

Publications arising from Polyomics research

1. G. Rossitto *et al.*, High sodium intake, glomerular hyperfiltration, and protein catabolism in patients with essential hypertension. *Cardiovasc Res* **117**, 1372-1381 (2021).
2. M. J. Ormsby, R. L. Davies, Diversification of OmpA and OmpF of *Yersinia ruckeri* is independent of the underlying species phylogeny and evidence of virulence-related selection. *Scientific reports* **11**, 3493 (2021).
3. M. Niu, J. Wandy, R. Daly, S. Rogers, D. Husmeier, R package for statistical inference in dynamical systems using kernel based gradient matching: KGode. *Computational Statistics* **36**, 715-747 (2021).
4. A. Munoz-Prieto *et al.*, Untargeted metabolomic profiling of serum in dogs with hypothyroidism. *Res Vet Sci* **136**, 6-10 (2021).
5. J. G. M. Mina *et al.*, Antileishmanial Chemotherapy through Clemastine Fumarate Mediated Inhibition of the Leishmania Inositol Phosphorylceramide Synthase. *ACS Infect Dis* **7**, 47-63 (2021).
6. K. Milne *et al.*, Mapping immune variation and var gene switching in naive hosts infected with *Plasmodium falciparum*. *Elife*. 2021 (10.7554/elife.62800).
7. K. McLuskey *et al.*, Ranking Metabolite Sets by Their Activity Levels. *Metabolites* **11**, 103 (2021).
8. A. R. J. Lima *et al.*, Nucleosome landscape reflects phenotypic differences in *Trypanosoma cruzi* life forms. *PLoS pathogens*. 2021 (10.1371/journal.ppat.1009272).
9. T. Hodgkinson *et al.*, The use of nanovibration to discover specific and potent bioactive metabolites that stimulate osteogenic differentiation in mesenchymal stem cells. *Sci Adv* **7**, eabb7921 (2021).
10. G. Hjorleifsson Eldjarn *et al.*, Ranking microbial metabolomic and genomic links in the NPLinker framework using complementary scoring functions. *PLoS computational biology* **17**, e1008920 (2021).
11. L. Fialho Junior *et al.*, Proteomic analysis reveals differentially abundant proteins probably involved in the virulence of amastigote and promastigote forms of *Leishmania infantum*. *Parasitol Res* **120**, 679-692 (2021).
12. J. A. T. Dow, S. A. Krause, P. Herzyk, Updates on ion and water transport by the Malpighian tubule. *Curr Opin Insect Sci* **47**, 31-37 (2021).
13. V. Davies *et al.*, Rapid Development of Improved Data-Dependent Acquisition Strategies. *Analytical chemistry* **93**, 5676-5683 (2021).
14. H. Craven *et al.*, Socioeconomic position links circulatory microbiota differences with biological age. *Scientific reports* **11**, 12629 (2021).
15. M. Ciosi *et al.*, Approaches to Sequence the HTT CAG Repeat Expansion and Quantify Repeat Length Variation. *J Huntingtons Dis* **10**, 53-74 (2021).
16. J. Chung *et al.*, Rare Missense Functional Variants at COL4A1 and COL4A2 in Sporadic Intracerebral Hemorrhage. *Neurology*, 10.1212/WNL.0000000000012227 (2021).
17. B. Cheaib *et al.*, Genome erosion and evidence for an intracellular niche – exploring the biology of mycoplasmas in Atlantic salmon. *Aquaculture* **541**, 736772 (2021).
18. L. V. Carruthers *et al.*, Diminazene resistance in *Trypanosoma congolense* is not caused by reduced transport capacity but associated with reduced mitochondrial membrane potential. *Mol Microbiol* **n/a**, (2021).
19. M. Cangiano *et al.*, Gene Regulation Network Analysis on Human Prostate Orthografts Highlights a Potential Role for the JMJD6 Regulon in Clinical Prostate Cancer. *Cancers (Basel)*. 2021 (10.3390/cancers13092094).
