

Full record: >160 publications, ~14,000 citations, *h*-index = 67; Highly Cited Researcher Thomson Reuters/Clarivate Analytics

Experimental work

Westermann AJ, Venturini E, Sellin ME, Förstner KU, Hardt WD, **Vogel J** (2018)

The major RNA-binding protein ProQ impacts virulence gene expression in Salmonella Typhimurium

mBio pii: e02504-18

Stapels DAC, Hill PWS, Westermann AJ, Fisher R, Thurston TL, Saliba AE, Blommestein I, **Vogel J**, Helaine S (2018)

Salmonella persists undermine host immune defences during antibiotic treatment

Science 362(6419):1156-1160

Recommended by Faculty1000

Holmqvist E, Li L, Bischler T, Barquist L, **Vogel J** (2018)

Global maps of ProQ binding in vivo reveal target recognition via RNA structure and stability control at mRNA 3' ends

Molecular Cell 70(5):971-982

Miyakoshi M, Matera G, Maki K, Sone Y, **Vogel J** (2018)

Functional expansion of a TCA cycle operon mRNA by a 3' end-derived small RNA

Nucleic Acids Research in press

Müller L, Cosentino R, Förstner KU, Guizetti J, Wedel C, Kaplan N, Janzen C, Arampatzi P, **Vogel J**, Steinbiss S, Otto T, Saliba AE, Sebra R, Siegel TN (2018)

Genome organization and DNA accessibility control antigenic variation in trypanosomes

Nature 563(7729):121-125

Tawk C, Nigro G, Lopes I, Aguilar C, Lisowski C, Mano M, Sansonetti P, **Vogel J**, Eulalio A (2018)

Stress-induced host membrane remodeling protects from infection by non-motile bacterial pathogens

EMBO Journal 37(23) pii: e98529

El Mouali Y, Gaviria-Cantin T, Sánchez-Romero MA, Gibert M, Westermann AJ, **Vogel J**, Balsalobre C (2018)

CRP-cAMP mediates silencing of Salmonella virulence at the post-transcriptional level

PLoS Genetics 14(6):e100740

Yu SH, **Vogel J**, Förstner KU (2018)

ANNOgesic: a Swiss army knife for the RNA-seq based annotation of bacterial/archaeal genomes

Gigascience 7(9) giy096

Heidrich N, Hagmann A, Bauriedl S, **Vogel J**, Schoen C (2018)

The CRISPR/Cas system in Neisseria meningitidis affects bacterial adhesion to human nasopharyngeal epithelial cells

RNA Biology in press

Michaux C, Holmqvist E, Vasicek E, Sharan M, Barquist L, Westermann AJ, Gunn JS, **Vogel J** (2017)

RNA target profiles direct the discovery of virulence functions for the cold shock proteins CspC and CspE

PNAS 114(26):6824-6829

Chao Y, Li L, Girodat D, Förstner KU, Said N, Corcoran C, Šmiga M, Papenfort K, Reinhardt R, Wieden HJ, Luisi BF, **Vogel J** (2017)

In vivo cleavage map illuminates the central role of RNase E in coding and noncoding RNA pathways

Molecular Cell 65(1):39-51

Preview in **Molecular Cell** 65(1):3-4, recommended by Faculty1000

Smirnov A, Wang C, Drewry LL, **Vogel J** (2017)

Molecular mechanism of mRNA repression in trans by a ProQ-dependent small RNA

EMBO Journal 36(8):1029-1045

Saliba AE, Li L, Westermann AJ, Appenzeller S, Stapels DAC, Schulte LN, Helaine S, **Vogel J** (2017)

Single-cell RNA-seq ties macrophage polarization to growth rate of intracellular Salmonella

