CURRICULUM VITAE

for

Ussery, David W.

Department of Physiological Sciences
College of Veterinary Medicine
Oklahoma State University
https://ussery.org/

1. PERSONAL

David Wayne Ussery

2. DEGREES

Post-doctoral Fellow, Institute for Molecular Medicine, The John Radcliffe Hospital, University of Oxford, England	1992 - 1996
Ph.D. in Biochemistry and Molecular Biology, The University of Cincinnati College of Medicine, Cincinnati, Ohio	1986 - 1993
M.Sc. in Physical Chemistry, The University of New Mexico, Albuquerque, New Mexico.	1982 - 1986
B.A. in Chemistry, William Jewell College, Liberty, Missouri, USA	1978 - 1982

3. DEGREES CREDENTIALS

none.

4. APPOINTMENTS (INCLUDING JOINT) & PROMOTIONS AT OSU

Professor	2025 - present
INTERACT Director	2025 - present
McCasland Foundation Professorship	2026 - present

5. MEMBERSHIPS AND AFFILIATIONS

Founding Member, Genomic Standards Consortium (GSC)	2005 - present
Member, American Association for the Advancement of Science	1985 - present
Advisory Board, EcoCyc, SRI, Palo Alto, California	2013 - 2017
Member, German Genome Linguistics Consortium	2002 - 2008

6. PREVIOUS POSITIONS RELEVANT TO OSU EMPLOYMENT

Professor, Department of Biomedical Informatics, UAMS	2016 - 2025
Professor, Department of Physiology and Cell Biology, UAMS	2016 - 2025
Helen G. Adams / ARA Endowed Chair in Bioinformatics, UAMS	2017 - 2025
Visiting International Professor, Dept. Clinical Diagnostics, St. Olav's Hospital Norwegian University of Science and Technology (NTNU), Trondheim, Norway 🇳🇴	2012 - 2018
Comparative Genomics Group Leader, Biosciences Division, Oak Ridge National Labs (ORNL), Oak Ridge, Tennessee, USA	2013 - 2016
Professor (20%), Center for Biological Sequence Analysis (CBS), Department of Systems Biology, The Technical University of Denmark, Kgs. Lyngby, Denmark 🇩🇰	2013 - 2015
Associate Professor, Center for Biological Sequence Analysis (CBS), Dept. of Systems Biology, The Technical University of Denmark, Kgs. Lyngby, Denmark 🇩🇰	2002 - 2013
Professor II (20%), Centre for Molecular Biology & Neuroscience, Institute of Medical Microbiology, Rikshospitalet University Hospital, Oslo, Norway 🇳🇴	2004 - 2011
Associate Research Professor, Center for Biological Sequence Analysis, (CBS) Institute of Biotechnology, The Technical University of Denmark, Kgs. Lyngby, Denmark 🇩🇰	1998 - 2002

9. TEACHING ACTIVITIES

Visiting Assistant Professor, Department of Biology, Roanoke College, Salem, Virginia, USA	1997 - 1998
Assistant Research Professor, Center for Biological Sequence Analysis, Dept. Chemistry, The Technical University of Denmark, Lyngby, Denmark 🇩🇰	1997
Visiting Scientist, Department of Pharmacology, Microbiolgy & Food Hygiene, Norwegian College of Vetinary Medicine, Oslo, Norway 🇳🇴	1996 - 1997
Postdoctoral Research Fellow, Imperial Cancer Research Fund, Institute of	1992 - 1996

7. LEAVES

Molecular Medicine, The John Radcliffe Hospital, Oxford University,

8. RECOGNITIONS

Headington, Oxford, United Kingdom 🇬🇧

none.

McCasland Foundation Professorship in Physiological Sciences, DVM, OSU	2026
ScholarGPS award for lifetime ranking in top 0.05% of scholars worldwide	2025
ScholarGPS award for lifetime ranking in top 0.2% of scholars worldwide	2022
Helen G. Adams Endowed Professorship in Biomedical Informatics at UAMS	2017
Arkansas Research Alliance Fellow award ($500,000)	2016
Made “editor’s choice” for Ebolavirus comparative genomics paper	2015
Member of “Faculty of a thousand” (F1000)	2011
Published most highly cited paper of the year in industrial microbiology	2009
Made list of BioMedCentral “hot 100” most cited authors	2007

9.1 Scheduled Instructional Activity

CBSC 5110: **Special Topics in High-throughput Genomics**
Mondays & Wednesdays: room 101, McElroy Hall, 9:30 – 10:20 p.m., spring 2026

9.2 Unscheduled Instructional Activity

- Supervising Aakash Bhattacharyya, from Central High School, for a science fair project for spring 2026. (Aakash won 4th place in computational biology division last year at the International Science Fair).

- Supervised Josef Gantner [junior, majoring in microbiology] on bioinformatics project (December 2025 - January 2026).

9.3 Course and Program Development

- Completed OSU-ITLE's Artificial Intelligence for Instructor's course, October, 2025.

- Led team of 3 faculty members from the CBSC graduate program, in ITLE's "AI Integration Platform program", Autumn, 2025.

9.4 Teaching Materials

- Wrote first textbook on comparative genomics, based on 10 years' of teaching
- Did more than 30 one-week workshops on comparative genomics (see below)
- Taught genomics / bioinformatics courses since 1997 (see below)

9.5 Other Teaching-Related Activities: Previous teaching activities, 1982 - 2025

Taught graduate level courses in Bioinformatics	1998 - 2025

UAMS courses taught	2016 - 2025

BMIG 5101 "Foundations in BMI: Sequences", Course director	2018 - 2025
BMIG 5210 "Genomics & Metagenomics", Course director	2018 - 2025
BMIG 6050 "Research Design", Course director	2019 - 2025
BMIG 5002 "BioMedicine for Informaticists", Co-Director	2018 - 2025
BMIG 5003 "Computational Methods in Biomedical Informatics"	2019 - 2025

BIOC 6102 "Special Topics in Biochemistry", guest lecture	2021 - 2025
PCOL 5120 "Grant writing / Ethics 3" Small group leader	2019 - 2025
PCOL 5121 "Grant writing / Ethics 4" Guest lecture and small group leader	2020 - 2025
PCOL 6101 "Systems Therapeutics", Guest lecture	2019 - 2025
BMIG 5110 "Project Rotations in BMI"	2018 - 2025
BMIG 6215 "Special Topics / student research in BMI"	2019 - 2025
BMIG 6800 "Dissertation Research"	2019 - 2025

Clinical Informatics Fellow “Bioinformatics rotation” (required)	2020 - 2025
Clinical Informatics Fellow “Metagenomics rotation” (optional)	2020 - 2025

Guest lectures for INBRAE orientation for new UAMS Ph.D. students	2019 - 2025
Guest lectures for the Arkansas Summer Research Institute	2021 - 2025

Taught one-week workshops on Comparative Microbial Genomics	*2005 - 2025*
🇺🇸 INBRE – UALR/UAMS (Little Rock, USA)	March of 2017 - 2019; 2021-2024
🇺🇸 UA Fayetteville, Arkansas, USA,	July, 2017
🇳🇵 Kathmandu, Nepal	March, 2013
🇺🇸 CDC, Atlanta, Georgia, USA	August, 2012
🇳🇴 Trondheim, Norway	05/2012; 05/2015; 04/2016; 05/2017
🇪🇸 Alicante, Spain	December, 2011
🇹🇳 Tunis, Tunisia	December, 2010
🇪🇸 Granada, Spain	October, 2010
🇬🇧 Oxford, England	September, 2010
🇲🇦 Rabat, Morocco	April, 2010; April, 2013
🇺🇸 Northern Arizona University, Flagstaff, Arizona, USA	July, 2009
🇳🇴 Oslo, Norway	October, 2006
🇧🇷 Petropolis, Brazil	08/2006; 08/2007; 08/2009
🇹🇭 Bangkok, Thailand	03/2005; 06/2008; 03/2010; 06/2011; 08/2016; 05/2017; 11/2017; 12/2019

Previous courses taught (before coming to UAMS in 2016).	1982 - 2014
Taught bioinformatics at The Technical University of Denmark (DTU)	1997 - 2014
Organized and taught bioinformatics journal club at DTU	1998 - 2008
Taught ‘Scientific Communication” course at DTU	2001 - 2014
Taught Introductory Biology and Genetics at Roanoke College, Virginia.	1997 - 1998
Taught Molecular Biology course at Norwegian Veterinary College of Med.	1996 - 1997
Gave tutorials at Magdalen College, University of Oxford	1993 - 1995
Taught biochemistry / molecular biology at UC College of Medicine	1986 - 1991
Teaching assistant, organic and biochemistry labs at U. New Mexico	1982 - 1986

10. SUPERVISION AND ADVISORY ACTIVITIES

10.0 High-School Student Supervision

- Supervising Aakash Bhattacharyya, from Central High School, for a science fair project for spring 2026. (Aakash won 4th place in computational biology division last year (2025) at the International Science Fair).

10.1 Undergraduate Student Supervision

- At OSU - Supervised Josef Gantner [junior, majoring in microbiology] on bioinformatics project (December 2025 - January 2026).

Undergraduate students mentored at UAMS **2017 - 2025**

Summer Undergraduate Research Fellowship (SURF) students:	2017 - 2021
Bobby Tu, from Cornell University, Ithaca, New York *"Genomics of SARS-CoV-2 Alpha and Delta variants".*	2021
Matthew Thompson, from Harding University, Searcy, Arkansas *"Alignment-free Construction of Pan-genomes".*	2019
Ana Swearingen, from Harding University, Searcy, Arkansas *"High Molecular Weight DNA Extraction for Oxford Nanopore Sequencing ".*	2018
Connor Purvis, from Harding University, Searcy, Arkansas *"Impact of respiratory syncytial virus and influenza virus infection on the diversity of gut microbiome in children".*	2017

10.2 Clinical trainee (intern/resident) supervision

None.

10.3 Graduate Theses Supervised

Graduate students mentored in the UAMS Graduate Program **2016 - 2025**

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__1_ Ph.D. student ***Brian Scott Delavan***, (graduated 30 April, 2025) 2021 - 2025
"Application of Bioinformatic Tools to Tuberculosis Surveillance at the Arkansas Department of Health".

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__2_ M.Sci. student ***Sudip Panday***, (graduated 12 November, 2024) 2022 - 2024
"Mash based analysis reveals unprecedented diversity in *Salmonella*".

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__3_ Ph.D. student ***Kaleb Abram***, (graduated April, 2023) 2017 - 2023
"Unifying traditional microbiology and sequence-based bacterial taxonomies".

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__4_ Ph.D. student ***Sangam Kandel*** (graduated 23 February, 2023) 2021 - 2023
"SARS-CoV-2 genomics in Arkansas".

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__5_ Ph.D. student ***Duah Alkam***, (graduated 28 January, 2021) 2017 - 2021
"Using genome-wide screens to identify-critical *Staphylococcus aureus* genes"

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__6_ Ph.D. student ***Visanu Wanchai***, (graduated 30 November, 2020) 2016 - 2020
"What is Life? Conservation of functional domains and domain architectures in life forms ".

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__7_ Ph.D. student ***Skylar Connor***, (graduated 30 July, 2020) 2017 - 2020
"Towards a Better Resolution in Microbial Taxonomy: 16S rRNA trees vs. ribosomal protein trees"

UT Knoxville Genome Science and Technology (GST) program

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__8_ Ph.D. student ***Carissa Bleker***, (graduated in August, 2020) 2016 - 2020
"Data-Driven Analytics for High-Throughput Biological Applications".
(Mike Langston, UTK main thesis advisor)

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__9_ Ph.D. student ***Suresh Poudel*** (graduated in August, 2017) 2013 - 2017
"Proteomics of *Clostridium thermocellum*"
(Bob Hettich, ORNL / UTK main thesis advisor)

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_10_ Ph.D. student ***Bikash Bogati*** (graduated in June, 2021) 2015 - 2021
"To survive some of us must stop growing: ZorO stasis in Enterohemorrhagic Escherichia coli"
(Elizabeth Fozo, UTK, main thesis advisor)

__11_ Ph.D. ***Qian Zhang***, (graduated in May, 2016) 2013 - 2016
"High-throughput clustering of genomes".
(Qian got her M.Sci. degree, and in the Ph.D. program at U. Washington, Seattle.)