20. J. D. Burgon *et al.*, Phylogenomic inference of species and subspecies diversity in the Paelearctic salamander genus *Salamandra*. *Mol Phylogenet Evol* **157**, 107063 (2021).
21. A. M. Buckley, D. Ewin, I. B. Moura, M. H. Wilcox, G. R. Douce, Insights into the regulatory mechanisms of *Clostridioides difficile* biofilm formation. *bioRxiv*, 2021.2002.2019.431970 (2021).
22. M. Biddau *et al.*, *Plasmodium falciparum* LipB mutants display altered redox and carbon metabolism in asexual stages and cannot complete sporogony in *Anopheles* mosquitoes. *Int J Parasitol* **51**, 441-453 (2021).
23. L. M. Bergner, D. J. Becker, C. Tello, J. E. Carrera, D. G. Streicker, Detection of *Trypanosoma cruzi* in the saliva of diverse neotropical bats. *Zoonoses Public Health* **68**, 271-276 (2021).
24. V. F. Annese *et al.*, A monolithic single-chip point-of-care platform for metabolomic prostate cancer detection. *Microsystems & Nanoengineering* **7**, 21 (2021).
25. Y. Yang *et al.*, Endothelial Pannexin 1 Channels Control Inflammation by Regulating Intracellular Calcium. *J Immunol* **204**, 2995-3007 (2020).



26. G. R. Varjak M, Burchmore R, Schnettler E, Kohl A, aBravo Is a Novel *Aedes aegypti* Antiviral Protein That Interacts with, but Acts Independently of, the Exogenous siRNA Pathway Effector Dicer 2. *Viruses* **12**, (2020).
27. P. Schwabl *et al.*, Culture-free genome-wide locus sequence typing (GLST) provides new perspectives on *Trypanosoma cruzi* dispersal and infection complexity. *PLoS genetics* **16**, e1009170 (2020).
28. A. M. Savino *et al.*, Metabolic adaptation of acute lymphoblastic leukemia to the central nervous system microenvironment is dependent on Stearoyl CoA desaturase. *Nat Cancer* **1**, 998-1009 (2020).
29. J. Royle *et al.*, Glucose-Regulated Protein 78 Interacts with Zika Virus Envelope Protein and Contributes to a Productive Infection. *Viruses* **12**, 524 (2020).
30. L. C. Rodgers *et al.*, The rheumatoid synovial environment alters fatty acid metabolism in human monocytes and enhances CCL20 secretion. *Rheumatology (Oxford)* **59**, 869-878 (2020).
31. J. J. G. Pritchard *et al.*, Monitoring of urothelial cancer disease status after treatment by digital droplet PCR liquid biopsy assays. *Urol Oncol* **38**, 737 e731-737 e710 (2020).
32. H. Pokojna, D. Livingstone, D. Wall, R. Burchmore, Animated Guide to Represent a Novel Means of Gut-Brain Axis Communication. *Adv Exp Med Biol* **1262**, 39-57 (2020).
33. B. K. Pesko *et al.*, Postmortomics: The Potential of Untargeted Metabolomics to Highlight Markers for Time Since Death. *OMICS* **24**, 649-659 (2020).
34. M. J. Ormsby *et al.*, Propionic Acid Promotes the Virulent Phenotype of Crohn's Disease-Associated Adherent-Invasive *Escherichia coli*. *Cell Rep* **30**, 2297-2305 e2295 (2020).
35. W. Orapiriyakul *et al.*, Nanovibrational Stimulation of Mesenchymal Stem Cells Induces Therapeutic Reactive Oxygen Species and Inflammation for Three-Dimensional Bone Tissue Engineering. *ACS Nano* **14**, 10027-10044 (2020).
36. C. Naula, R. Burchmore, 2D Gel Electrophoresis Analysis of *Leishmania* Proteomes. *Methods Mol Biol* **2116**, 577-586 (2020).