Nature Microbiology 2:16206

- Heidrich N, Bauriedl S, Barquist L, Li L, Schoen S, **Vogel J** (2017)
The primary transcriptome of Neisseria meningitidis and its interaction with the RNA chaperone Hfq
Nucleic Acids Research 45(10):6147-6167
- Sharan M, Förstner KU, Eulalio A, **Vogel J** (2017)
APRICOT: an integrated computational pipeline for the sequence-based identification and characterization of RNA-binding proteins
Nucleic Acids Research 45(11):e96
- Tawk C, Sharan M, Eulalio A, **Vogel J** (2017)
A systematic analysis of the RNA-targeting potential of secreted bacterial effector proteins
Scientific Reports 7(1):9328
- Gonzalez GM, Hardwick SW, Maslen SL, Skehel JM, Holmqvist E, **Vogel J**, Bateman A, Luisi BF, Broadhurst RW (2017)
Structure of the Escherichia coli ProQ RNA binding protein
RNA 23(5):696-711
- Westermann AJ, Förstner KU, Amman F, Barquist L, Chao Y, Schulte LN, Müller L, Reinhardt R, Stadler PF, **Vogel J** (2016)
Dual RNA-seq unveils noncoding RNA functions in host-pathogen interactions
Nature 529:496-501
[Covered by News & Views in Nature 529\(7587\):472-3](#), [Nature Reviews Genetics 17\(3\):126](#), [Faculty 1000](#)
- Smirnov A, Förstner KU, Holmqvist E, Otto A, Günster R, Becher D, Reinhardt R, **Vogel J** (2016)
Grad-seq guides the discovery of ProQ as a major small RNA binding protein
PNAS 113(41):11591-6
[Research highlight in Nature Reviews Microbiology](#), [recommended by Faculty1000](#)
- Chao Y, **Vogel J** (2016)
A 3'UTR derived small RNA provides the regulatory noncoding arm of the inner membrane stress response
Molecular Cell 61:352-363
- Holmqvist E, Wright PR, Li L, Bischler T, Barquist L, Reinhardt R, Backofen R, **Vogel J** (2016)
Global RNA recognition patterns of post-transcriptional regulators Hfq and CsrA revealed by UV crosslinking in vivo
EMBO Journal 35(9):991-1011
- Fröhlich KS, Haneke K, Papenfort K, **Vogel J** (2016)
The target spectrum of SdsR small RNA in Salmonella
Nucleic Acids Research 44(21):10406-22
- Das S, Lindemann C, Young BC, Muller J, Österreich B, Ternette N, Winkler AC, Paprotka K, Reinhardt R, Förstner KU, Allen E, Flaxman A, Yamaguchi Y, Rollier CS, van Diemen P, Blättner S, Remmele CW, Selle M, Dittrich M, Mueller T, **Vogel J**, Ohlsen K, Crook DW, Massey R, Wilson DJ, Rudel R, Wyllie DH, Fraunholz MJ (2016)
Natural mutations in a S. aureus virulence regulator attenuate cytotoxicity but permit bacteremia and abscess formation
PNAS 113(22):E3101–E3110
- Hershko-Shalev T, Odenheimer-Bergman A, Elgrably-Weiss M, Ben-Zvi T, Govindarajan S, Seri H, Papenfort K, **Vogel J**, Altuvia S (2016)
Gifsy-1 prophage IsrK with dual function as small and messenger RNA modulates vital bacterial machineries
PLoS Genetics 12(4):e1005975
- Müller AA, Dolowschiak T, Sellin ME, Felmy B, Verbree C, Gadiant S, Westermann AJ, **Vogel J**, LeibundGut-Landmann S, Hardt WD (2016)
An NK cell perforin response elicited via IL-18 controls mucosal inflammation kinetics during Salmonella gut infection
PLoS Pathogens 12(6):e1005723
- Cao Y, Förstner KU, **Vogel J**, Smith J (2016)
Cis-encoded sRNAs, a conserved mechanism for repression of polysaccharide utilization in the Bacteroides
Journal of Bacteriology 198(18):2410-8
- Jiang Y, Oron TR, Clark WT, Bankapur AR, D'Andrea D, Lepore R, Funk CS, Kahanda I, Verspoor KM, Ben-Hur A, Koo da CE, Penfold-Brown D, Shasha D, Youngs N, Bonneau R, Lin A, Sahraeian SM, Martelli PL, Profitti G, Casadio R, Cao R, Zhong Z, Cheng J, Altenhoff A, Skunca N, Dessimoz C, Dogan T, Hakala K, Kaewphan S, Mehryary F, Salakoski T, Ginter F, Fang H,

Smithers B, Oates M, Gough J, Törönen P, Koskinen P, Holm L, Chen CT, Hsu WL, Bryson K, Cozzetto D, Minneci F, Jones DT, Chapman S, Bkc D, Khan IK, Kihara D, Ofer D, Rappoport N, Stern A, Cibrian-Uhalte E, Denny P, Foulger RE, Hieta R, Legge D, Lovering RC, Magrane M, Melidoni AN, Mutowo-Meullenet P, Pichler K, Shypitsyna A, Li B, Zakeri P, ElShal S, Tranchevent LC, Das S, Dawson NL, Lee D, Lees JG, Sillitoe I, Bhat P, Nepusz T, Romero AE, Sasidharan R, Yang H, Paccanaro A, Gillis J, Sedeño-Cortés AE, Pavlidis P, Feng S, Cejuela JM, Goldberg T, Hamp T, Richter L, Salamov A, Gabaldon T, Marcet-Houben M, Supek F, Gong Q, Ning W, Zhou Y, Tian W, Falda M, Fontana P, Lavezzo E, Toppo S, Ferrari C, Giollo M, Piovesan D, Tosatto SC, Del Pozo A, Fernández JM, Maietta P, Valencia A, Tress ML, Benso A, Di Carlo S, Politano G, Savino A, Rehman HU, Re M, Mesiti M, Valentini G, Bargsten JW, van Dijk AD, Gemovic B, Glisic S, Perovic V, Veljkovic V, Veljkovic N, Almeida-E-Silva DC, Vencio RZ, Sharan M, Vogel J, Kansakar L, Zhang S, Vucetic S, Wang Z, Sternberg MJ, Wass MN, Huntley RP, Martin MJ, O'Donovan C, Robinson PN, Moreau Y, Tramontano A, Babbitt PC, Brenner SE, Linial M, Orengo CA, Rost B, Greene CS, Mooney SD, Friedberg I, Radivojac P (2016)

An expanded evaluation of protein function prediction methods shows an improvement in accuracy

Genome Biology 17(1):184

Berger P, Knödler M, Förstner KF, Berger M, Bertling C, Sharma CM, **Vogel J**, Karch H, Dobrindt U, Mellmann A (2016)

The primary transcriptome of the E. coli O104:H4 pAA plasmid and novel insights into its virulence gene expression and regulation

Scientific Reports 6:35307

Papenfort K, Espinosa E, Casadesús J, **Vogel J** (2015)

Small RNA-based feed-forward loop with AND-gate logic regulates extrachromosomal DNA transfer in Salmonella