CBS (Denmark) Ph.D. students [2004-2016]

All of the below Ph.D. students have graduated in 3 to 3.5 years, and have published at least three first-author papers

_12_ Ph.D. student ***Thomas Pedersen*** 2012 - 2016
"Comprehensive Proteomics of *Streptococcus thermophilus* in Industrial Dairy Products".

_13_ Ph.D. student ***Asli Ismihan Özen*** 2012 - 2016
"Phylogenomics Approaches for Functional Discovery".

_14_ Ph.D. student ***Tammi Vesth*** 2011 - 2013
"Determining and comparing protein function in Bacterial genome sequences".
https://orbit.dtu.dk/en/publications/determining-and-comparing-protein-function-in-bacterial-genome-se/

_15_ Ph.D. student ***Marlene Hansen*** 2010 - 2013
"High-throughput Characterization of *Campylobacter* genomes for epidemiological studies".

_16_ Ph.D. student ***Shinny Pimlapas Leekitcharoenphon*** 2010 - 2013
"High-throughput Characterization of Salmonella genomes for epidemiological studies".

_17_ Ph.D. student ***Rolf Sommer Kaas*** 2010 - 2013
"High-throughput Characterization of Escherichia coli and Shigella genomes for epidemiological studies".

_18_ Ph.D. student ***Oksana Lukjancenko*** 2010 - 2013
"Analysis of pan-genome content and its application in microbial identification".
https://orbit.dtu.dk/en/publications/analysis-of-pan-genome-content-and-its-application-in-microbial-i/

_19_ Ph.D. student ***Martin Holm Rau*** 2009 - 2012
"*Pseudomonas aeruginosa* host-adaptation in cystic fibrosis patients".

_20_ Ph.D. student ***Maria Seier-Petersen*** 2009 - 2011
"Response to Biocides in *Salmonella, E. coli, and S. aureus*".

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_21_ Ph.D. student ***Kristoffer Kiil*** 2007 - 2010
"Prediction of Bacterial Protein Function".

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_22_ Ph.D. student ***Peter F. Hallin*** 2007 - 2009
"Operon Prediction in Bacterial Genomes".

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_23_ Ph.D. student ***Tim T. Binnewies***, 2005 - 2007
"Computational Modeling of Bacterial Pathogenesis".

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_24_ Ph.D. student ***Hanni Wallinbrock***. 2004 - 2006
"DNA Microarrays in Comparative Genomics and Transcriptomics".

Norwegian Ph.D. students supervised **[2003-2014]**

Students supervised at CBS (Denmark) and the University of Oslo [UiO], Norway or at St. Olaf's Hospital, NTNU (Norges Teknisk-Naturvitenskaplige Universitet, or The Norwegian University of Science and Technology), in Trondheim, Norway.

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_25_ Ph.D. student ***Kjersti Haugum*** 2011 - 2014
"Genomic heterogeneity among non-O157 Shiga toxin-producing *Escherichia coli* (STEC) from patients with and without haemolytic uremic syndrome (HUS)".
Clinic of Laboratory Medicine, Department of Medical Microbiology, St. Olavs Hospital, Trondheim University Hospital, Trondheim, Norway.

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_26_ Ph.D. student ***Brynildsrud Ola Brønstad*** 2011 - 2013
"Small RNAs in bacterial genomes".
Norwegian School of Veterinary Science, Dept Food Safety & Infect Biol, Oslo, Norway.

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_27_ Ph.D. student ***Hilde Vinje*** 2011 - 2013
"From Bacterial Genome Sequence to Taxonomy".
Biostatistics group/ IKBM, Norwegian University of Life Science, Ås, Norway.

……

_28_ Ph.D. student ***Øystein Tenfjord Engelsen*** 2006 - 2010
"Estimating Gene Families in Bacterial Genomes".
Biostatistics group/ IKBM, Norwegian University of Life Science, Ås, Norway.

……

_29_ Ph.D. student ***Camilla Seks*** 2005 - 2008
"Public health risk of the ubiquitous reservoir of Shiga toxin-encoding *Escherichia coli* in animals".
Norwegian School of Veterinary Science, Dept Food Safety & Infect Biol, Oslo, Norway.

……

_30_ Ph.D. student ***Jon Bohlin*** 2004 - 2008
“Mathematical models in bioinformatics and infectious disease dynamics”.
Norwegian School of Veterinary Science, Dept Food Safety & Infect Biol, Oslo, Norway.

……

_31_ Ph.D. student ***Karin Lageson*** 2003 - 2008
“Ribosomal RNAs in prokaryotes: mapping and characterization”.
CMBN, IMM, Rikshospitalet, Oslo, Norway.

Masters Students educated in Denmark (2000 - 2013)

All of the master’s students below have published at least one paper as part of their master’s thesis project.

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_32_ ***Emilie Glad Bak*** 2013
“Subtyping of Listeria monocytogenes”.

……

_33_ ***Sandra Anderson*** 2013
“Identification of unknown metagenomic species”.

……

_34_ ***Dan Jensen*** 2012
“Identification of genetic markers for prediction of bacterial lifestyle characteristics”.

……

_35_ ***Annika Jacobsen*** 2012
“Variation in Antiterminator Q in Verocytotoxin Phages”.

……

_36_ ***Niklas J. Cvetanovski*** 2011
“Comparison of probiotic bacterial core genes in Human Microbiome Samples”.

……

_37_ ***Asli Ismihan Özen*** 2011
“Taxonomy from Genomic Sequences”.

……

_38_ ***Tammi Vesth*** 2011
“Artificial Neural Networks to predict function in bacterial genomes”.

……

_39_ ***Marlene Hansen*** 2010
“Biofilm Formation and Genome Annotation of *Achromobacter xylosoxidans* - An emerging Cystic Fibrosis Pathogen”.

……

_40_ ***Anja Stausgaard*** 2010
“Modeling Bacterial Virulence in *S. aureus*”.

……

_41_ ***Oksana Lukjancenko*** 2009
"Design of a high-density 116 genome-based microarray for enteric bacteria".

……

_42_ ***Mamuna Afzal*** 2009
"Immunological Analysis of *Mycobacterium aviu*m Subsp. Paratuberculosis Ejlskov 2007 09".

……

_43_ ***Soad Abidi*** 2009
"Comparative Genomics of Mycobacterium avium Subsp. Paratuberculosis Ejlskov 2007 09".

……

_44_ ***Mervat El-Minaoui*** 2008
"Comparative Genomics of *Pseudomonas*".

……

_45_ ***Mads Albaek*** 2008
"Comparison of 51 *Burkholderia* genomes".

……

_46_ ***Marcello Bertalan*** 2007
"Comparative Genomics of *Bacteroides fragilis*".

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_47_ ***Kristoffer Kiil*** 2006
"Operon Prediction in *Streptomyces coelicolor*".

……

_48_ ***Peter F. Hallin*** 2006
"Design and application of a high density microarray for expression analysis in *Campylobacter jejuni*".

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_49_ ***Heng Wu*** 2005
"Prediction of rRNA operons in bacterial genomes".

……

_50_ ***Haakan Ohlsson*** 2003
"Prediction of promoters based on DNA structures".

……

_51_ ***Vera van Noort*** 2002
"Genome annotation in *Escherichia coli*".

……

_52_ ***Carsten Friis*** 2000
"DNA structures in Bacterial Chromosomes".

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10.4 Post-Doctoral Supervision

- ***Dr. Veniamin Borin*** https://scholar.google.com/citations?hl=en&user=LBMUqooAAAAJ 2025 - present
Dr. Borin is currently funded by an NIH R01 grant (GM148886), "Biophysical Model of Enzyme Catalysis: Conformational Sub-states, Solvent Coupling and Energy Networks", that I am now the PI for. His project involves using molecular dynamics simulations to model the active sites of novel Squalene-Hopene Cyclase (SHC) enzymes developed by directed evolution.

- ***Dr. Ranabir Majumder*** https://scholar.google.com/citations?hl=en&user=d2nYs-MAAAAJ 2025 - present
Dr. Majumder is also currently funded by an NIH R01 grant (GM148886), "Biophysical Model of Enzyme Catalysis: Conformational Sub-states, Solvent Coupling and Energy Networks", that I am now the PI for. Ranabir's project involves using structural 'metadynamics' -modeling how protein structures change with time, using a combination of molecular dynamics simulations as well as now also using deep-learning/protein language model components as an extension of comparative genomics and sequence-based structural modeling.

Previous post-docs (before joining OSU in 2025)	**1999 - 2020**
Dr. Zulema Udaondo	2017 - 2020
Dr. Adriana Cabal	2009 - 2010
Dr. Matloob Qureshi	2009 - 2010
Dr. Stefano Borini	2008 - 2010
Dr. Tom Coeyne	2006 - 2007
Dr. Anne Petersen	2004 - 2005
Dr. Peder Worning	1999 - 2005
Dr. Lise Petersen	1999 - 2001

10.5 Other Advisory Activities (Mentor for Early Career Faculty)

Assistant Professor Se-Ran Jun (now Associate Professor at UAMS)	2016 - 2024
Associate Professor Intawat Nookaew (now full Professor at UAMS)	2016 - 2024
Assistant Professor Michael Robeson II (now Associate Professor at UAMS)	2017 - 2024
Assistant Professor Nandini Mukherjee (now Associate Professor at UAMS)	2018 - 2022

11 - 18 PUBLICATIONS & FUNDING

Publications ***1984 - present***

Web page with full list of publications: https://ussery.org/Pubs_full_Dec2025.html

ORCID:
https://orcid.org/0000-0003-3632-5512

GoogleScholar:
https://scholar.google.com/citations?user=aws0djcAAAAJ&hl=en
As of 26 December, 2025: 319 papers; 32,7347 citations; h-index = 72; i10 index = 178 articles.

NCBI "MyBibliography" page
https://www.ncbi.nlm.nih.gov/myncbi/1-76oZYFPumk7/bibliography/public/

"Exaly project" rankings page
https://exaly.com/author/8920020/david-w-ussery/rankings
As of 26 December, 2025, most cited author of the year, for eight different journals.

Scholar GPS ranking page:
https://scholargps.com/scholars/39389209849759/david-w-ussery
As of 26 December, 2025, lifetime ranking in top 0.02%

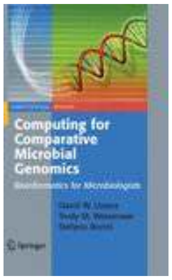
Frontiers impact page
https://loop.frontiersin.org/people/106537/impact
As of 26 December, 2025, 72,390 views from 267 publications.

*legends: * = > student/post-doc co-authors; cited > 10x (178 articles); cited > 100x (55 articles); cited > 1000x (8 articles).*

11. BOOKS & Chapters in Books

11.1 - Authored book:

David Wayne Ussery, Trudy M. Wassenaar, *Stefano Borini*, "**Computing for Comparative Microbial Genomics: Bioinformatics for Microbiologists**", (Springer, 2009). https://link.springer.com/book/10.1007/978-1-84800-255-5. Cited 66x.



