

CURRICULUM VITAE

(03.02.2014)

NAME/BIRTH YEAR: Ole Andreas Løchen Økstad (1969)
ADDRESS: Laboratory for Microbial Dynamics and Department of
Pharmaceutical Biosciences, School of Pharmacy, University of Oslo,
PB 1068 Blindern ,0316 Oslo, Norway
PHONE / FAX: +47 22 854789 (work), +47 92 603952 (cell), +47 22 844944 (fax)
Email: aloechen@farmasi.uio.no
CITIZENSHIP: Norwegian

TOTAL CITATIONS: 3421 (3315 citing articles without self-citations)
HIRSCH (H)-INDEX: 15 (*average number of citations per paper: 114.03*)

EDUCATION AND PROFESSIONAL EXPERIENCE

Current position: *Associate professor of Microbiology*, Department of Pharmaceutical Biosciences, School of Pharmacy, University of Oslo.
(since 2005):

2011: *Sabbatical* (3 months), Macquarie University, Australia (Prof. Ian T. Paulsen)
2002-2004: *Senior postdoc, deputy group leader* (Biotechnology Centre, University of Oslo)
2001: *Visiting scientist* (7 months), University of Oxford, UK (Prof. David J. Sherratt)
2000-2002: *Postdoc*, Biotechnology Centre, University of Oslo (personal grant, Norwegian Research Council).
1999-2000: *Mandatory military service*, Norwegian Defense Research Establishment
1995 - 1999: *PhD research fellow* (Microbiology), Biotechnology Centre / School of Pharmacy, University of Oslo
1988-1995: *Master of Science* (Biochemistry), Biotechnology Centre / Department of Biochemistry, University of Oslo

LIST OF PUBLICATIONS (International peer review journals)

30. Fagerlund A, Dubois T, Økstad OA, Gilois N, Bennaceur I, Perchat S, Gominet M, Aymerich S, Kolstø AB, Lereclus D, Gohar M. SinR controls enterotoxin expression in *Bacillus cereus* biofilms. **PLoS One**. In press.

29. Vik U, Logares R, Blaali R, Halvorsen R, Carlsen T, Bakke I, Kolstø AB, Økstad OA, Kauserud H. (2013). Different bacterial communities in ectomycorrhizae and surrounding soil. **Sci Rep**. 3:3471.

28. Bräunlich M, Økstad OA, Slimestad R, Wangensteen H, Malterud KE, Barsett H. (2013). Effects of *Aronia melanocarpa* constituents on biofilm formation of *Escherichia coli* and *Bacillus cereus*. **Molecules** 18:14989-99.

27. Backe PH, Simm R, Laerdahl JK, Dalhus B, Fagerlund A, Økstad OA, Rognes T, Alseth I, Kolstø AB, Bjørås M. (2013). A new family of proteins related to the HEAT-like repeat DNA glycosylases with

affinity for branched DNA structures. *J Struct Biol.* 2013 Apr 25. doi:pii: S1047-8477(13)00107-X. 10.1016/j.jsb.2013.04.007. In press.

26. Kristoffersen SM, Haase C, Weil MR, Passalacqua KD, Niazi F, Hutchison SK, Desany B, Kolstø AB, Tourasse NJ, Read TD, Økstad OA. (2012). Global mRNA decay analysis at single nucleotide resolution reveals segmental and positional degradation patterns in a Gram-positive bacterium. *Genome Biol.* 13(4):R30.

25. Reiter L, Tourasse NJ, Fouet A, Loll R, Davison S, Økstad OA, Piehler AP, Kolstø AB. (2011). Evolutionary history and functional characterization of three large genes involved in sporulation in *Bacillus cereus* group bacteria. *J Bacteriol.* 193, 5420-5430.