PNAS 112(34):E4772-81

Miyakoshi M, Chao Y, **Vogel J** (2015)

Crosstalk between ABC transporter mRNAs via a target mRNA-derived sponge of the GcvB small RNA

EMBO Journal 34(11):1478-92

[Preview in EMBO J 34\(11\):1436-8](#)

Sass A, Van Acker H, Förstner KU, Van Nieuwerburgh F, Deforce D, **Vogel J**, Coenye T (2015)

Genome-wide transcription start site profiling in biofilm-grown Burkholderia cenocepacia J2315

BMC Genomics 16(1):775

Afonso-Grunz F, Hoffmeier K, Müller S, Westermann AJ, Rotter B, **Vogel J**, Winter P, Kahl G (2015)

Dual 3'Seq using deepSuperSAGE uncovers transcriptomes of interacting Salmonella Typhimurium and human host cells

BMC Genomics 16(1):323

Fan B, Li L, Chao Y, Jiang CL, Förstner KU, **Vogel J**, Borriß B, Wu XQ (2015)

dRNA-seq reveals genomewide TSSs and noncoding RNAs of plant beneficial rhizobacterium Bacillus amyloliquefaciens FZB42

PLoS One 10(11):e0142002

Dimastrogiovanni D, Fröhlich KS, Bandyra KJ, Bruce HA, Hohensee S, **Vogel J**, Luisi BF (2014)

Recognition of the small regulatory RNA RydC by the bacterial Hfq protein

eLife 3:e05375

Förstner KU, **Vogel J**, Sharma CM (2014)

READemption – A tool for the computational analysis of deep-sequencing-based transcriptome data

Bioinformatics 30(23):3421-3

Papenfort K, Sun Y, Miyakoshi M, Vanderpool CK, **Vogel J** (2013)

Small RNA-mediated activation of sugar phosphatase mRNA regulates glucose homeostasis

Cell 153:426-37

Fröhlich KS, Papenfort K, Fekete A, **Vogel J** (2013)

A small RNA activates CFA synthase by isoform-specific mRNA stabilization

EMBO Journal 32(22):2963-79

Zhang Y, Heidrich N, Ampattu BJ, Gunderson CW, Seifert HS, Schoen C, **Vogel J**, Sontheimer EJ (2013)

Processing-Independent CRISPR RNAs Limit Natural Transformation in Neisseria meningitidis

Molecular Cell 50(4):488-503

[Highlighted by spotlight article in Trends in Microbiology](#)

Göpel Y, Papenfort K, Reichenbach B, **Vogel J**, Görke B (2013)

Targeted decay of a regulatory small RNA by an adaptor protein for RNase E and counteraction by an anti-adaptor RNA

Genes & Development 27(5):552-64

- Wright PR, Richter AS, Papenfort K, Mann M, **Vogel J**, Hess WR, Backofen R, Georg J (2013)
Comparative genomics boosts target prediction for bacterial small RNAs
PNAS 110(37):E3487-96
- Gutierrez A, Laureti L, Crussard S, Abida H, Rodríguez Rojas A, Blázquez J, Baharoglu Z, Mazel D, Darfeuille F, **Vogel J**, Matic I (2013)
 β -lactam antibiotics promote bacterial mutagenesis via RpoS-mediated reduction in replication fidelity
Nature Communications 4:1610
[Research Highlight in Nature Reviews Microbiology](#) 11(5):298-9
- Schulte LN, Westermann AJ, **Vogel J** (2013)
Differential activation and functional specialisation of miR-146 and miR-155 in innate immune sensing
Nucleic Acids Research 41(1):542-53
- Chao Y, Papenfort K, Reinhardt R, Sharma CM, **Vogel J** (2012)
An atlas of Hfq-bound transcripts reveals 3' UTRs as a genomic reservoir of regulatory small RNAs
EMBO Journal 31(20):4005-19
[Preview in EMBO J](#) 31(20):3958-60; [multiple evaluations in Faculty 1000](#)
- Bandyra K, Said N, Pfeiffer V, Górna MW, **Vogel J**, Luisi BF (2012)
The seed region of a small RNA drives the controlled destruction of target mRNA by the endoribonuclease RNase E
Molecular Cell 47(6):943-53.
[Preview in Molecular Cell](#) 47(6):825-6
- Papenfort K, Podkaminski D, Hinton JC, **Vogel J** (2012)
The ancestral SgrS RNA discriminates horizontally acquired Salmonella mRNAs through a single G-U wobble pair
PNAS 109(13):E757-64
[Selected by Faculty 1000](#)
- Argaman L, Elgrably-Weiss M, Hershko T, **Vogel J**, Altuvia S (2012)
RelA protein stimulates the activity of RyhB small RNA by acting on Hfq
PNAS 109(12):4621-6
[Research Highlight in Nature Reviews Microbiology](#) 10: 310-311
- Kröger C, Dillon SC, Cameron AD, Papenfort K, Sivasankaran SK, Hokamp K, Chao Y, Sittka A, Hebrard M, Händler K, Colgan A, Leekitcharoenphon P, Langridge GC, Lohan AJ, Loftus B, Lucchini S, Ussery DW, Dorman CJ, Thomson NR, **Vogel J**, Hinton JC (2012)
The transcriptional landscape and small RNAs of Salmonella enterica serovar Typhimurium
PNAS 109(20):E1277-86
- Lioliou E, Sharma CM, Caldelari I, Helfer AC, Fechter P, Vandenesch F, **Vogel J**, Romby P (2012)
Global regulatory functions of the of Staphylococcus aureus endoribonuclease III in gene expression
PLoS Genetics 8(6):e1002782
- Corcoran C, Podkaminski D, Papenfort K, Urban JH, Hinton JC, **Vogel J** (2012)
Superfolder GFP reporters validate diverse new mRNA targets of the classic porin regulator, MicF RNA
Molecular Microbiology 84(3):428-45
[MicroCommentary in Molecular Microbiology](#) 84(3):401-4
- Zhelyazkova P, Sharma CM, Förstner KU, Liere K, **Vogel J**, Börner T (2012)
The primary transcriptome of barley chloroplasts: numerous non-coding RNAs and the dominating role of the plastid-encoded RNA polymerase
Plant Cell 24(1):123-36
[Selected by Faculty 1000](#)
- Fröhlich KS, Papenfort K, Berger AA, **Vogel J** (2012)
A conserved RpoS-dependent small RNA controls the synthesis of major porin OmpD
Nucleic Acids Research 40(8):3623-40
[Selected by Faculty 1000](#)
- Schmidtke C, Findeiß S, Sharma CM, Kuhfuß J, Hoffmann S, **Vogel J**, Stadler PF, Bonas U (2012)
Genome-wide transcriptome analysis of the plant pathogen Xanthomonas identifies sRNAs with putative virulence functions
Nucleic Acids Research 40(5):2020-203