11.2 - Edited books:

- none -

11.3 - Authored Book Chapters:

1. **Adriana Cabal*, Trudy M Wassenaar, **David W Ussery**, (2018). “Gender Differences in the Gut Microbiome and How These Affect Cardiovascular Diseases”, Chapter 7 in **Gender Differences in the Pathogenesis and Management of Heart Disease**, (Springer International Publishing AG, 2018). https://doi.org/10.1007/978-3-319-71135-5_7. Cited 15x

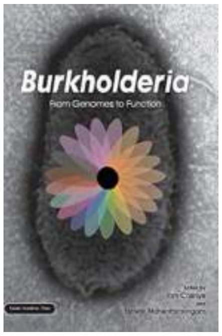
2. Trudy M. Wassenaar, **Visanu Wanchai*, **Duah Alkam*, Intawat Nookaew, and **David W. Ussery**, (2018).“Conservation of Two-Component Signal Transduction Systems in *E. coli*, *Salmonella*, and Across 100,000 Bacteria of Various Bacterial Phyla”. Chapter 7 in **Molecular Mechanisms of Microbial Evolution**, P. H. Rampelotto (ed.); Springer International Publishing AG, part of Springer Nature (2018). Grand Challenges in Biology and Biotechnology. https://doi.org/10.1007/978-3-319-69078-0_7

3. Trudy M. Wassenaar, Se-Ran Jun, **Visanu Wanchai*, **Preecha Patumcharoenpol*, Intawat Nookaew, **Katrina Schlum*, Michael R. Leuze, and **David W. Ussery**, (2017). “Insights from Comparative Genomics of the Genus *Salmonella*”, Chapter 1 in: **Current Topics in *Salmonella* and Salmonellosis**, (Mihai Mares, editor, InTechOpen, published by Ion Ionescu de la Brad University of Agricultural Sciences and Veterinary Medicine of Iași, Romania; 2017). http://dx.doi.org/10.5772/67131

4. **Asli Ismihan Ozen*, **David Wayne Ussery**, (2015).“Genome Atlases, Potential Applications in Study of Metagenomes”; chapter in: **ENCYCLOPEDIA OF METAGENOMICS - Genes, Genomes and Metagenomes. Basics, Methods, Databases and Tools** (K.E. Nelson, editor, Springer Science+Business Media New York, pages 219-222). https://doi.org/10.1007/978-1-4899-7478-5_686

5. **Asli I. Ozen*, **Tammi Vesth*, **David W. Ussery**, (2013). “From Genome Sequence to Taxonomy - A Skeptic's View”, Chapter 8 in **The Prokaryotes**, 4th edition, (Springer Berlin Heidelberg, pages 209-227; 2013). https://doi.org/10.1007/978-3-642-30194-0_11

6. **Pimlapas Leekitcharoenphon*, Gregory S. Buzard, and **David W. Ussery**, (2013). “Comparative Genomics in the Genus *Burkholderia*”, Chapter 2 in **Burkholderia: Molecular Microbiology and Genomics** (Horizon Press, 2013). https://doi.org/10.21775/9781912530069. Cover image.



7. Trudy M. Wassenaar, **Tim T. Binnewies, *Peter F. Hallin*, and **David W. Ussery,** (2010). “Tools for comparison of bacterial genomes", Chapter 74 in: **Handbook of Hydrocarbon and Lipid Microbiology**, (K. N. Timmis (ed.), Springer-Verlag, Heidelberg, Germany, 2010; pages 4,313 - 4,317). https://doi.org/10.1007/978-3-540-77587-4_337.

8. Trudy M. Wassenaar, **Jon Bohlin, *Tim T. Binnewies*, **David W. Ussery**, (2009). "Genome comparison of bacterial pathogens", Chapter 1 in **Genome Dynamics, volume 6 - Microbial Pathogenomics**, (Karger AG publishers, Basel, 2009). https://doi.org/10.1159/000235759

9. **David W. Ussery**, "Physical Maps of Chromosomes", **The Encyclopedia of Life Sciences**, John Wiley & Sons, Ltd., Chichester, England, (2009). https://doi.org/10.1002/9780470015902.a0001425

10. David W. Ussery, **Kristoffer Kiil, *Karin Lagesen*, Thomas Sicheritz-Ponten, **Jon Bohlin*, and Trudy M. Wassenaar, (2009). "The genus *Burkholderia*: analysis of 56 genomic sequences", Chapter 14 in **Genome Dynamics, volume 6 - Microbial Pathogenomics**, (Karger AG publishers, Basel, 2009). https://doi.org/10.1159/000235768
Cited 77x

11. **Kristoffer Kiil, *Tim T. Binnewies, *Hanni Willenbrock*, Susse Kirkelund Hansen, **Lei Yang, *Lars Jelsbak*, **David W. Ussery**, and **Carsten Friis*, (2009). "Comparative genomics of *Pseudomonas*", Chapter 1 in ***Pseudomonas*: Model Organism, Pathogen, Cell Factory**, (Edited by Bernd H. A. Rehm; Wiley-VCH Press, 2009). https://doi.org/10.1002/9783527622009.ch1

12. Jens Klockgether, Dieco Würdemann, Lutz Wiehlmann, **Tim T. Binnewies*, **David W. Ussery,** and Burkhard Tümmler, "Genome Diversity of *Pseudomonas aeruginosa*", Chapter 2 in: ***Pseudomonas*: Genetics and Molecular Biology,** (editor: Pierre Cornelis; Horizon Press, London, 2008; pages 19-42). https://doi.org/10.21775/9781910190036
Cited 13x

13. **Kristoffer Kiil, *Tim T. Binnewies, *Hanni Willenbrock*, Susse Kirkelund Hansen, **Lei Yang, *Lars Jelsbak*, **David W. Ussery**, and **Carsten Friis*, "Comparative genomics of *Pseudomonas*", Chapter 1 in: ***Pseudomonas*: Model organism, pathogen, cell factory**, (Wiley-VCH Press, 2008; pages 1-23). https://doi.org/10.1002/9783527622009.ch1
Cited 21x

14. **Phatthanaphong Wanchanthuek, *Peter F. Hallin, *Rodrigo Gouveia-Oliveira*, and **David W. Ussery**, "Structural features of fungal genomes", Chapter 3 in: **Topics in Current Genetics: Comparative genomics using fungi as a model**, **15**:47-77, (2006). (P. Sunnerhagen and J. Piskur, eds., Springer Verlag, Heidelberg). https://doi.org/10.1007/4735_112

15. Mensur Dlakic, **David Ussery**, and Søren Brunak, "DNA bendability and nucleosome positioning in transcriptional regulation", Chapter 14 in: **DNA Conformation in Transcription,** (Takashi Ohyama, editor; Landes Bioscience, Georgetown, Texas, 2005; pages 189-202.). https://link.springer.com/content/pdf/10.1007/0-387-29148-2.pdf#page=193
Cited 13x

16. _*Lars Juhl Jensen, *Marie Skovgaard_, Thomas Sicheritz-Ponten, _*Niclas Tu Hansen, *Helle Johansson, *Merete Kjær Jørgensen, *Kristoffer Kiil, *Peter F. Hallin_ and **David Ussery**, "Comparative genomics of four Pseudomonas species", Chapter 5 in **THE _PSEUDOMONADS_ VOL I. GENOMICS, LIFE STYLE AND MOLECULAR ARCHITECTURE** (Juan L. Ramos, editor, Kluwer Academic / Plenum Publishers, New York, pages 139-164, 2004). https://doi.org/10.1007/978-1-4419-9086-0_5

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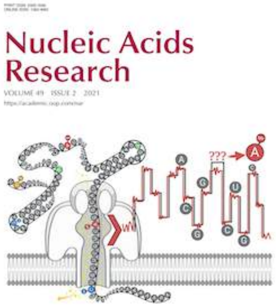

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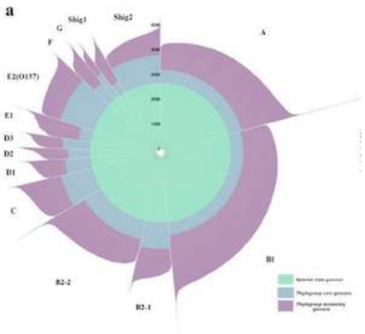

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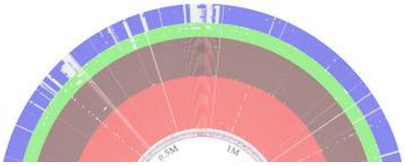

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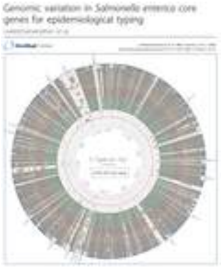

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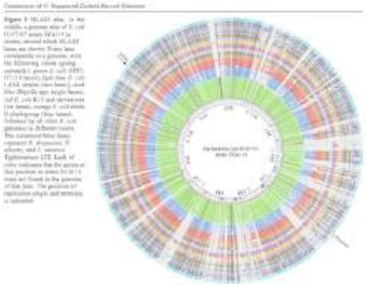

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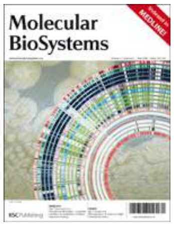

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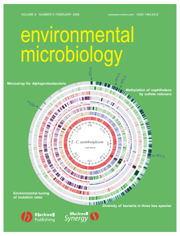

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13. REFEREED CONFERENCE PUBLICATIONS

14. PRESENTATIONS

REFEREED CONFERENCE PUBLICATIONS

223. Oksana Lukjancenko and **David W. Ussery**, (2010). “Design of an Enterobacteriaceae Pan-genome Microarray Chip", In: Computational Systems Biology and Bioinformatics. International Conference on Computational Systems-Biology and Bioinformatics (CSBio 2010), Proceedings. CCIS, **115**:174-189, Springer, Heidelberg (2010). https://doi.org/10.1007/978-3-642-16750-8_15

224. Matloob Qureshi, Eva Rotenberg, Hans-Henrik Stærfeldt, Lena Hansson, and **David W. Ussery**, “The Genome Atlas Resource”, In: Computational Systems Biology and Bioinformatics. International Conference on Computational Systems-Biology and Bioinformatics (CSBio 2010), Proceedings. CCIS, **115**: 149-158, Springer, Heidelberg (2010). https://doi.org/10.1007/978-3-642-16750-8_13.

225. **David W. Ussery**, Jakob Bondo, Jimmy Hoffmann Hansen, Paiman Khorsand-Jamal, Anne Egholm Pedersen, Maria Seier Petersen, Pernille Nielsen, Peter Hallin, “A DNA-centric view of *Clostridium* genomes”, In: Diagnosis, epidemiology and antibiotic resistance of the genus Clostridium, (Duchesnes C., Mainil J, Pelkonen S. and Menozzi MG, editors), Proceedings of the meeting, Presses de la Faculté de Médecine Vétérinaire de l'Université de Liège, pages 60-66, (2004).

226. David W. Ussery, Clare Harrington, Peter Hallin, and Stephen On, “Comparative Genomics of Five epsilon-Protobacterial Genomes”, Proceedings of the 13th Annual Conference on Campylobacter, Helicobacter, and Related Organisms (2003).