24. Papazisi L, Rasko DA, Ratnayake S, Bock GR, Remortel BG, Appalla L, Liu J, Dracheva T, Braisted JC, Shallom S, Jarrahi B, Snesrud E, Ahn S, Sun Q, Rilstone J, Økstad OA, Kolstø AB, Fleischmann RD, Peterson SN. (2011). Investigating the genome diversity of *B. cereus* and evolutionary aspects of *B. anthracis* emergence. *Genomics.* 98, 26-39.

23. Tourasse NJ, Helgason E, Klevan A, Sylvestre P, Moya M, Haustant M, Økstad OA, Fouet A, Mock M, Kolstø AB. (2011). Extended and global phylogenetic view of the *Bacillus cereus* group population by combination of MLST, AFLP, and MLEE genotyping data. *Food Microbiol.* 28, 236-244.

22. Kristoffersen SM, Tourasse NJ, Kolstø AB, Økstad OA. (2011). Interspersed DNA repeats *bcr1-bcr18* of *Bacillus cereus* group bacteria form three distinct groups with different evolutionary and functional patterns. *Mol Biol Evol.* 28,

21. Tourasse NJ, Økstad OA, Kolstø AB. (2010). HyperCAT: an extension of the SuperCAT database for global multi-scheme and multi-datatype phylogenetic analysis of the *Bacillus cereus* group population. *Database.* 2010, baq017.

20. Kolstø AB, Tourasse NJ, Økstad OA. (2009). What sets *Bacillus anthracis* apart from other *Bacillus* species? *Annu Rev Microbiol.* 63, 451-476.

19. Stabell FB, Egge-Jacobsen W, Risøen PA, Kolstø AB, Økstad OA. (2009). ORF 2 from the *Bacillus cereus* linear plasmid pBclin15 encodes a DNA binding protein. *Lett Appl Microbiol* 48, 51-57.

18. Gohar M, Faegri K, Perchat S, Ragnum S, Økstad OA, Gominet M, Kolstø AB, Lereclus D. (2008). The PlcR virulence regulon of *Bacillus cereus*. *PLoS One.* 3, e2793.

17. Klevan A, Tourasse NJ, Stabell FB, Gejer P, Ravel J, Rasko DA, Kolstø AB, Økstad OA. (2007). Exploring evolution of the *Bacillus cereus* group repeat element *bcr1* by comparative genome analysis of closely related strains. *Microbiology* 153, 3894-3908.

16. Kristoffersen SM, Ravnum S, Tourasse NJ, Økstad OA, Kolstø AB, Davies W. (2007) Low concentrations of bile salts induce stress responses and reduce motility in the *Bacillus cereus* type strain. *J Bacteriol.* 189, 5302-5313.

15. Rasko DA, Rosovitz MJ, Økstad OA, Fouts DE, Jiang L, Cer RZ, Kolstø AB, Gill SR, Ravel J. (2007). Complete sequence analysis of novel plasmids from emetic and periodontal *Bacillus cereus* isolates reveals a common evolutionary history among the *B. cereus* group plasmids including *B. anthracis* pXO1. *J Bacteriol* 189, 52-64.

14. Tourasse NJ, Helgason E, Økstad OA, Hegna IK, Kolsto AB. (2006). The *Bacillus cereus* group: novel aspects of population structure and genome dynamics. *J Appl Microbiol* 101, 579-593.