- Madhugiri R, Pessi G, Voss B, Hahn J, Sharma CM, Reinhardt R, **Vogel J**, Hess WR, Fischer HM, Evguenieva-Hackenberg E (2012)
Small RNAs of the Bradyrhizobium/Rhodopseudomonas lineage and their analysis
RNA Biology 9(1):47-58
- Rieder R, Reinhardt R, Sharma CM, **Vogel J** (2012)
Experimental tools to identify RNA-protein interactions in Helicobacter pylori
RNA Biology 9(4):520-31
- Schulte LN, Eulalio A, Mollenkopf HJ, Reinhardt R, **Vogel J** (2011)
Analysis of the host microRNA response to Salmonella uncovers the control of major cytokines by the let-7 family
EMBO Journal 30(10):1977-89
[Commentary in EMBO J 30\(10\):1977-9](#)
- Deltcheva E, Chylinski K, Sharma CM, Gonzales K, Chao Y, Pirzada ZA, Eckert MR, **Vogel J**, Charpentier E (2011)
CRISPR RNA maturation by trans-encoded small RNA and host factor RNase III
Nature 471(7340):602-7
[News & Views in Nature 471\(7340\):588-589](#)
- Gogol EB, Rhodius VA, Papenfort K, **Vogel J**, Gross CA (2011)
Small RNAs endow a transcriptional activator with essential repressor functions for single-tier control of a global stress regulon
PNAS 108(31):12875-80
- Mitschke J, Georg J, Scholz I, Sharma CM, Dienst D, Bantscheff J, Voß B, Steglich C, Wilde A, **Vogel J**, Hess WR (2011)
An experimentally anchored map of transcriptional start sites in the model cyanobacterium Synechocystis sp. PCC 6803
PNAS 108(5):2124-9
- Sharma CM, Papenfort K, Pernitzsch SR, Mollenkopf HJ, Hinton JC, **Vogel J** (2011)
Pervasive post-transcriptional control of genes involved in amino acid metabolism by the Hfq-dependent GcvB small RNA
Molecular Microbiology 81(5):1144-65
[MicroCommentary in Molecular Microbiology 81\(5\):1129-32](#)
- Berghoff B, Glaeser J, Sharma CM, Zobawa M, Lottspeich F, **Vogel J**, Klug G (2011)
Contribution of Hfq to photooxidative stress resistance and global regulation in Rhodobacter sphaeroides
Molecular Microbiology 80(6):1479-95
- Albrecht M, Sharma CM, Dittrich MT, Müller T, Reinhardt R, **Vogel J**, Rudel T (2011)
The transcriptional landscape of Chlamydia pneumoniae
Genome Biology 12(10):R98
- Belair C, Baud J, Chabas S, Sharma CM, **Vogel J**, Staedel C, Darfeuille F (2011)
Helicobacter pylori interferes with an embryonic stem cell miRNA cluster to block cell cycle progression
Silence 2(1):7
- Eulalio A, Fröhlich KS, Mano M, Giacca M, **Vogel J** (2011)
A candidate approach implicates the secreted Salmonella effector protein SpvB in P-body disassembly
PLoS ONE 6(3):e17296
- Sharma CM, Hoffmann S, Darfeuille F, Reignier J, Findeiß S, Sittka A, Chabas S, Reiche K, Hackermüller J, Reinhardt R, Stadler PF, **Vogel J** (2010)
The primary transcriptome of the major human pathogen Helicobacter pylori
Nature 464(7286):250-5
[Many evaluations in both Faculty1000 Biology & Medicine; Leading Edge Paper in Cell 141\(1\):5; ScienceWatch Fast Breaking Paper Feb 2011](#)
- Papenfort K, Bouvier M, Mika F, Sharma CM, **Vogel J** (2010)
Evidence for an autonomous 5' target recognition domain in an Hfq-associated small RNA
PNAS 107(47):20435-40
[Multiple evaluations by Faculty1000](#)
- Heale BS, Eulalio A, Schulte LN, **Vogel J**, O'Connell MA (2010)
Analysis of A to I editing of miRNA in Macrophages exposed to Salmonella
RNA Biology 7(5):116-122