Oral Presentations at OSU July, 2025 - present

1. "When Names Lie: Taxonomic Turbulence and Pangenome Diversity in the Enterobacteriaceae", talk for the **One Health Pangenome25** conference: THE MICROBIAL PANGENOME IN ONE HEALTH, Valencia, Spain 🇪🇸, 4 December, 2025

2. "INTERACT: Past, Present, and Future", talk for the **2025 INTERACT symposium**, Stillwater, Oklahoma, 23 October, 2025

3. "A Genomic Epidemiology Approach to One-Health", opening talk for the "Integrative Approaches to Zoonotic and Environmental Disease Control: Focus on Rural Communities" session for the **2025 INTERACT symposium**, Stillwater, Oklahoma, 23 October, 2025

4. "HIDDEN PATTERNS IN PROTEINS: How Pfam Domains Uncover Function Beyond BLAST", talk for the Bioinformatics workshop for the **2025 INTERACT symposium**, 22 October, 2025

5. "BIG PROBLEMS & BIG DATA IN BIOLOGY: Genomics and the Flow of Biological Information", talk for the **second discussion group on the future of Computational Biology at Oklahoma State University**, Room 130K of the HBRC building, 11 August, 2025
6. "THE MUSIC OF LIFE: Genomics and the Flow of Biological Information", Talk for the **Stowers Institute for Medical Research**, Kansas City, Missouri, on 9 July, 2025

Oral Presentations before joining OSU in 2025 (talks in 23 countries, 5 continents) 1998 - 2025

1. "The Music of Life: An Introduction to Bioinformatics", Talk for **West Virginia University Cancer Institute;** Wednesday, 16 April, 2025
2. "Benchmarking High-throughput computing of viral genomes", talk for the **Third OAK Supercomputing Conference**, Wichita, Kansas 23 May, 2024
3. "Using Chat-GPT in teaching bioinformatics", talk for the **ARA "Project Scope" Seminar Series** 29 May, 2024
4. "Using Chat-GPT in teaching bioinformatics", invited talk for the first session of the **Artificial Intelligence Monthly Teleconference Series**, 4 April, 2024
5. "What Can We Learn from a Million Salmonella Genomes?", talk for the **2023 OAK Supercomputing Fall Conference** Little Rock, Arkansas 25 October, 2023
6. "Genomic Epidemiology of *E. coli*", invited talk for the **Donaghey College of Science, Technology, Engineering, and Mathematics Colloquium Series**, University of Arkansas at Little Rock, 8 September, 2023.
7. "Big Data Management: Examples from the Data Curation & Life Cycle thrust", talk for the **Arkansas NSF EPSCoR grant site visit** (RII Track-1: Data Analytics that are Robust and Trusted (DART); NSF "reverse site visit", Little Rock, Arkansas, 18 September, 2023.
8. "Who's Afraid of the Monkeypox virus?", invited talk for the **30th International Point-of-Care Diagnostics for Global Health & Biodefense** virtual conference, 8 June, 2023
9. "Big Data in Genomic Research for Big Questions, with Examples from COVID-19 and Other Zoonoses", **1rst Oak Supercomputing Conference**, Stillwater, Oklahoma, 6 April, 2023
10. "Microbiome changes with age", **23rd Annual UAMS Geriatrics and Long-Term Care Conference**; 15 September, 2022
11. "When Boring is Good: Limited Mutational Repertoire across millions of SARS-CoV-2 genomes", invited talk for the **29th International Biodetection Technologies Meeting**, virtual conference, 29 June, 2022
12. "Population Genomics of *E. coli*", talk for **Metagenomics Forum, Evolutionary Genomics Group, Universidad Miguel Hernandez, Alincante, Spain 🇪🇸**; 20 January, 2022

13. "What can we learn from 4.2 million Covid-19 genomes?", **13th International Conference on Information Technology and Electrical Engineering (ICITEE 2021)**, Bangkok, Thailand 🇹🇭, 14 October, 2021
14. "An Introduction to the Human Gut Microbiome, and how it changes with age", talk for the **UAMS Geriatrics and Long-Term Care Conference**; Little Rock, Arkansas, Thursday, 16 September, 2021
15. "When Boring is Good: Limited Mutational Repertoire across millions of SARS-CoV-2 genomes", invited talk for the **28th International Biodetection Technologies** (Virtual meeting), 18 July, 2021
16. "SARS-CoV-2 "VoC's in Arkansas -or- Stone Soup in Arkansas", Invited **Arkansas Research Alliance Project Scope** talk, 17 February, 2021
17. "Big Data Comes to Biology: Portable Genome Sequencing", workshop at the **Little Rock TechFest**, 10 October, 2019; Little Rock, Arkansas, USA.
18. "Building Standardized Dendograms for Viruses", invited talk for **National Institute on Standards (NIST) workshop on Standards for Next-Generation Sequence Detection of Viruses** on 19 September, 2019; Gaithersburg, MD, USA.
19. "Real-time, full length genome sequencing of DNA and RNA viruses", talk for **BioDefense World Summit**, on 18 June, 2019; Bethesda, Maryland, USA
20. "Rapid Sequencing of RNA and DNA Viromes from Clinical Isolates", talk for **Ouachita Baptist University,** biophysics seminar class, OBU, on 14 March, 2019, Arkansas, USA.
21. "Big Data from Clinical Genome Sequencing", talk at the **2018 AAHC Research Meeting, with the theme "Big Data Advances in Biomedical Science"**, 29 November, 2018, at the Liaison Capitol Hill Hotel in Washington, DC., USA.
22. "High-throughput comparison of genomes", talk at **St. Louis University**, St. Louis, Missouri, USA (19 September, 2018).
23. chaired opening session at "BioDefense 2018" on "**BIODETECTION TECHNOLOGIES: BIOTHREAT AND PATHOGEN DETECTION**"; gave talk on "Rapid Sequencing of RNA and DNA Viromes", Bethesda, Maryland, USA, 27 June, 2018
24. "What can Genome Quality Scores for a hundred thousand bacterial genomes tell us about standards for metagenomics?", invited talk for **2017 SIMB Annual Meeting and Exhibition**, Tuesday, 1 August, 2017, Denver, Colorado, USA.
25. chaired morning session and gave talk at the **AR-BIC conferenc**e, in Little Rock (on 21 April, 2017). "What is Life? Five-hundred Functional Domains found in all genomes across the Tree of Life", Little Rock, Arkansas, USA.
26. Lectures for **INBRE workshop** on comparative genomics, for high-school and university undergraduates and graduate students, on 19-21 March, 2017, UAMS, Little Rock, Arkansas, USA.

27. Lectures for Comparative Genomics course workshop on 22 and 23 February, 2017, at the **University of Tennessee Medical School**, in Memphis, Tennessee, USA, on using 3rd generation sequencing technology for sequencing viral genomes.
28. “What is Life? Conserved Protein Functional Domains across 100,000 Bacterial Genomes”, Seminar for **UAMS Dept. Pharmacology & Toxicology,** UAMS, Little Rock, Arkansas, USA, 2 November, 2016.
29. “What is Bioinformatics? Sequences as information”, invited talk at the **Arkansas Life Science Summit**, Conway, Arkansas, USA, 19 October, 2016.
30. “Microbial Communities - What can high-throughput genomics teach us about evolution?”, invited lecture for **Department of BioMedical Informatics Research & Application Seminar Series**, University of Arkansas for Medical Sciences, Little Rock, Arkansas, USA, 15 September, 2016
31. “Microbial Communities - Bacterial Pan- and Core-Genomes”, invited lecture on **Comparative Genomics, SiMPC Conference**, Sirirai Hospital, Mahidol University, Bangkok, Thailand 🇹🇭, 23 August, 2016.
32. “Third Generation Sequencing for Rapid Biosurviellence”, invited talk at the **BioDefense World Summit**, Baltimore, Maryland, USA, 30 June, 2016.
33. “Zika virus comparative genomics”, talk at **National Center for Toxicology Research (NCTR)**, Pine Bluff, Arkansas, USA, 24 June, 2016.
34. “Who Are We? Defining Microbial Ecosystems”, invited talk **DTRA [Defense Threat Reduction Agency]**, Washington, D.C., USA, 4 May, 2016.
35. “Roughly 500 functional domains conserved in 70,000 bacterial genomes”, lecture at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway 🇳🇴, 22 April, 2016.
36. “Microbial Communities: Bacterial Pan- and Core-genomes”, lecture at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway 🇳🇴, 21 April, 2016.
37. “Comparative Genomics: Introduction to DNA Atlases”, lecture at **St. Olav’s Hospital, The Norwegian Technical University (NTNU),** Trondheim, Norway 🇳🇴, 20 April, 2016.
38. “Genome Quality Scores”, lecture at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway 🇳🇴, 19 April, 2016.
39. “Third Generation Sequencing for Rapid Biosurviellence”, lecture at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway 🇳🇴, 18 April, 2016.
40. “Introduction to Microbial Genomics - Alignments”, Lecture at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway 🇳🇴, 17 April, 2016.
41. “Genome-Based taxonomy of *Vibrios*”, Guest lecture for ‘Compuational -omics’ course at **University of Tennessee**, Knoxville, USA, 18 February, 2015.

42. “Comparative Genomics: Introduction to DNA Atlases”, Guest lecture at **The University of Tennessee,** Knoxville, USA, 2 September, 2015.

43. “Introduction to Genomics: Sequences as Biological Information”, Guest lecture for **Science and Faith workshop**, Gordon College, USA, 17 June, 2015.

44. “Regulation of Gene Expression in Bacterial Genomes”, Guest professor talk at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway, 19 May, 2015.

45. “Genome Sequences for Rapid Biosurviellence”, Guest professor talk at **St. Olav’s Hospital, The Norwegian Technical University (NTNU)**, Trondheim, Norway 🇳🇴, 20 November, 2014.

46. “Third Generation Sequencing for Rapid Biosurviellence”, Keynote talk for the **CoZEE Zoonoses Network Autumn Conference** on “The role of high-throughput sequencing in surveillance, diagnostics and tracking zoonotic bacteria”, Dundee, Scotland 🏴󠁧󠁢󠁳󠁣󠁴󠁿, 11 November, 2014.

47. “Defining *Pseudomonas* species - with special emphasis on the *Pseudomonas fluorescens* clade”, talk for the **Plant Microbe Interfaces group, Oak Ridge National Labs,** Oak Ridge, Tennessee, USA, 10 September, 2014.

48. “*Ruminiclostridium thermocellu*m genomics”, lecture at **Dartmouth College**, New Hampshire, USA, 31 July, 2014.

49. “Sequences as Biological Information”, set of three lectures in course “Science and Faith: A Course for Pastors”, held at **Gordon College, Boston, MA**, USA, 28-30 July, 2014.

50. “Comparative Genomics”, 3-week course taught at DTU, in the Center for Biological Sequence Analysis, Department of Systems Biology, The Technical University of Denmark 🇩🇰, 4-26 June, 2014.

51. “Using Genomes to Estimate Community Structures”, talk for the **Plant Microbe Interfaces group, Oak Ridge National Labs, Oak Ridge**, Tennessee, USA, 28 May, 2014.

52. “Detecting and Identifying New Outbreaks during Real-time Monitoring with 3rd Generation Genomic Sequencing”, invited talk for **the head of U.S. Biosurviellence Program**, at the Pentagon, Washington, D.C., USA, 9 May, 2014.

53. “Comparative Genomics -or- ‘Big Data’ Comes to Biology”, talk for the **BioEnergy Sciences Center group, Oak Ridge National Labs**, Oak Ridge, Tennessee, USA, 1 April, 2014.

54. “Sigma Factors across a Thousand *E. coli* genomes”, invited talk for the **University of Cincinnati, College of Medicine**, Cincinnati, Ohio, USA, 27 November, 2013.

55. “OTUs - Can we do better than 16S rRNA?”, talk for the **Plant Microbe Interfaces group, Oak Ridge National Labs**, Oak Ridge, Tennessee, USA, 6 November, 2013.

56. “Towards an Integrated Systems Biology for BESC”, group talk for the **BioEnergy Center, Oak Ridge National Labs**, USA, 5 November, 2013.

57. “Data Management Strategy for BESC”, talk for **DOE annual review of the BioEnergy Center, Oak Ridge National Labs,** Oak Ridge, Tennessee, USA, 24 October, 2013.

58. Morning lectures (three days) for the “**Sixth International Course: Computational genomics**”, CNSRT, Rabat, Morocco” 🇲🇦, 1-5 April, 2013.

59. Morning lectures (four days) for “Comparative Bacterial Genomics Workshop”, held at **Dhulikhel Hospital, Kavrepalanchok District, Nepal** 🇳🇵 , 18-22 March, 2013.

60. “Bacterial Pan- and Core-genomes - A Skeptics View”, invited talk for **NCBI Genome Annotation Workshop,** Bethesda, Maryland, USA, 4 March, 2013.