13. Økstad OA, Tourasse NJ, Sundfær CK, Stabell FB, Jacobsen W, Risøen PA, Read TD, Kolstø AB. (2004). The *bcr1* DNA repeat element is specific to the *Bacillus cereus* group and exhibits mobile element characteristics. **J Bacteriol** 186, 7714-7725.
12. Rasko DA, Ravel J, Økstad OA, Helgason E, Cer RZ, Jiang L, Shores KA, Fouts D, Tourasse NJ, Angiuoli SV, Kolonay J, Nelson WC, Kolstø AB, Fraser CM, Read TD (2004). The genome sequence of *Bacillus cereus* ATCC 10987, a model organism for the study of *Bacillus anthracis*. **Nucleic Acids Res.** 32, 977-988.
11. Lau IF, Filipe SR, Søballe B, Økstad OA, Barre FX, Sherratt DJ. (2003). Spatial and temporal organization of replicating *Escherichia coli* chromosomes. **Mol Microbiol** 49, 731-743.
10. Read TD, Peterson SP, Tourasse N, Baillie LW, Paulsen IT, Nelson KE, Tettelin H, Fouts DE, Eisen JA, Gill SR, Holtzapple EK, Økstad OA, Helgason E, Rilstone J, Wu M, Kolonay JF, Beanan MJ, Dodson RJ, Brinkac LM, Gwinn M, DeBoy RT, Madpu R, Daugherty SC, Durkin AS, Haft DH, Nelson WC, Peterson JD, Pop M, Khouri HM, Radune D, Benton JL, Mahamoud Y, Jiang L, Hance IR, Weidman JF, Berry KJ, Plaut RD, Wolf AM, Watkins KL, Nierman WC, Hazen A, Cline R, Redmond C, Thwaite JE, White O, Salzberg SL, Thomason B, Friedlander AM, Koehler TM, Hanna PC, Kolstø AB, Fraser CM (2003). The complete genome sequence of *Bacillus anthracis* Ames and comparison to closely-related *B. cereus* group bacteria. **Nature** 423, 81-86.
9. Gohar M, Økstad OA, Gilois N, Sanchis V, Kolstø AB, Lereclus D (2002). Two-dimensional electrophoresis analysis of the extracellular proteome of *Bacillus cereus* reveals the importance of the PlcR regulon. **Proteomics** 2, 784-791.
8. Helgason E, Økstad OA, Caugant DA, Johansen HA, Fouet A, Mock M, Hegna IK, Kolstø AB. (2000). *Bacillus anthracis*, *Bacillus cereus* and *Bacillus thuringiensis* – one species on the basis of genetic evidence. **Appl Environ Microbiol** 66, 2627-2630.
7. Økstad OA, Gominet M, Purnelle B, Rose M, Lereclus D, Kolstø AB (1999). Sequence analysis of three *Bacillus cereus* loci carrying PlcR-regulated genes encoding degradative enzymes and enterotoxin. **Microbiology** 145, 3129-3138.
6. Økstad OA, Hegna IK, Lindbäck T, Rishovd AL, Kolstø AB. (1999). Genome organisation is not conserved between *Bacillus cereus* and *Bacillus subtilis*. **Microbiology** 145, 621-631.
5. Lindbäck T, Økstad OA, Rishovd AL, Kolstø AB. (1999). Insertional inactivation of *hb/C* encoding the L₂ component of *Bacillus cereus* ATCC 14579 haemolysin BL strongly reduces enterotoxigenic activity, but not the haemolytic activity against human erythrocytes. **Microbiology** 145, 3139-3146.
4. Agaisse H, Gominet M, Økstad OA, Kolstø AB, Lereclus D. (1999). PlcR a pleiotropic regulator of extracellular virulence factor gene expression in *Bacillus thuringiensis*. **Mol Microbiol** 32, 1043-1053.
3. Wilcks A, Smidt L, Økstad OA, Kolstø AB, Mahillon J, Andrup L. (1999). Replication mechanism and sequence analysis of the replicon of pAW63, a conjugative plasmid from *Bacillus thuringiensis*. **J Bacteriol** 181, 3193-3200.
2. Økstad OA, Grønstad A, Lindbäck T, Kolstø AB. (1997). Insertional inactivation of a Tet(K)/ Tet(L) like transporter does not eliminate tetracycline resistance in *Bacillus cereus*. **FEMS Microbiol Lett** 154, 181-186.
1. Økstad OA, Helgeland K, Schenck K, Kolstø AB (1996). Cloning and sequencing of Hsp60 from *A. actinomycetemcomitans*. **J Dent Res** 5, 1302-1302.