- Imov I, Sharma CM, **Vogel J**, Winkler WC (2010)
Identification of regulatory RNAs in Bacillus subtilis
Nucleic Acids Research 38(19):6637-6651
- Bohn C, Rigoulay C, Chabelskaya S, Sharma CM, Marchais A, Skorski P, Borezee-Durant B, Barbet R, Jacquet E, Jacq A, Gautheret D, Felden B, **Vogel J**, Boulloc P (2010)
Experimental discovery of small RNAs in Staphylococcus aureus reveals a riboregulator of central metabolism
Nucleic Acids Research 38(19):6620-6636
- Albrecht M, Sharma CM, Reinhardt R, **Vogel J**, Rudel T (2010)
Deep sequencing-based discovery of the Chlamydia trachomatis transcriptome
Nucleic Acids Research 38(3):868-77
- Pfeiffer V, Papenfort K, Lucchini S, Hinton JC, **Vogel J** (2009)
Coding sequence targeting by MicC RNA reveals bacterial mRNA silencing downstream of translational initiation
Nature Structural & Molecular Biology 16(8):840-846
[News & Views in NSMB 16\(8\):804-6](#); [Research Highlight in Nature Reviews Microbiology 7\(9\): 618-9](#)
- Jäger D, Sharma CM, Thomsen J, Ehlers C, **Vogel J**, Schmitz RA (2009)
Deep sequencing analysis of the Methanosarcina mazei Gö1 transcriptome in response to nitrogen availability
PNAS 106(51):21878-21882
- Said N, Rieder R, Hurwitz R, Deckert J, Urlaub H, **Vogel J** (2009)
In vivo expression and purification of aptamer-tagged small RNA regulators
Nucleic Acids Research 37(20):e133
- Berghoff BA, Glaeser J, Sharma CM, **Vogel J**, Klug G (2009)
Photooxidative stress induced and abundant small RNAs in Rhodobacter sphaeroides
Molecular Microbiology 74(6), 1497–1512
- Papenfort K, Said N, Welsink T, Lucchini S, Hinton JC, **Vogel J** (2009)
Specific and pleiotropic patterns of mRNA regulation by ArcZ, a conserved, Hfq-dependent small RNA
Molecular Microbiology 74(1):139-158
- Muller C, Bang IS, Velayudhan J, Karlinsey J, Papenfort K, **Vogel J**, Fang FC (2009)
Acid Stress Activation of the σ^E Stress Response in Salmonella enterica serovar Typhimurium
Molecular Microbiology 71(5):1228-38
- Hoffmann S, Otto C, Kurtz S, Sharma CM, Khaitovich P, **Vogel J**, Stadler PF, Hackermüller J (2009)
Fast mapping of short sequences with mismatches, insertions and deletions using index structures
PLoS Computational Biology 5(9):e1000502
- Sittka A, Sharma CM, Rolle K, **Vogel J** (2009)
Deep sequencing of Salmonella RNA associated with heterologous Hfq proteins in vivo reveals small RNAs as a major target class and identifies RNA processing phenotypes
RNA Biology 6(3):266-275
- Bouvier M, Sharma CM, Mika F, Nierhaus KH, **Vogel J** (2008)
Small RNA binding to 5' mRNA coding region inhibits translational initiation
Molecular Cell 32(6):827-37
[Preview in Molecular Cell 32\(6\):751-753](#)
- Urban JH, **Vogel J** (2008)
Two seemingly homologous noncoding RNAs act hierarchically to activate glmS mRNA translation
PLoS Biology 6(3):e64
[Leading Edge Paper in Cell 133\(4\):555](#)
- Sittka A, Lucchini S, Papenfort K, Sharma C, Rolle K, Binnewies TT, Hinton JC, **Vogel J** (2008)
Deep sequencing analysis of small noncoding RNA and mRNA targets of the global post-transcriptional regulator, Hfq
PLoS Genetics 4(8):e1000163
[Research Highlight in Nature Reviews Microbiology 6\(10\):172](#)