61. “Comparing Thousands of Bacterial Genomes, using high-throughput methods”, invited talk at **Oak Ridge National Labs**, Oak Ridge, Tennessee, USA, 21 February, 2013.

62.“Reasons to be Skeptical of Big Data”, **CBS group talk**, Lyngby Denmark 🇩🇰, 4 February, 2013.

63. “From Genome Sequence to Taxonomy - A Skeptic’s View”, invited talk for the **University of New Mexico College of Medicine**, Albuquerque, New Mexico, USA, 7 January, 2013.

64. “Methods to Compare Bacterial Genomes, with emphasis on AT content”, invited talk for **Los Alamos National Laboratory**, Los Alamos, New Mexico, USA, 4 January, 2013.

65. “Bayesian prediction of bacterial growth temperature range, based on genome sequences”, talk for **InCOB2012 meeting, Bangkok**, Thailand 🇹🇭, 4 October, 2012.

66. “CMGenomics.net – Comparison of Microbial Genomes for High-throughput Monitoring and Epidemiology”, talk for the **16th Annual PulseNet Update Meeting,** Atlanta, Georgia, USA, 29 August, 2012.

67. “Genome Sequence to Taxonomy: Diversity in the Human Gut Microbiome”, talk for the **15th Conf. in Genomics & Proteomics of Human Pathogens**, HPA, Collindale, England 🇬🇧, 22 June, 2012.

68. “Methods to Calculate Bacterial Pan-genomes: Benchmarks, Progress and Pitfalls to Avoid”, talk for the **ASM 112th General Meeting**, 18 June, 2012, San Francisco, California, USA.

69. “Comparison of hundreds of *Escherichia coli* genomes”, talk for the **5th IECA conference Riviera Maya, Mexico** 🇲🇽, 6 December, 2011

70. “Comparison of 105 Vibrio genomes”, talk for the **Vibrio2011 conference, Santiago de Compostela, Spain** 🇪🇸, 3 November, 2011.

71. “Veillonella: Half-way between Gram positives and Gram negatives”, talk for the **Norwegian University of Science and Technology (NTNU),** Norway 🇳🇴, April, 2011.

72. “Standardization of Descriptions for Core- and Pan-genomes”, talk at the **11th Genomics Standards Consortium,** Wellcome Trust Sanger Center, Cambridge, England 🇬🇧, 5 April, 2011.

73. “An Inordinate Fondness for Bacteria”, invited talk at the **BioLogos workshop, Harvard Club, New York City**, USA, 10 November, 2010.

74. “The minimal set of conserved proteins across a thousand bacterial genomes”, invited keynote talk at the **First International Conference on Computational Systems-Biology and Bioinformatics (CSBio2010)**, Bangkok, Thailand 🇹🇭, on Friday, 5 November, 2010.

75. "Using REAL Biology (evolution) to Design Synthetic Life", invited talk at the **Exploratory Round Table Conference of 2010 - Synthetic Biology, in Shanghai, China** 🇨🇳, 19 October, 2010.

76. "The core set of conserved proteins in more than a thousand bacterial genomes", invited talk at the **Comparative Genomics and Metagenomics, Impacts on Health and Environment Workshop in Granada, Spain** 🇪🇸, 8 October, 2010.

77. "The minimal set of conserved proteins across a thousand bacterial genomes", invited talk at **IECA Functional Genomics Mini-symposium, Purdue University**, West Lafayette, Indiana, USA, 17 April, 2010.

78. “On the Origins of a *Vibrio* species", invited talk on 10 November, 2009, at **The Biotechnology Centre of Oslo**, Norway 🇳🇴. http://www.biotek.uio.no/news/2009/guestlecture_du.html.

79. “Bacterial pangenomics - or - Using pan-genome microarrays for rapid, high-throughput typing”, **talk for course on molecular typing, Hvidovre Hospital,** Denmark 🇩🇰,10 September, 2009.

80. “Comparative Pan-Genomics of *Escherichia coli* (and Friends)", invited talk at **the European Bionformatics Institute (EBI) and Sanger Center, Hinxton, England** 🇬🇧, 27 August, 2009.

81.“*Pseudomonas* Pangenomics”, invited opening talk for **Pseudomonas 2009 meeting, XII International Conference, in Hannover, Germany** 🇩🇪, 14 August, 2009.

82.“Full genome sequence of *Mycobacterium avium* subsp. paratuberculosis Ejlskov2007”, invited talk for **PAF group, Copenhagen, Denmark** 🇩🇰, 18 June, 2009. https://orbit.dtu.dk/en/publications/full-genome-sequence-of-a-danish-isolate-of-mycobacterium-avium-s/

83.“Bacterial Pangenome Microarrays”, invited external talk for **MedVetNet WP30** (fifth meeting), Utrecht, The Netherlands 🇳🇱, 7 May, 2009.

84.“Bacterial Comparative Pangenomics”, invited talk for the **Joint Centre for Bioinformatics in Oslo**, Norway 🇳🇴, 25 March, 2009.

85. “Bacterial Comparative Pangenomics”, invited keynote talk **Microbiology & Molecular Genetics dept., Michigan State University**, USA, 16 March, 2009.

86. “*Burkholderia* Pan-genomics”, invited keynote talk at the **Annual Conference of the Association for General and Applied Microbiology (VAAM)**, Bochum, Germany 🇩🇪, 9 March, 2009.

87. “*E. coli* fuzzy pan-genomics -or- How to compare Hundreds of *E. coli* genomes”, invited keynote talk at **Ulleval Universitetssykehus, Oslo**, Norway 🇳🇴, 10 December, 2008.

88. “*E. coli* pangenomics - How to compare hundreds of *E. coli* genomes”, invited keynote talk at 3rd International *E. coli* Alliance meeting, Cambridge, England 🇬🇧, 24-28 September, 2008.
89. "Discovering natural groups in *Vibrio*”, invited talk at **XII International Congress of Bacteriology and Applied Microbiology (IUMS),** section on Prokaryote systematics - is it relevant to modern science?, Istanbul, Turkey 🇹🇷, 8 August, 2008.
90. Morning lectures at the **2nd Workshop on Comparative Microbial Genomics, Bangkok**, Thailand 🇹🇭, 2-6 June, 2008.
91. "*Burkholderia* Pan-genomics”, invited talk at the **Max Planck Institut fur Terrestrial Microbiology, Marburg, Germany** 🇩🇪, 26 May, 2008.
92. "On the Origins of Bacterial Species”, invited talk at the **Center for Environmental Systems Microbiology, Georgia Tech**, USA, 17 March, 2008.
93. "Introduction to Bacterial PanGenomics", invited talk at **Medizinischen Hochschule Hannover,** Germany 🇩🇪, 30 January, 2008.
94. "Where does *Vibrio cholera* come from?", invited talk at **University of Copenhagen Microbiology dept., Denmark** 🇩🇰, 20 January, 2008.
95. "On the Origins of a Bacterial Species", invited Keynote talk at the **Vibrio2007 meeting, Paris**, France 🇫🇷, 29 November, 2007.
96. "Minimal genomes in bacterial Genera", invited talk at the **European Conference on Synthetic Biology: Design, Programming and Optimisation of Biological Systems**, Hotel Eden Roc, Sant Feliu de Guixols, Spain 🇪🇸, 26 November 2007.
97. "Bacterial PanGenomics", invited talk at the **Florida Institute of Technology**, Melbourne, Florida, USA, 5 November, 2007.
98. "Pangenomics of 'Bioterrorism Bacteria' -or- How to Compare and Analyse Hundreds of Bacterial Genome Sequences from the Same Organism", invited talk for the **BioDefense conference, Medizinische B-Schutz-Tagung, Munich, Germany** 🇩🇪, 17 Oktober, 2007.
99. "Development of an *E. coli* pan-genome microarray", invited talk for **NimbleGen, Reykjavik, Iceland** 🇮🇸, 29 August, 2007.
100. "Evolutionary Fossils in Bacterial Genomes", invited talk for the **Biology Department, Emory University,** USA, 20 August, 2007.
101. "*Campylobacter* Pangenomics", invited talk for **5th Symposium on Food Microbiology**, LO skolen, Helsingør, Denmark 🇩🇰, 23 May, 2007.
102. "Evolutionary Fossils in Bacterial Genomes", invited talk for the **Workshop on Microbial Evolution, held at DTU**, Denmark 🇩🇰, 15 May, 2007.
103. "Sequencing and Analysis of the *Escherichia coli* Oslo O103 strain", invited talk at **NVH, Oslo**, Norway 🇳🇴,15 January, 2007.

104. "Opening the pan-genomics box for *E. coli*", invited talk at the **"Genomics of pathogenic *Escherichia coli*: European and Japanese perspectives" meeting, INRA**, 147 rue de l'Université, Paris, France 🇫🇷, 29 September, 2006.

105. "New -omics approaches and bioinformatics", invited talk at the **"International Specialized Symposium on Yeasts (ISSY25) Systems Biology of Yeasts - From Models to Applications"**, Helsinki, Finland 🇫🇮, 28-21 June, 2006.

106. "Comparison of 20 *E. coli* genomes", invited talk for the **Norwegian National Molecular Microbiology meeting, Oslo**, Norway 🇳🇴, 17 June, 2006.

107. "A Brief History of *Escherichia coli*", invited talk at the **Norwegian Veterinary Hospital, in Oslo**, Norway 🇳🇴, 25 May, 2006.

108. "Comparison of 20 *E. coli* genomes", invited talk at the Stockholm Bioinformatics Center, Sweden 🇸🇪, 17 May, 2006.

109. "10 Years of Sequencing Bacterial Genomes", invited group talk, I**nformatics and Mathematical Modeling, DTU**, Denmark 🇩🇰, 26 April, 2006.

110. "Comparison of Bacterial Genomes", invited talk at **UMB, Ås, Norway** 🇳🇴, 20 April, 2006.

111. "Methods to Compare Bacterial Genomes", invited talk **CMBN, Universitet i Oslo**, Norway 🇳🇴, 29 marts, 2006.

112. "20 Methods to Compare Bacterial Genomes", invited talk at the **European Science Foundation - Japanese Society for the Promotion of Science Workshop on Functional Genomics, Tokyo, Japan** 🇯🇵, 8 March, 2006.

113. "20 Methods to Compare Bacterial Genomes", invited talk at **Trinity College, Dublin, Ireland** 🇮🇪, 24 January, 2006.

114. "*Aspergillus niger* genomic properties", invited talk for the **Workshop for the A. niger Nature Biotech manuscript**, Noordwijkerhout, The Netherlands 🇳🇱, 12 January, 2006.

115. "Structural Atlases of Microbial Genomes", invited talk for the **Nordic Bioinformatics Network Symposium, Stockholm**, Sweden 🇸🇪, 6 December, 2005.

116. "Towards a 'Systems Microbiology' of *Escherichia coli*", invited talk in **Bremen, Germany** 🇩🇪, 21 November, 2005.

117. "10 Methods to Compare Fungal Genomes", invited talk for **EUROFUNGBASE meeting, Sevilla, Spain** 🇪🇸, 17 November, 2005.

118. "YSBN Databases", invited talk for **YSBN Kick-off meeting, Bordeaux, France** 🇫🇷, 11 November, 2005.

119. "Bioinformatic Tools to Compare *Vibrio* Genomes", invited talk for the **Vibrio2005 meeting, Ghent, Belgium** 🇧🇪, 8 November, 2005.

120. "Chromatin structure and gene expression in *Escherichia coli*", invited talk for the **'Geometry of the Genome' meeting**, Leicester University, England 🇬🇧, 23 September, 2005.

121. "The GenomeAtlas Database: 20 Methods to Compare Bacterial Genomes", invited talk for the **eGenomics meeting, Cambridge**, England 🇬🇧, 7 September, 2005.

122. "Systems Microbiology of *Salmonella entericia*", invited talk for **Dept. of Cancer Research and Molecular Medicine, Norwegian University of Science and Technology,** Trondheim, Norway 🇳🇴, 2 June, 2005.

