhydrases. Mol. Microbiol. 92:931-944
17. Lehneck R, Neumann P, Vullo D, **Elleuche S**, Supuran CT, Ficner R, Pöggeler S (2014) Crystal structures of two tetrameric β -carbonic anhydrases from the filamentous ascomycete *Sordaria macrospora*. FEBS J 281:1759-1772
16. Schröder C, **Elleuche S**, Blank S, Antranikian G (2014) Characterization of a heat-active archaeal β -glucosidase from a hydrothermal spring metagenome. Enzyme Microb. Technol. 57:48-54
15. **Elleuche S**, Fodor K, von der Heyde A, Klippel B, Wilmanns M, Antranikian G (2014) Group III-alcohol dehydrogenase from *Pectobacterium atrosepticum*: insights into enzymatic activity and organization of the metal-ion containing region. Appl. Microbiol. Biotechnol. 98:4041-4051
14. **Elleuche S**, Fodor K, Klippel B, von der Heyde A, Wilmanns M, Antranikian G (2013) Structural and biochemical characterization of a NAD⁺-dependent alcohol dehydrogenase from *Oenococcus oeni* as a new model molecule for industrial biotechnology applications. Appl. Microbiol. Biotechnol. 97:8963-8975

13. **Elleuche S**, Klippel B, von der Heyde A, Antranikian G (2013) Comparative analysis of two members of the metal ion-containing group III-alcohol dehydrogenases from *Dickeya zeae*. *Biotechnol. Lett.* 35:725-733
12. **Elleuche S**, Piascheck H, Antranikian G (2011) Fusion of the OsmC domain from esterase EstO confers thermolability to the cold-active xylanase Xyn8 from *Pseudoalteromonas arctica*. *Extremophiles* 15:311-317
11. **Elleuche S**, Bernhards Y, Schäfers C, Manjali Varghese J, Nolting N, Pöggeler S (2010) The small serine-threonine protein SIP2 interacts with STE12 and is involved in ascospore germination in *Sordaria macrospora*. *Eur. J. Cell. Biology* 89: 873-887
10. Al Khudary R, Venkatachalam R, Katzer M, **Elleuche S**, Antranikian G (2010) A Cold-Adapted Esterase of a Novel Marine Isolate, *Pseudoalteromonas arctica* - Gene Cloning, Enzyme Purification and Characterization. *Extremophiles* 14: 273-285
9. **Elleuche S**, Pöggeler S (2009) β -Carbonic Anhydrases play a Role in Fruiting Body Development and Ascospore Germination in the Filamentous Fungus *Sordaria macrospora*. *PLoSOne* 4(4): e5177
8. **Elleuche S**, Pöggeler S (2009) Evolution of carbonic anhydrases in fungi. *Curr. Genet.* 55: 211-222
7. **Elleuche S**, Pelikan C, Nolting N, Pöggeler S (2009) Inteins and introns within the *prp8*-gene of four *Eupenicillium* species. *J. Basic Microbiol.* 49: 52-57
6. **Elleuche S**, Pöggeler S (2008) A cyanase is transcriptionally regulated by arginine and involved in cyanate decomposition in *Sordaria macrospora*. *Fungal. Genet. Biol.* 45: 1458-1469
5. **Elleuche S**, Pöggeler S (2008) Visualization of peroxisomes via SKL-tagged DsRed protein in *Sordaria macrospora*. *Fungal Genetics Reports* 55: 9-12
4. **Elleuche S**, Döring K, Pöggeler S (2008) Minimization of a eukaryotic mini-intein. *Biochem. Biophys. Res. Commun.* 366: 239-243
3. Neu D, Lehmann T, **Elleuche S**, Pollmann S (2007) Arabidopsis amidase1, a member of the amidase signature family. *FEBS Journal* 274: 3440-3451
2. **Elleuche S**, Pöggeler S (2007) *Trans*-splicing of an artificially split fungal mini-intein. *Biochem. Biophys. Res. Commun.* 355: 830-834
1. **Elleuche S**, Nolting N, Pöggeler S (2006) Protein splicing of PRP8 mini-inteins from species of the genus *Penicillium*. *Appl. Microbiol. Biotechnol.* 72: 959-967

Reviews

7. **Elleuche S**, Schäfers C, Blank S, Schröder C, Antranikian G. (2015) Exploration of extremophiles for high temperature biotechnological processes. *Curr. Opin. Microbiol.* 25C:113-119 (invited review)
6. **Elleuche S*** (2015) Bringing functions together with fusion enzymes - From nature's inventions to biotechnological applications. *Appl. Microbiol. Biotechnol.* 99:1545-1556 (invited review)