- Song T, Mika F, Lindmark B, Liu Z, Schild S, Bishop A, Zhu J, Camilli A, Johansson J, **Vogel J**, Wai SN (2008)
A new Vibrio cholerae sRNA modulates colonization and affects release of outer membrane vesicles
Molecular Microbiology 70(1):100–111
- Papenfort K, Pfeiffer V, Lucchini S, Sonawane A, Hinton JC, **Vogel J** (2008)
Systematic deletion of Salmonella small RNA genes identifies CyaR, a conserved CRP-dependent riboregulator of OmpX synthesis
Molecular Microbiology 68(4):890–906
[Selected by Faculty 1000](#)
- Dienst D, Dühring U, Mollenkopf HJ, **Vogel J**, Golecki J, Hess WR, Wilde A (2008)
The cyanobacterial homologue of the RNA chaperone Hfq is essential for motility of Synechocystis sp. PCC 6803
Microbiology 154(10):3134–3143
- Sharma CM, Darfeuille F, Plantinga T, **Vogel J** (2007)
A small RNA regulates multiple ABC transporter mRNAs by targeting C/A-rich elements inside and upstream of ribosome binding sites
Genes & Development 21(21):2804–2817
[Research Highlight in Nature Reviews Microbiology](#) 6(1):4 and [Nature Reviews Molecular Cell Biology](#) 8(12): 945
- Darfeuille F, Unoson C, **Vogel J**, Wagner EGH (2007)
An antisense RNA inhibits translation by competing with “standby” ribosomes
Molecular Cell 26(3):381–92
[Selected by Faculty 1000](#)
- Pfeiffer V, Sittka A, Tomer R, Tedin K, Brinkmann V, **Vogel J** (2007)
A small noncoding RNA of the invasion gene island (SPI-1) represses OMP synthesis from the Salmonella core genome
Molecular Microbiology 66(5):1174–1191
[Selected by Faculty 1000](#)
- Wilson JW, Ott CM, Höner zu Bentrup K, Ramamurthy R, Quick L, Porwollik S, Cheng P, McClelland M, Tsaprailis G, Radabaugh T, Hunt A, Fernandez D, Richter E, Shah M, Kilcoyne M, Joshi L, Nelman-Gonzalez M, Hing S, Parra M, Dumars P, Norwood K, Bober R, Devich J, Ruggles A, Goulart C, Rupert M, Stodieck L, Stafford P, Catella L, Schurr MJ, Buchanan K, Morici L, McCracken J, Allen P, Baker-Coleman C, Hammond T, **Vogel J**, Nelson R, Pierson DL, Stefanyshyn-Piper HM, Nickerson CA (2007)
Spaceflight alters bacterial gene expression and virulence and reveals roles for global regulator Hfq
PNAS 104(41):16299–16304
- Viegas S, Pfeiffer V, Sittka A, Silva IJ, **Vogel J**, Arraiano CM (2007)
Characterization of the role of Ribonucleases in Salmonella small RNA decay
Nucleic Acids Research 35(22):7651–7664
- Urban JH, Papenfort K, Thompsen J, Schmitz RA, **Vogel J** (2007)
A conserved small RNA promotes discoordinate expression of the glmUS operon mRNA to activate GlmS synthesis
Journal of Molecular Biology 373(3): 521–528
- Urban JH, **Vogel J** (2007)
Translational control and target recognition by Escherichia coli small RNAs in vivo
Nucleic Acids Research 35(3):1018–37
- Sittka A, Pfeiffer V, Tedin K, **Vogel J** (2007)
The RNA chaperone Hfq is essential for the virulence of Salmonella typhimurium
Molecular Microbiology 63(1): 193–217
- Papenfort K, Pfeiffer V, Mika F, Lucchini S, Hinton JC, **Vogel J** (2006)
SigmaE-dependent small RNAs of Salmonella respond to membrane stress by accelerating global omp mRNA decay
Molecular Microbiology 62(6), 1674–1688
- Udekwi KI, Darfeuille F, **Vogel J**, Reimegård J, Holmqvist E, Wagner EGH (2005)
Hfq-dependent regulation of OmpA synthesis is mediated by an antisense RNA
Genes & Development 19(19):2355–2366
[Selected by Faculty 1000](#)

Axmann IM, Kensche P, **Vogel J**, Kohl S, Herzel H, Hess WR (2005)

Identification of cyanobacterial non-coding RNAs by comparative genome analysis

Genome Biology 6(9):R73

Vogel J, Argaman L, Wagner EGH, Altuvia S (2004)

The small RNA IstR inhibits synthesis of an SOS-induced toxic peptide

Current Biology 14(24):2271-6

Vogel J, Bartel V, Tang TH, Churakov G, Slagter-Jäger, Hüttenhofer A, Wagner EGH (2003)

RNomics in Escherichia coli detects new sRNA species and indicates parallel transcriptional output in bacteria

Nucleic Acids Research 31(22):6435-6443

Vogel J, Axmann IM, Herzel H, Hess WR (2003)

Experimental and computational analysis of transcriptional start sites in the cyanobacterium Prochlorococcus MED4

Nucleic Acids Research 31(11):2890-2899

Vogel J, Börner T (2002)

Lariat formation and a hydrolytic pathway in plant chloroplast group II intron splicing

EMBO Journal 21(14):3794-3803

Argaman L, Hershberg R, **Vogel J**, Bejerano G, Wagner EGH, Margalit H, Altuvia S (2001)

Novel small RNA-encoding genes in the intergenic regions of Escherichia coli

Current Biology 11(12):941-950

Selected by Faculty 1000

Vogel J, Hess WR (2001)

Complete 5' and 3' end maturation of group II intron containing tRNA precursors

RNA 7(2):285-292

Vogel J, Börner T, Hess WR (1999)

Comparative analysis of splicing of the complete set of chloroplast group II introns in three higher plant mutants

Nucleic Acids Research 27(19): 3866-3874

Vogel J, Börner T, Hess WR (1998)

Barley plastid genes encoding trnI-GAU and trnA-UGC are disrupted by group II introns

Plant Physiology 118:331

Vogel J, Hess WR, Börner T (1997)

Precise branch point mapping and quantification of splicing intermediates

Nucleic Acids Research 25(10):2030-2031

Vogel J, Hübschmann T, Börner T, Hess WR (1997)

Splicing and intron-internal RNA editing of trnK-matK transcripts in barley plastids: support for MatK as an essential splice factor

Journal of Molecular Biology 270(2):179-187

Reviews and Commentaries

Holmqvist E, **Vogel J** (2018)

RNA-binding proteins in bacteria

Nature Reviews Microbiology 6(10):601-615

Hör J, Gorski SA, **Vogel J** (2018)