BOOK CHAPTERS:

Økstad OA and Kolstø AB (2012). Evolution of the *Bacillus cereus* group. In: *Bacillus thuringiensis* biotechnology. Sansinenea (Ed.). Springer.

Økstad OA and Kolstø AB (2011). Genomics of *Bacillus* spp. related to food-borne disease. In: Genomics of Foodborne Bacterial Pathogens. Wiedmann, Martin, Zhang, Wei (Eds.). Springer.

SUPERVISING ACTIVITIES

One postdoc (**contract ended 2011**), seven PhD students (main supervisor of two; one ongoing, **one finished 2011**), seventeen MSc students (main supervisor of fourteen; **eleven finished**, four ongoing), one Erasmus student. Internal supervisor for one PhD thesis (**finished 2008**) and two MSc thesis.

SCIENTIFIC PRESENTATIONS

Thirteen scientific talks at international conferences, research institutes and universities.

Thirteen scientific talks at domestic conferences, research institutes and universities.

More than 40 poster presentations at international and domestic conferences and workshops.

PEER REVIEW

Reviewer for: PLoS One, *Microbiology*, *Journal of Applied Microbiology*, *Nucleic Acids Research*, *Research in Microbiology*, *Infection Genetics and Evolution*

THESIS EVALUATION WORK

Eight PhD candidate evaluation committees (One in the Netherlands, seven domestic)

Four MSc thesis evaluations

MAJOR PROJECT GRANTS

FUGE II Channel III grant, 2007-2011 (4 years, Norwegian Research Council)

White paper, NIH grant, 2005-2008 (co-author, National Institutes of Health, USA). Collaborator with The Institute for Genomic Research (TIGR), USA (contributor)

Project grant from the National Science Foundation (NSF), USA. Collaborator with The Institute for Genomic Research (TIGR), USA (contributor)

FUGE technology platform grant (CAMST), 2001-2006 (5 years, Norwegian Research Council (contributor))

Strategic University Programme grant (SUP), 2000-2005 (5 years, Norwegian Research Council (contributor))

OTHER GRANTS

Personal postdoc grant (2 yrs, Norwegian Research Council), **Conference support grants** (NFR).

Grants for running expenses, travel, minor equipment (Anders Jahre Foundation, Nansen foundation a.o.)

ORGANIZATION OF CONFERENCES AND RESEARCH COURSES

Member of organizing committee for three international microbiology conferences (ETOX 2011, BACELL 2008, BACILLUS-ACT 2007) and three international microbial genomics workshops (Workshop on Microbial Comparative and Functional Genomics; 2003, 2004, 2006)

SCIENCE COMMUNICATION

Nation-wide radio: NRK P2, Ekko: two programs in 2011

Nation-wide television: NRK1, Schrödingers Katt (2003)

Newspaper and science communication journal contributions (Nettavisen, NFT, NBS-nytt), Annual oral presentations at Open Day for Teachers (Univ. Oslo, 2001-2003), Presentations at National research fares (Forskningstorget, UngForsk; 2001-2003)

OTHER ACTIVITIES

Member of Steering group for BACELL – Organization for *Bacillus* research in Europe (2013-present)

Vice-head of CIME – Center for Microbial Evolution – 'Endringsmiljø', MN Faculty, UiO (2014-present)

Deputy member, School of Pharmacy Board (2009-present)

Member of Committee for administration of PhD-studies, School of Pharmacy (2009-present)

Co-founder / vice-head of the Laboratory for Microbial Dynamics (LaMDa) – prioritized research area at the Faculty of Mathematics and Natural Sciences, University of Oslo (2007-present)

Deputy board member of EMBIO (now MLS) - Steering board for research in molecular life sciences at the University of Oslo (2007-2009)

Teaching microbiology, biochemistry, and cell biology at the School of Pharmacy, University of Oslo (2005-present) and the National PhD School in Pharmacy (2013-present)