5. **Elleuche S**, Schröder C, Sahm K, Antranikian G (2014) Extremozymes - biocatalysts with unique properties from extremophilic microorganisms. *Curr Op Biotechnol* 29: 116-123 (invited review)
4. **Elleuche S***, Antranikian G (2013) Bacterial group III alcohol dehydrogenases – function, evolution and biotechnological applications. *OA Alcohol* 1(1):3 (invited review) (“High Impact”)
3. Rizk M, Antranikian G, **Elleuche S*** (2012) End-to-end gene fusions and their impact on the production of multifunctional biomass degrading enzymes. *Biochem. Biophys. Res. Commun.* 428: 1-5
2. **Elleuche S**, Pöggeler S (2010) Inteins, valuable genetic elements in molecular biology and biotechnology. *Appl. Microbiol. Biotechnol.* 87: 479-489 (invited review)
1. **Elleuche S**, Pöggeler S (2010) Carbonic anhydrases in fungi. *Microbiology* 156: 23-29

Book Chapters

7. **Elleuche S**, Schröder C, Antranikian G (2016) Lipolytic Extremozymes from Psychro- and (Hyper-)Thermophilic Prokaryotes and their Potential for Industrial Applications. In: Rampelotto PH (Ed.) *Grand Challenges in Biology and Biotechnology Vol. 1: Biotechnology of Extremophiles*. Springer Verlag, Berlin, Heidelberg, New York, Tokyo; pp. (in press)
6. **Elleuche S**, Pöggeler S (2016) Inteins and their use in protein synthesis with fungi. In: Schmoll M, Dattenböck C (Eds.) *Fungal Biology. Gene Expression Systems in Fungi: Advancements and Applications*. Springer Verlag, Berlin, Heidelberg, New York, Tokyo; pp. 289-307
5. Krüger A, **Elleuche S**, Sahm K, Antranikian G (2016) Robust biocatalysts - routes to new diversity. In: Liese A, Hilterhaus L, Kettling U, Antranikian G (Eds.) *Applied Biocatalysis: From Fundamental Science to Industrial Applications*. Wiley- VCH Verlag GmbH; pp. 31-51
4. Schäfers C, **Elleuche S**, Antranikian G (2015) Biochemical properties and applications of heat-active biocatalysts. In: Fuli L (Ed.) *Thermophilic Microorganisms*. Horizon Scientific Press; pp. 47-90
3. **Elleuche S**, Antranikian G (2013) Starch-hydrolyzing enzymes from thermophiles. In: Satyanarayana T, Littlechild J, Kawarabayasi Y (Ed.), *Thermophilic Microbes in Environmental and Industrial Biotechnology: Biotechnology of Thermophiles*. Springer Verlag, Berlin, Heidelberg, New York, Tokyo; pp. 509-533
2. **Elleuche S*** (2011) Carbonic anhydrases in fungi and fungal-like organisms – functional distribution and evolution of a gene family. In: Wöstemeyer J, Pöggeler S (Ed.), *The Mycota XIV. Evolution of Fungi and Fungal-like organisms*. Springer Verlag, Berlin, Heidelberg, New York, Tokyo; pp. 257-274
1. **Elleuche S**, Pöggeler (2009) Inteins – Selfish elements in fungal genomes. In: Anke T, Weber D (Ed.), *The Mycota XV. Physiology and Genetics: Selected Basic and Applied Aspects*. Springer Verlag, Berlin, Heidelberg, New York, Tokyo; pp. 41-61

Articles in German

7. **Elleuche S*** (2016) Ein Kopie des Elastin-Gens steuert die Entwicklung der glatten Muskulatur im Herz der Teleostei. Naturwissenschaftliche Rundschau (in press)
6. **Elleuche S*** (2015) Das Intein – Ein parasitäres genetisches Element oder ein essentieller Regulator? Naturwissenschaftliche Rundschau 68: 633-635
5. **Elleuche S*** (2015) *Picrophilus torridus* - Eine Schatztruhe voller industriell relevanter Biokatalysatoren. Naturwissenschaftliche Rundschau 68: 410-411
4. **Elleuche S*** (2014) Zwei Gene, eine Schnittstelle. Laborjournal 11/2014: 74
3. Maurer KH, **Elleuche S**, Antranikian G (2012) 10. Enzyme. In: Sahm H, Antranikian G, Stahmann KP, Takors R (Ed.), Industrielle Mikrobiologie. Springer Verlag, Berlin, Heidelberg, New York, Tokyo; pp. 205-224
2. **Elleuche S***, Sahm K, Grote R, Antranikian G (2012) Extremozyme – Neue Biokatalysatoren für die industrielle Anwendung. Biol. Unserer Zeit 42: 166-173
1. **Elleuche S**, Pöggeler S (2006) Inteine – die „Introns“ der Proteine und ihre biotechnologische Anwendung: Proteinspleißen. Biol. Unserer Zeit 36: 294-301

***Corresponding Author**