123. "Three Levels of Gene Regulation in Bacterial Genomes ", invited talk for **ESF Workshop on Transcription Networks: A Global View,** Madrid, Spain 🇪🇸, 27 May, 2005.

124. "CBS Microbial Genome Database", invited talk for **Eurofung database project meeting**, Manchester, England 🇬🇧, 23 May, 2005.

125. "Comparative Genomics of Food Pathogens", invited talk for **3rd Symposium on Food Microbiology, Gl. Avernæs, Ebberup, Fyn**, Denmark 🇩🇰, 17 May, 2005.

126. "Towards a systems biology of *Salmonella*", invited talk for **Systems Biology meeting, the University East Anglia, England** 🇬🇧, 6 May, 2005.

127. "Chromatin and Gene Expression in *E. coli* ", invited talk for **The Epigenomics Project, Genopole Evry, France** 🇫🇷, 28 January, 2005.

128. "Prediction of pathogenicity networks in bacterial proteomes", invited talk for **The Norwegian Biochemical Society winter meeting in Tromsø, Norway** 🇳🇴, 15 January, 2005.

129. "DNA Chromatin and Gene Expression", tutorial at **the Norwegian Veterinary Institute, Oslo,** Norway 🇳🇴, 5 December, 2004.

130. "Bioinformatics of Fungal Genomes -or- Bioinformatics of 18 genomes in 18 minutes", invited talk for **Eurofung meeting, Wageningen, The Netherlands** 🇳🇱, 19 November, 2004.

131. "Comparative Genomics of Bacterial Oral Pathogens", invited talk for the **Bioinformatics & Exploiting Genomic Information Oral Microbiology & Immunology Group symposium, Bristol,** England 🇬🇧, 11 November, 2004.

132. "Prediction of pathogenicity networks in bacterial proteomes", invited talk at the **College Veterinary Medicine, Oklahoma State University**, Stillwater, Oklahoma, USA, 21 Oktober, 2004.

133. "Classification of pathogenic proteins in bacterial proteomes", invited talk for **Norsk forening for mikrobiologi Høstmøtet, Oslo**, Norway 🇳🇴, 13 Oktober, 2004.

134. "Prediction of pathogenicity networks in bacterial proteomes", invited talk for **Tierärztliche Hochschule in Hannover**, Germany 🇩🇪, 23 September, 2004.

135. "Comparison of 150 Bacterial Genomes", invited talk for **Rikshospitalet University Hospital, Oslo**, Norway 🇳🇴, 21 June, 2004.

136. "Visualisation of sequenced Yeast Genomes - Or, an introduction to DNA Chromosome Atlases", invited talk for **EUROFUNG workshop, WICC, Wageningen**, The Netherlands 🇳🇱, 25 February, 2004.

137. "Leading strand Oligomer-bias in Bacterial Genomes - Including a discussion of the *Alkanivorax borkumensis* genome", invited talk for **Meeting of the Task Force Genome Linguistics at the Max Planck Institute in Bremen,** Germany 🇩🇪, 16 February, 2004.

138. "Comparative Genomics of five *Clostridium* species", invited talk for workshop on **DIAGNOSIS, EPIDEMIOLOGY AND ANTIBIOTIC RESISTANCE OF THE GENUS *CLOSTRIDIUM***, Parma, Italy 🇮🇹, 17 October, 2003.

139. "Prediction of Highly Expressed Genes in Prokaryotic Genomes - A DNA-centric perspective", invited talk for a special session of the **SGM meeting (Exploiting Genomes: Bases to Megabases in 50 years), University of Manchester**, England 🇬🇧, 8 September, 2003.

140. "DNA Atlases for *Campylobacter, Helicobacter*, and Related Organisms", KEYNOTE opening talk for **CHRO2003 (*Campylobacter, Helicobacter,* and Related Organisms), Aarhus**, Denmark 🇩🇰, 6 September, 2003.

141. "Genome Atlases for the Study of Evolutionary Systems", invited talk for the **European Science Foundation / LESC workshop on Horizontal Gene Transfer, St. Catherine's College, Oxford,** England 🇬🇧, 13 June, 2003.

142. "Visualisation of DNA Structural Information", invited talk for the **Institute of Biosciences and Technology, Texas A & M University, Houston, Texas,** USA,13 June, 2003.

143. "Visualisation of DNA Structural Information in Sequenced Plasmids", invited talk at **CEH-Oxford, Oxford**, England 🇬🇧, 28 May, 2003.

144. "DNA Atlases for Visualisation of Positional Information within Bacterial Genomes", invited talk for **5th Annual Conference on Functional Genomics, in Göteborg, Sweden** 🇸🇪, August 29 - 30 (2002).

145. "Bioinformatics of *Pseudomonas* genomes.", invited Bioinformatics lecture for the **summer school course on *Pseudomonas*, Gesellschaft für Biotechnologische Forschung, in Braunschweig**, Germany 🇩🇪 (26 August, 2002).

146. "Bioinformatics of *Helicobacter pylori* - A DNA-centric view", talk for the **5th International Workshop on Pathogenesis and Host Response in *Helicobacter* Infections, LO Skolen, Helsingnor**, Denmark 🇩🇰, 4-7 July, 2002

147. "Bioinformatics of Bacterial Genomes", talk for meeting of the **Task Force for Microbial Genome Linguistics, as part of The Competence Network: Genome Research on Bacteria**

relevant for Environmental Protection, Agriculture and Biotechnology, Meeting at the Medizinische Hochschule, Hannover, Germany 🇩🇪, 24 May, 2002.

148. "Gene Finding in Three-Dimensions", invited lecture for at **Informatik og teknik i jordbruget, Fuglsøcentret, Denmark** 🇩🇰, 1 March, 2002.

149. "Bacterial Chromatin, Genome Organisation and Gene Expression in *E. coli*", invited lectures at Wesleyan University department of Molecular Biology, Middleton, Connecticut, USA, 11 December, 2001.

150. "Bioinformatics of Microbial Genomes", two lectures for the **GBB/Groningen Genomics Center MASTERCLASS on Microbial Genomics, at the Biological Center, Haren, The Netherlands** 🇳🇱, 21-23 November, 2001.

151. "Genome Organisation in prokaryotic and eukaryotic chromosomes", invited talk at the **Sanger Centre, Hinxton,** England 🇬🇧, 25 October, 2001.

152. "Genome Organisation, chromatin structure, and gene expression in bacteria", invited talk at the **Veterinary Laboratories Agency, Weybridge, England** 🇬🇧, 24 October, 2001.

153. "DNA Atlases for *Helicobacter* genomes", invited talk at the **Sir William Dunn School of Pathology, Oxford University**, England 🇬🇧, 22 October, 2001.

154. "DNA chip Analysis of Gene Expression in *E. coli*", invited talk at **The Nordic GeneChip Users Meeting, Lund University**, Sweden 🇸🇪, 2 October, 2001.

155. "Chromatin Structure and Gene Expression in *E. coli*", invited plenary talk for the **28th Congreso de la Sociedad Espanola de Microbiologia, University of Alicante,** Spain 🇪🇸, 18 September, 2001.

156. "Bioinformatics of *E. coli* genomes", talk for the **Protein Design Group, CNB-CSIC, Cantoblanco, Madrid,** Spain 🇪🇸, 14 September, 2001.

157. "DNA Chip Atlases for Analysis of Gene Expression", invited talk for the **4th Annual Affymetrix User's Group Meeting,** 9-10 May, 2001, in Cannes, France 🇫🇷.

158. "Genome Organization and Chromatin Structure in *Escherichia coli*", talk at the **Albert B. Alkek Institute of Biosciences and Technology, Texas A&M University System, Health Science Center, Houston,** Texas, USA, 1 February, 2001.

159. "DNA Structural Atlases for Eukaryotic Chromosomes", invited plenary talk at the **ASM & TIGR Conference on Microbial Genomes, Monterey, California**, USA, 31 January, 2001.

160. "Visualisation of Whole Genome Expression in *Escherichia coli*", **Departmental Seminar at the Microelectronics Center (MIC), Danish Technical University, Kgs. Lyngby**, Denmark 🇩🇰, 19 January, 2001.

161. "Affymetrix DNA Chip analysis of the *Escherichia coli* Genome", informal talk for the Affymetrix User's group, **Department of Biotechnology, Danish Technical University,** Kgs. Lyngby, Denmark 🇩🇰, 5 January, 2001.

162. "Bacterial Pathogenicity and DNA Structures", talk for the Department of Biotechnology's annual January meeting, **Danish Technical University, Kgs. Lyngby,** Denmark 🇩🇰, 2 January, 2001.

163. "DNA Structural Atlases", invited talk at the **Department of Microbiology, Danish Vetinary Laboratory, Copenhagen**, Denmark 🇩🇰, 5 October, 2000.

164. "DNA Atlases for Chromosomes from All Five Kingdoms of Life", talk at the **Joint Stockholm/Copenhagen Bioinformatics Meeting, Stockholm,** Sweden 🇸🇪, 24 September, 2000.

165. "DNA Structural Atlases", Departmental Seminar at the **Microbiology Dept., Danish Technical University, Kgs. Lyngby,** Denmark 🇩🇰, 14 September, 2000.

166. "12 Different Views of *Escherichia coli* p0157", invited talk at the **Dept. of Microbiology, Danish Veterinary Laboratory, Copenhagen,** Denmark 🇩🇰, 11 September, 2000.

167. "DNA Structures in Whole Genomes", invited talk at the **EMBO Workshop on Cell Cycle and Nucleoid Organisation in Bacteria**, 2-6 September, 2000, held on the Island of Texel, The Netherlands 🇳🇱.

168. "Presentation and discussion of perspectives of biosequence analysis in biology research.", invited talk as part of the **Dina Research School Workshop on Biosekvensanalyse, Koldbaekgaard Landboskole, Skejby, Denmark** 🇩🇰, 7 April 2000.

169. "DNA structural periodicities in complete genomes: Evolutionary Genomic Signatures", invited talk at the **Dept. of Evolutionary Biology, Copenhagen University,** Denmark 🇩🇰, 10 December, 1999.

170. "A DNA Structural Atlas for *E. coli*", invited talk at the *E. coli* Genetics group, **University of Wisconsin, Madison, Wisconsin**, USA, 23 November, 1999.

171. "A DNA Structural Atlas for *E. coli"*, invited talk at the Department of Molecular Biology, Odense University, Denmark 🇩🇰, 29 October, 1999.

172. "Prediction of Gene Expression in *E. coli*", invited talk at the Department of Pharmacology, Microbiology and Food Hygiene, The Norwegian School of Veterinary Science, Oslo, Norway 🇳🇴, 16 September, 1999.

173. "Identification of Bacterial Promoter Sequences", invited talk at Microbial Genomes III: Sequencing, Functional Characterization and Comparative Genomics", in Chantilly, Virginia, USA. on 1 Feb., 1999.

174. "Gene Finding in 3D", invited talk at 2nd Annual TIGR conference on "Comparative Microbial Genomics", in Reston, Virginia, USA. (Oct. 31 to Nov. 3, 1998).