Bacterial RNA biology on a genome scale

Molecular Cell 70(5):785-799

Munschauer M, **Vogel J** (2018)

Nuclear lncRNA stabilization in the host response to bacterial infection

EMBO Journal 37(13) pii:e99875

- Westermann AJ, **Vogel J** (2018)
Host-pathogen transcriptomics by Dual RNA-seq
Methods in Molecular Biology 1737:59-75
- Gorski SA, **Vogel J**, Doudna JA (2017)
RNA-based Recognition and targeting: Sowing the seeds of specificity
Nature Reviews Molecular Cell Biology 18(4):215-228
- Hör J, **Vogel J** (2017)
Global snapshots of bacterial RNA networks
EMBO Journal 36(3):245-247
- Westermann AJ, Barquist L, **Vogel J** (2017)
Resolving host-pathogen interactions by Dual RNA-seq
PLoS Pathogens 13(2):e1006033
- Smirnov A, Schneider C, Hör J, **Vogel J** (2017)
Discovery of new RNA classes and global RNA-binding proteins
Current Opinion in Microbiology 39:152-160
- Saliba AE, Santos SC, **Vogel J** (2017)
New RNA-seq approaches for the study of bacterial pathogens
Current Opinion in Microbiology 35:78-87
- Marbaniang CM, **Vogel J** (2016)
Emerging roles of RNA modifications in bacteria
Current Opinion Microbiology 30:50-57
- Barquist L, Westermann AJ, **Vogel J** (2016)
Molecular phenotyping of infection-associated small noncoding RNAs
Philosophical Transactions B 371(1707):20160081
- Barquist L, **Vogel J** (2015)
Accelerating discovery and functional analysis of small RNAs with new technologies
Annual Review of Genetics 49:367-94
- Ziebuhr W, **Vogel J** (2015)
The end is not the end: remnants of tRNA precursors live on to sponge up small regulatory RNAs
Molecular Cell 58(3):389-90
- Miyakoshi M, Chao Y, **Vogel J** (2015)
Regulatory small RNAs from the 3' regions of bacterial mRNAs
Current Opinion in Microbiology 24:132-139
- Heidrich N, Dugar G, **Vogel J**, Sharma CM (2015)
Investigating CRISPR RNA biogenesis and function using RNA-seq
Methods in Molecular Biology 1311:1-21
- Vogel J** (2014)
A bacterial seek-and-destroy system for foreign DNA
Science 344(6187):972-3
- Saliba AE, Westermann AJ, Gorski SA, **Vogel J** (2014)
Single-cell RNA-seq: advances and future challenges
Nucleic Acids Research 42(14):8845-60
- Sharma CM, **Vogel J** (2014)
Differential RNA-seq: the approach behind and the biological insight gained
Current Opinion in Microbiology 19:97-105

- Papenfort K, **Vogel J** (2014)
Small RNA functions in carbon metabolism and virulence of enteric pathogens
Frontiers in Cellular and Infection Microbiology 4:91
- Vogel J**, Gottesman S, Belasco JG, Narberhaus F (2014)
Meeting report: Regulating with RNA in Bacteria 2013
RNA Biology 11(5):403-12
- Heidrich N, **Vogel J** (2013)
Same same but different: new structural insight into CRISPR-Cas complexes
Molecular Cell 52(1):4-7
- Holmqvist E, **Vogel J** (2013)
A small RNA serving both the Hfq and CsrA regulons
Genes & Development 27:1073-8
- Heidrich N, **Vogel J** (2013)
CRISPRs extending their reach: Prokaryotic RNAi protein Cas9 recruited for gene regulation
EMBO Journal 32(13):1802-4
- Vogel J**, Bassler BL (2013)
Bacterial Regulatory Mechanisms: The gene and beyond
Current Opinion in Microbiology 16(2):109-11
- Westermann AJ, Gorski SA, **Vogel J** (2012)
Dual RNA-seq of pathogen and host
Nature Reviews Microbiology 10(9):618-30
- Eulalio A, Schulte LN, **Vogel J** (2012)
The mammalian microRNA response to bacterial infections
RNA Biology 9(6):742-50
- Boehm A, **Vogel J** (2012)
The csgD mRNA as a hub for signal integration via multiple small RNAs
Molecular Microbiology 84(1):1-5
- Vogel J**, Luisi BF (2011)
Hfq and its constellation of RNA
Nature Reviews Microbiology 9(8):578-89
- Storz G, **Vogel J**, Wassarman KM (2011)
Regulation by Small RNAs in Bacteria: Expanding Frontiers
Molecular Cell 43(6):880-91
- Papenfort K, **Vogel J** (2011)
Sweet business: Spot42 RNA networks with CRP to modulate catabolite repression
Molecular Cell 41(3):245-6
- Böhm A, Papenfort K, Lopez D, **Vogel J** (2011)
Microbes at their best: First Mol Micro Meeting Würzburg
Molecular Microbiology 82(4):797-806
- Papenfort K, **Vogel J** (2010)
Regulatory RNA in bacterial pathogens
Cell Host & Microbe 8(1):116-27
- Podkaminski D, **Vogel J** (2010)
Small RNAs promote mRNA stability to activate the synthesis of virulence factors
Molecular Microbiology 78(6):1327-31
- Chao Y, **Vogel J** (2010)
The role of Hfq in bacterial pathogens
Current Opinion in Microbiology 13(1):24-33