Poster Presentations before joining OSU in 2025 1998 - 2023

1. David W. Ussery, "Using AI in Education" poster for the **14th Annual Teach the Teacher: Developing and Sustaining Professional Identity Symposium** at the University of Arkansas for Medical Sciences, presented on Friday, May 5, 2023.
2. Visanu Wanchai, Arvind Ramanathan, Intawat Nookaew, David Foutch, Preecha Pratumcharoenpol, Se-Ran Jun, Trudy Wassenaar, Mike Leuze, and David W. Ussery, "What is Life? A set of 500 conserved functional domains", Poster for **UAMS Showcase of Medical Discoveries: Biomedical Informatics Research,** Sept. 21, 2016, UAMS, Little Rock, Arkansas, USA.
3. Intawat Nookaew, Visanu Wanchai, Preecha Pratumcharoenpol, Mike Leuze, Se-Ran Jun, and David Ussery, "Microbiomics: linking human gut microbiome with human health and disease", Poster for **UAMS Showcase of Medical Discoveries: Biomedical Informatics Research**, Sept. 21, 2016, UAMS, Little Rock, Arkansas, USA.
4. Se-Ran Jun, Skylar Connor, Duah Hamza Alkam, Intawat Nookaew, and David W Ussery, "Comparative Genomic Evidence of Zika Virus Epidemiology", P**oster for UAMS Showcase of Medical Discoveries: Biomedical Informatics Research**, Sept. 21, 2016, UAMS, Little Rock, Arkansas, USA.
5. David Ussery, Se-Ran Jun, Collin M. Timm, W. Nathan Cude, Tse-Yuan Lu, Miriam Land, Intawat Nookaew, Christopher W. Schadt, Gerald Tuskan, Mitchel J. Doktycz, Dale A. Pelletier, "Defining the functional diversity of the *Populus* root microbiome", poster for the **JGI (Joint Genomes Institute) meeting, 23-25 March, 2015, Walnut Creek**, California, USA.
6. Deborah A. Weighill, Gerald A. Tuskan, David W. Ussery, Dan A. Jacobson, "Correlotypes: Discovering complex, heterogenous genotypes in the *Populus* pan-genome responsible for phenotypes and macrobiotic associations", **DOE Genomic Science Contractors-Grantees Meeting XIII/USDA-DOE Plant Feedstock Genomics for Bioenergy**, 23-25 February, 2015, Tyson's Corner, Virginia, USA.
7. Intawat Nookaew, Daniel G. Olson, Mirko Basen, Manesh Shah, Visanu Wanchai, Cong Trinh, Philip D. Hyatt, Steve D. Brown, Miriam L. Land, Michael R Leuze, Robert L. Hettich, Robert M. Kelly, Mike Adams, Lee Lynd, David W. Ussery, and Paul Gilna, "Integration of Multi-Omic Data for Advanced Consolidated Bioprocesses", **DOE Genomic Science Contractors-Grantees Meeting XIII/USDA-DOE Plant Feedstock Genomics for Bioenergy**, 23-25 February, 2015, Tyson's Corner, Virginia, USA.
8. Se-Ran Jun, Sanjeev Dahal, Suresh Poudel, Visanu Wanchai, Tse-Yuan Lu, Miriam Land, Intawat Nookaew, Chris W. Schadt, Collin M. Timm, Tatiana V. Kapinets, Daniel A. Jacobson, Trudy M. Wassenaar, Dale A. Pelletier, and David W. Ussery, "Plant-Microbe Interfaces: Comparative Genomics of Populus rhizosphere microbiomes", **DOE Genomic Science Contractors-Grantees Meeting XIII/USDA-DOE Plant Feedstock Genomics for Bioenergy**, 23-25 February, 2015, Tyson's Corner, Virginia, USA.

9. Marie Skovgaard, Lars Juhl Jensen, Thomas Sicheritz-Ponten and David W. Ussery, "Functionally uncharacterized genes in prokarytic genomes - junk or treasure?", poster and talk for **Bioinformatics2003 conference,** 22-24 May, 2003, in Helsinki, Finland.

10. Vera van Noort, Haakan Ohlson, Peter Hallin, Merete K. Jørgensen, Anders Gorm Pedersen, Lars Juhl Jensen, and David W. Ussery, "Promoter Binding Sites for Sigma Factors", poster for **TIGR's 14th International Genome Sequencing & Analysis Conference**, 2-5 October, 2002, in Boston, MA, USA.

11. Peder Worning, Lars Juhl Jensen, Hans Henrik Stærfeldt, and David W. Ussery, "Origin of Replication in Circular Bacterial Genomes and Plasmids", poster for **Bioinformatics2002 conference,** Bergen, Norway, 4-7 April, 2002.

12. Vera van Noort, David Ussery, Thomas Schou Larsen, and Marie Skovgaard, "Re-Annotation of the E. coli genome", poster for the **Third Georgia Tech-Emory International Conference on Bioinformatics,** 15-18 November, 2001, Atlanta, Georgia, USA.

13. T. Sicheritz-Ponten, J.O. Andersson, D. Ussery, A.J- Roger, J. Logsdon, R. Hirt, and T.M. Embley, "Phylogenomic Atlases for Sequenced Microbial Genomes", poster for the **Third Georgia Tech-Emory International Conference on Bioinformatics,** 15-18 November, 2001, Atlanta, Georgia, USA.

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18. Carsten Friis, Peder Worning, Birgitte Regenberg, Chris Workman, Steen Knudsen, and David W. Ussery, "Measurement and Prediction of Gene Expression in Whole Genomes", poster for the **9th International Conference on Intelligent Systems for Molecular Biology,** 21-25 July, 2001, at Tivoli Gardens, Copenhagen, Denmark.

19. Peder Worning, Lars Juhl Jensen, Hans Henrik Stærfeldt, and David W. Ussery, "Origin of Replication in Circular Bacterial Genomes and Plasmids", poster for the **9th International Conference on Intelligent Systems for Molecular Biology**, 21-25 July, 2001, at Tivoli Gardens, Copenhagen, Denmark.

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22. David Ussery, Heidi Dvinge, Herluf Riddersholm, Nikolaj Blom, Kristoffer Rapacki, and Søren Brunak, "Genome Size Distribution in Prokaryotes, Eukaryotes, and Viruses", poster for the **9th International Conference on Intelligent Systems for Molecular Biology**, 21-25 July, 2001, at Tivoli Gardens, Copenhagen, Denmark.

23. Peder Worning, Lars Juhl Jensen, Hans Henrik Stærfeldt, and David W. Ussery, "Origin of Replication in Circular Bacterial Genomes and Plasmids", poster for the **BIOINFORMATICS 2001 Meeting**, 29 March - 1 April, 2001, at the First Resort Billingehus Hotel and Conference Centre, Skövde, Sweden.

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for the **Genomes 2000: International Conference on Microbial and Model Genomes**, 11-15 April, 2000, Paris, France.

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Other Creative Products

Video links 2017 - present

“Data Curation and SARS-CoV-2: population genomics of 2.5 million genomes”,
DART Webinar, on 28 July, 2021
https://dartproject.org/dart-webinar-2021-jul-28/

Discovery Economics column "Unlocking Genomics"
https://arkansasvoices4research.com/discovery-economics

ARA Project Scope talk - 17 February, 2021
https://aralliance.org/video/ara-project-scope-with-david-ussery/

UALR/UAMS IMBRE Genomics Workshop - part 1 "What Is Biological Information?"
https://www.youtube.com/watch?v=fO0W4BIOUfo
22 March, 2021

UALR/UAMS IMBRE Genomics Workshop - part 2 "Sequence Alignments"
https://www.youtube.com/watch?v=jpRbtYGivS4
22 March, 2021

UALR/UAMS IMBRE Genomics Workshop - part 3 "Introduction to R-BioTools"
https://www.youtube.com/watch?v=5-jgQJMEcfs
22 March, 2021

UALR/UAMS IMBRE Genomics Workshop - Part 4 "Comparing Genomes"
https://www.youtube.com/watch?v=eo_-0VcfWf0
23 March 2021

UALR/UAMS IMBRE Genomics Workshop - part 5 "Introduction to Atlases"
https://www.youtube.com/watch?v=ohma7fXIL5Q
23 March, 2021

UALR/UAMS IMBRE Genomics Workshop - part 6 "Comparing Proteomes"
https://www.youtube.com/watch?v=VJbeR6ssF-w
23 March, 2021

UALR/UAMS IMBRE Genomics Workshop - part 7 "Viral Genomics"
https://www.youtube.com/watch?v=xHa1oVvY6a4
24 March, 2021

UALR/UAMS IMBRE Genomics Workshop - part 8 "The Human Genome Project"
https://www.youtube.com/watch?v=S3jXMWyEAyY
24 March, 2021

Covid-19 projects at ArC-GEM - September, 2020
https://www.youtube.com/watch?v=wuql-ZaUV_s

Tip - Glioma methylation - July, 2020
https://www.youtube.com/watch?v=gk-bXlU4gxk

"Gut Brain Interactions" ARA talk, July, 2020 https://www.youtube.com/watch?v=mOJnh48iqsM

Duah - talk for Oxford Nanopore conference - February, 2020
https://www.youtube.com/watch?v=BR63q_dj21M

Summer Undergraduate Research Fellowship (SURF) program

2018 Harding College rotation student (Ana Swearingen)
https://www.youtube.com/watch?v=IRTdK0kl9v4
July, 2018

2017 Harding College rotation student (Connor Purvis)
https://www.youtube.com/watch?v=CC11Jlydqrc

June, 2017

Mumps sequencing - with Tip, Skylar, Piroon
https://www.youtube.com/watch?v=ttOB_Cr6Bas
July, 2017

Arkansas Research Alliance 2017 Fellows Announcement
https://www.youtube.com/watch?v=B6PUcB-QVYA
August, 2017

Tip's video on 'elephant DNA':
https://www.youtube.com/watch?v=E5Kge3ZpQP4&feature=youtu.be
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16. BOOK REVIEWS

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Cited 24x

17. INTELLECTUAL PROPERTY

INTELLECTUAL PROPERTY

Patents and Technology Transfer

Charles Parker, George Garrity, **David Ussery**, **Visanu Wanchai*, and Intawat Nookaew. "Method for Identification and Characterization of Prokaryotes Using Whole Genome DNA Sequence Data." US Provisional Patent Application No. 62/232,925. Filed September 25, 2015. Washington, DC: U.S. Patent and Trademark Office.

18. RESEARCH FUNDING HISTORY

RESEARCH FUNDING HISTORY

Grants and Contract Awards at OSU 2025 - present

Current funding at OSU (pending, January, 2026):

Waiting for confirmation of transfer of PI:
NIH R01 GM148886 Grant Title: Biophysical Model of Enzyme Catalysis: Conformational Substates, Solvent Coupling and Energy Networks
[$1,110,275] 2023 - 2028

Waiting for McCasland Foundation Professorship in Physiological Sciences, DVM, OSU - January 2026

Previous funding (total of ~$51,163,951, where I was **PI or Co-I**)	2001- 2025
Arkansas Research Alliance (ARA) Fellow [$500,000 towards UAMS start-up funds]	2016 - 2025
Helen G. Adams and ARA Chair in Biomedical Informatics [$1 million endowment - from ARA and the Helen G. Adams Foundation]	2017 - 2025

NSF OIA-1946391 Jennifer Fowler / Jack Cothren (PIs) 2020 - 2025
“RII Track-1: Data Analytics that are Robust and Trusted (DART): From Smart Curation to Socially Aware Decision Making”
Role: Co-Lead for Data Curation and Life Cycle thrust and PI for UAMS grad. students
[$24,000,000 in total for 5 years; ~$300,000 per year for UAMS graduate students]

NIH T32 GM106999 Paul Prather (PI) 2023 - 2028
“Systems Pharmacology and Toxicology Training Program”
Role: Member of the Training Faculty
[$873,220]

NIH INBRE Jonathan Stubblefield & David Ussery (co-PIs) 2024 - 2025
“Benchmarking Genomic Comparison Tools Across Different Organisms” (INBRE Collaborative Research Grant)
Role: Co-PI
[$52,726]

ABI grant supplement Wen Zhang and Dave Ussery (PIs) 2024-2025
“Long-Range PCR Sequencing in Wastewater Surveillance of Disease Outbreak”
Role: Co-PI
[$17,450]

ABI grant supplement Chris Nelson and Dave Ussery (PIs) 2023-2024
“A versatile long-read sequencing method for analysis of DNA-editing therapies”
Role: Co-PI
[$17,450]

NIH UL1 TR003107-01 Laura P. James (PI) 2019 - 2024
“Expanding Translational Research in Arkansas”
Role: Other personnel; I was funded as a 10% FTE for Covid-19 work, for 1 year (2020).
[$24,200,000]

NIH T32 GM106999 Paul Prather (PI) 2018 - 2023
“Systems Pharmacology and Toxicology Training Program”
Role: Member of the Training Faculty
[$740,000]

ARA 239/G1-53307-01, Arkansas Research Alliance Ussery, David (PI) 2021 - 2022
“Genomic Epidemiology of SARS-CoV-2 in Arkansas”
Role: PI
[$50,000]

UAMS VCRI equipment grant Ussery, David (PI) 2021
“Oxford Nanopore GridION machine for high-throughput sequencing ”
Role: PI
[$51,105]

NIH P20 Administrative supplement Josh Kennedy (PI) July, 2021 - June, 2021
"Sequencing and Analysis of SARS-CoV-2 Variants in Arkansas”
Role: Co-Investigator

[$765,000]

NIH / NGMS P20 GM121293-01, NIH/NGMS Alan Tackett (PI) 2017 – 2022
“Center for Translational Pediatric Research”
Role: Co-Investigator
[$11,500,000]

ARA Impact Grant (Dave Ussery, PI) 2020 - 2021
“Rapid Biosurviellence for Covid-19”
Role: PI
[$37,000]

NIH ISPCTN pilot award from RFA-OD-19-026 Onarecker, Timothy (PI) 2019 - 2020
“Rapid Genomic Sequencing of Pneumococcal Meningitis Isolates”
Role: co-mentor.
[$25,000]

ARA Impact Grant (Dave Ussery, PI) 2019 - 2020
“Identification of Staphylococcus aureus Genes that Contribute to the Pathogenesis of Osteomyelitis”
Role: PI
[$75,000]

ARA Impact Grant (Dave Ussery, PI) 2019 - 2020
“Sleep Apnea Gut Microbiome”
Role: PI
[$25,000]

DOE internal funding, ORNL Jeremy Archileta (PI) 2015 - 2016
“Accumulative Linking and Analysis of Scientific Results: A New Data-Infrastructure Paradigm to Enable Data-Driven Discoveries”(AspenGrove LDRD - part of the DOE ‘exascale’ initiative)
Role: Co-investigator.
[$720,000]

Industry Ph.D. grant from the Danish Research Council Dave Ussery (PI) 2012 - 2015
“Comprehensive Proteomics of Streptococcus thermophilus in Industrial Dairy Products”
Role: PI
[DKK 2.5 million (~ $500,000 U.S.)]

Danish Council for Strategic Research Frank M. Aarestrup (PI) 2010 - 2015
"Center for genomic epidemiology"
Role: Co-Investigator
[DKK 35 million (~$7 million U.S.)]

Danish Council for Strategic Research Hanne Ingmer (PI) 2008 - 2012
"Biocide resistance; an emerging threat to public health?"
Role: Co-Investigator
[DKK 45 million (~$9 million U.S.)]

EU consortium Dave Ussery (PI) 2008
“MedVetNet: Campylobacter jejuni microarrays"
Role: PI
[€240,000 (~$292,000)]

DTU infrastructure Søren Brunak, Zoltan Szallasi, Chris Workman, & Dave Ussery, co-PIs 2007
“Custom DNA Microarray Platform for Integrative Systems Biology”
Role: Co-PI
[DKK 30 million (~$6 million U.S.)]

Danish FNU Dave Ussery (PI) 2007 - 2009
“Comparative Genomics of Campylobacter jejuni”
Role: PI
[DKK 3 million (~$600,000)]

Danish FNU Søren Molin (PI) 2007 - 2009
“Host-parasite relationships and evolution of microbial persistent infections”
Role: Co-Investigator
[DKK 3 million (~$600,000)]

Danish Research Council Gregers Jungersen (PI) 2007
“Pathogens in the Food Chain”
Role: PI for Bacterial Genomics thrust
[DKK 20 million (~$4 million)]

Norwegian Vet. Institute Yngvild Wasteson (PI) 2006 - 2007
“Genome sequencing and characterization of the E. coli O103 outbreak strain”
Role: Co-Investigator
[NOK 360,000 (~$73,000)]

Danish Galethea III Nikolaj Blom (PI) 2005 - 2008
“DNA of the Polar Seas”
Role: Co-Investigator
[DKK 2 million (~$400,000)]

EU Coordination Action grant [35 partners from 17 countries] 2005 - 2008
“EUROFUNG - European Fungal Genomics DataBase”
Role: member of the scientific steering committee (Cees van den Hondel, Leiden University; Steve Oliver, University of Manchester; and David Ussery, CBS/DTU)
[€500,000 (~$608,000)]

Danish SJVF Hanne Ingmer and Dave Ussery (PIs) 2005 - 2007
"The biology of Campylobacter jejuni during colonization of the chicken gut”
Role: Co-PI
[DKK 3 million (~$600,000)]

Danish IVC application to STVF Søren Brunak, PI 2004 - 2007
“Systemic Genomics in Medicine and Biotechnology”
Role: Co-Investigator

[DKK 10 million (~$2 million)]

Norwegian EMBIO Torbjørn Rognes (PI) 2004 - 2006
"Discovery of genome maintenance genes and non-coding RNA genes by microbial transcriptome analysis"
Role: Co-Investigator
[NOK 150,000 (~$30,000)]

Norwegian Research council Yngvild Wasteson (PI) 2002 - 2005
"The effect of stress on genetic recombination and pathogenicity of Shiga toxin-encoding bacteriophages"
Role: Co-Investigator
[NOK 3 million (~$600,000)]

BMBF, German government Burkhard Tuemmler (PI) 2002 - 2005
"The competence network: Genome Research with Bacteria relevant for Environmental Protection, Agriculture and Biotechnology."
Role: Co-Investigator
[€487,000 (~$592,000)]

Danish STVF Dave Ussery (PI) 2001 - 2003
"Comparative genetics of Camplyobacter jejuni: A bioinformatics-mediated approach"
Role: Co-Investigator
[DKK 1.6 million (~$320,000)]

19. PRACTICE OF PROFESSIONAL SKILLS

a. Clinical responsibilities, contribution to clinical service and other professional practice:

None at OSU (yet!).

Grand Rounds and other Clinical Presentations at UAMS 2017 - 2024

"AI-Assisted Genome Studies Are Riddled with Errors", talk for the **University of Arkansas for Medical Sciences** Clinical Informatics Journal Club, 21 November, 2024.

Who's Afraid of the Monkeypox virus?, invited talk for the **University of Arkansas for Medical Sciences Faculty Excellence Series**, Sponsored by the UAMS Academic Senate; Wednesday, 9 November, 2022

"Rapid Detection of Anti-Microbial-Resistant ESKAPE Pathogens from Clinical Isolates Using High-Throughput Sequencing", invited talk for the **Arkansas American Society for Clinical Laboratory Science Spring Conference,** Baptist Health College, Little Rock, Arkansas; Friday, 8 April, 2022.

“Genomic Epidemiology in Arkansas”, Arkansas Department of Health **Grand Rounds**, 3 November, 2022.

“Healthy Gut, Healthy Heart? The microbiome & cardiovascular health”, UAMS Department of Internal Medicine **Grand Rounds**, October, 2018.

“Community profiles in atherosclerotic plaques from UAMS patients”, UAMS **Grand Rounds**, 30 November, 2017.

“Genomic Epidemiology of the Mumps Outbreak in NW Arkansas”, NWA Internal Medicine **Grand Rounds**, 27 March, 2017.

b. American College of Veterinary Internal Medicine (ACVIM)-related responsibilities:

None.

c. Scientific reviews and related activities:

U.S. and European Grant Review Panels	**2013 - 2025**
NIAID Technologies for Cancer Research Special Emphasis Panel (R33 and R61)	July, 2025
UKRI Funding Service BBSRC-NSF 24/25 Oxford / MIT collaboration	July, 2025
NIAID New Innovators Awards (DP2)	April, 2025
UAMS NIH K-12 applications (3x)	March, 2025
ESF (European Science Foundation) Belgium post-doctoral application.	Feb., 2025
FWF ASTRA Austrian Science Awards application	Jan., 2025
UKRI Funding Service	Dec., 2024
U.S. National STEM (Science Fair)	Nov., 2024
NIH Centers for Research in Emerging Infectious Diseases (CREID) Network (U01)	Oct., 2024
UKRI Funding Service	June, 2024
UAMS Internal Grant Applications	April, 2024
NIAID New Innovators Awards (DP2)	March, 2024
UAMS NIH K-12 applications (3x)	March, 2024
Belgian Fundamental Research grant (FWO)	March, 2024
UAMS Internal Grant Applications	Nov., 2023
UAMS NIH K-12 applications (3x)	April, 2023

NIAID New Innovators Awards (DP2)	March, 2023
UAMS Internal Grant Applications	March, 2023
ESF (European Science Foundation) post-doctoral applications (4x).	Feb., 2023
Canadian Poultry Research Council	Oct., 2022
UAMS Internal Grant Applications	Oct., 2022
UAMS Internal Grant Applications	May, 2022
UAMS Internal Grant Applications	Nov., 2021
NCI R01 and R21 grants review panel	Oct., 2021
UAMS Internal Grant Applications	Nov., 2020
I-SITE ULNE (France)	Sept., 2020
NIAID Emerging Infectious Diseases Research Centers (U01)	Nov., 2019
NIAID System Biology: The Next generation for Infectious Diseases (U19) chair.	July, 2017
NIAID Rapid Assessment of Zika Virus (ZIKV) Complications (R21)	April, 2017
BBSCR (UK)	March, 2017
AERES (France) 2 grants	March, 2014
NIAID Genomic Centers for Infectious Diseases (U19)	Nov., 2013

20. PRACTICE OF PROFESSIONAL SKILLS

ADMINISTRATIVE SERVICE

Committee Assignments and Administrative Services at UAMS	**2017 - 2025**
Chair, DBMI Tenure and Promotion Committee	2017 - 2022
Member, DBMI Tenure and Promotion Committee	2017 - 2025
Member, UAMS Graduate Council	2018 - 2024
Member, UAMS College of Medicine Research Council	2019 - 2025
Chair of Search Committee for DBMI Vice-Chair of Clinical Informatics	2019
UAMS Senator, “Member at large”	2021 - 2023

21. PROFESSIONAL OR ASSOCIATION OFFICES AND COMMITTEE ACTIVITY OUTSIDE OSU

Editorial Board Appointments

Associate Editor, Frontiers in Bioinformatics	2024 - present
Associate Editor, Frontiers in Microbiology	2019 - present
Associate Editor, Associate Editor, Molecular Genetics and Genomics	2005 - present
Associate Editor, BMC Genomics	2013 - 2018
Associate Editor, Microbiology (UK)	1998 - 2012

22. PUBLIC AND COMMUNITY CONTRIBUTIONS

Professional Community Activities 2013 - 2024

Interview for Discover Economics magazine on "CREATING ARKANSAS' NEXT GENERATION OF RESEARCHERS", May, 2024.
https://armoneyandpolitics.com/creating-arkansas-next-generation-of-researchers/

Interview for Discovery Economics magazine on "Unlocking Genomics", January, 2021.
https://arkansasvoices4research.com/discovery-economics

"Science Cafe" panel discussion at the Whole Hog Cafe in Little Rock, on "Indwelling Gut Bacteria and You", followed by a radio interview, on 23 May, 2017.
http://ualrpublicradio.org/post/science-cafe-role-microbiome-bacteria-and-human-body

Talk for the Copenhagen 'Skeptics in the Pub', on the Human Genome Project, on 8 July, 2013.
https://www.facebook.com/CopenhagenSkeptics/

23. OTHER ACTIVITIES

I enjoy photography, especially taking landscape pictures as I travel and of sunrises / sunsets at home, and going for long hikes. I also love music and enjoy singing in choirs.