Sharma CM, **Vogel J** (2009)

Experimental approaches for the discovery and characterization of regulatory small RNA

Current Opinion in Microbiology 12(5):536-46

Fröhlich K, **Vogel J** (2009)

Activation of gene expression by small RNA

Current Opinion in Microbiology 12(6):674-82

Narberhaus F, **Vogel J** (2009)

Regulatory RNAs in prokaryotes: Here, there and everywhere

Molecular Microbiology 74(2):261-269

Vogel J (2009)

An RNA trap helps bacteria get the most of out of chitobiose

Molecular Microbiology 73(5):737-741

Vogel J (2009)

A rough guide to the noncoding RNA world of Salmonella

Molecular Microbiology 71(1):1-11

Papenfort K, **Vogel J** (2009)

Multiple target regulation by small noncoding RNAs rewires gene expression at the post-transcriptional level

Research in Microbiology 160:278-287

Görke B, **Vogel J** (2008)

Noncoding RNA functions in the making and breaking of sugars

Genes & Development 22(21):2914-25

Sittka A, **Vogel J** (2008)

A glimpse at the evolution of virulence control

Cell Host & Microbe 4:310-312

Vogel J, Wagner EGH (2007)

Target identification of small non-coding RNAs in bacteria

Current Opinion in Microbiology 10:262-270

Narberhaus F, **Vogel J** (2007)

Sensory and regulatory RNAs in prokaryotes: A new German research focus

RNA Biology 4(3):160-164

Arraiano CM, Bamford J, Brüßow H, Carpousis AJ, Pelicic V, Pflüger K, Polard P, **Vogel J** (2007)

Recent Advances on the Expression, Evolution and Dynamics of Prokaryotic Genomes

Journal of Bacteriology 189(17):6093-6100

Vogel J, Papenfort K (2006)

Small non-coding RNAs and the bacterial outer membrane

Current Opinion in Microbiology 9(6):605-611

Hüttenhofer A, **Vogel J** (2006)

Experimental approaches to identify noncoding RNAs

Nucleic Acids Research 34(2):635-46

Vogel J, Sharma CM (2005)

How to find small non-coding RNAs in bacteria

Biological Chemistry 386(11):1219-38

Bonen L, **Vogel J** (2001)

The ins and outs of group II introns

Trends in Genetics 17(6):322-331

Book chapters

Podkaminski D, Bouvier M, **Vogel J** (2014)

Identification and characterization of small noncoding RNAs in bacteria

In: **Handbook of RNA Biochemistry** (eds. Hartmann RK, Bindereif A, Schön A, Westhof E), Wiley-VCH

Caldelari I, Chao Y, Romby P, **Vogel J** (2013)

RNA-mediated regulation in pathogenic bacteria

Cold Spring Harb Perspect Med 3(9)

Papenfert K, Corcoran CP, Gupta SK, Miyakoshi M, Heidrich N, Chao Y, Fröhlich KS, Sharma CM, Ziebuhr W, Böhm A, **Vogel J** (2013)

Regulatory Mechanisms of Special Significance: The role of sRNAs in Virulence Regulation

In: **Regulation of Bacterial Virulence** (eds. Darwin AJ, Vasil ML), ASM Press, pp493-527

Borries A, **Vogel J**, Sharma CM (2012)

Differential RNA sequencing (dRNA-seq): Deep-sequencing based analysis of primary transcriptomes

In: **Tag-based Approaches for Next-Generation Sequencing**, Eds. M. Harbers, G. Kahl, Wiley-Blackwell-VCH

Corcoran CP, Rieder R, Podkaminski D, Hofmann B, **Vogel J** (2012)

Use of aptamer tagging to identify in vivo protein binding partners of small regulatory RNAs

Methods in Molecular Biology 905:177-200

Corcoran C, Papenfert K, **Vogel J** (2011)

Hfq-associated regulatory small RNAs

In: **Regulatory RNAs in Prokaryotes** (eds. A. Marchfelder, W.R. Hess), Springer Germany; pp15-50

Javayel S, Papenfert K, **Vogel J** (2010)

The small RNAs of Salmonella

Salmonella: From Genome to Function (Edited by S. Prowollik), Caister Academic Press; ISBN: 978-1-904455-73-8

Vogel J (2009)

A small RNA cascade regulates aminosugar synthesis

Nova Acta Leopoldina 378:41-50

Urban JH, **Vogel J** (2009)

A green fluorescent protein (GFP) based plasmid system to study post-transcriptional control of gene expression in vivo

Methods in Molecular Biology 540:301-19

Henry AA, **Vogel J** (2008)

Noncoding RNAs

In: **Wiley Encyclopedia of Chemical Biology (WECB)** John Wiley & Sons, Ltd

Vogel J, Wagner EGH (2005)

RNA mining

In: **Handbook of RNA Biochemistry** (eds. Hartmann RK, Bindereif A, Schön A, Westhof E), Wiley-VCH, Vol 2:595-613

Wagner EGH, **Vogel J** (2005)

Functional analysis of identified non-mRNAs

In: **Handbook of RNA Biochemistry** (eds. Hartmann RK, Bindereif A, Schön A, Westhof E), Wiley-VCH, Vol 2:614-642

Wagner EGH, **Vogel J** (2003)

Noncoding RNAs encoded by bacterial chromosomes

In: **Noncoding RNAs** (eds. Barciszewski J, Erdmann V), Landes Bioscience, 243-259