37. C. L. McIntyre *et al.*, beta2 Integrins differentially regulate gammadelta T cell subset thymic development and peripheral maintenance. *Proceedings of the National Academy of Sciences of the United States of America* **117**, 22367-22377 (2020).
38. N. Mallo *et al.*, Depletion of voltage-dependent anion channel (VDAC) of *Toxoplasma gondii* affects multiple mitochondrial functions, but not calcium signalling. *bioRxiv*, 2020.2010.2007.330423 (2020).
39. M. A. Madsen, G. Hamilton, P. Herzyk, A. Amtmann, Environmental Regulation of PndbA600, an Auto-Inducible Promoter for Two-Stage Industrial Biotechnology in Cyanobacteria. *Front Bioeng Biotechnol* **8**, 619055 (2020).
40. R. Lathan *et al.*, Ischemic and Perfused Kidney Treated with Non-Cultured Adipose-Derived Regenerative Cells Increase the Immune and Regulatory Transcriptome. *Transplantation* **104**, S201-S201 (2020).
41. C. A. Jukes *et al.*, Bile salt metabolism is not the only factor contributing to *Clostridioides (Clostridium) difficile* disease severity in the murine model of disease. *Gut Microbes* **11**, 481-496 (2020).
42. A. Jacobs *et al.*, Parallelism in eco-morphology and gene expression despite variable evolutionary and genomic backgrounds in a Holarctic fish. *PLoS genetics* **16**, e1008658 (2020).
43. H. Hulme *et al.*, Microbiome-derived carnitine mimics as previously unknown mediators of gut-brain axis communication. *Sci Adv* **6**, eaax6328 (2020).
44. C. A. H. Hansell *et al.*, Analysis of lung stromal expression of the atypical chemokine receptor ACKR2 reveals unanticipated expression in murine blood endothelial cells. *Eur J Immunol* **50**, 666-675 (2020).
45. A. I. M. Greer *et al.*, Nanopatterned Titanium Implants Accelerate Bone Formation In Vivo. *ACS Appl Mater Interfaces* **12**, 33541-33549 (2020).
46. V. Grazielle-Silva *et al.*, *Trypanosoma brucei* and *Trypanosoma cruzi* DNA Mismatch Repair Proteins Act Differently in the Response to DNA Damage Caused by Oxidative Stress. *Front Cell Infect Microbiol* **10**, 154 (2020).
47. F. Giordani *et al.*, Veterinary trypanocidal benzoxaboroles are peptidase-activated prodrugs. *PLoS pathogens*. 2020 (10.1371/journal.ppat.1008932).
48. A. Garber *et al.*, The effect of supplementing pony diets with yeast on 2. The faecal microbiome. *Animal* **14**, 2493-2502 (2020).
49. A. Garber, P. Hastie, D. McGuinness, P. Malarange, J. A. Murray, Abrupt dietary changes between grass and hay alter faecal microbiota of ponies. *PLoS one* **15**, e0237869 (2020).
50. G. H. Eldjárn *et al.*, Ranking microbial metabolomic and genomic links in the NPLinker framework using complementary scoring functions. *bioRxiv*, 2020.2006.2012.148205 (2020).

51. E. Dolezelova *et al.*, Cell-based and multi-omics profiling reveals dynamic metabolic repurposing of mitochondria to drive developmental progression of *Trypanosoma brucei*. *PLoS Biol* **18**, e3000741 (2020).
52. L. A. Damiati *et al.*, PEA polymer-coated nanotopography delivers solid-state BMP2, enhances mesenchymal stem cell adhesion, prevents bacterial biofilm formation and protects cells from quorum sensing virulence factors. *bioRxiv*, 2020.2009.2017.302455 (2020).
53. A. Damianou *et al.*, Essential roles for deubiquitination in *Leishmania* life cycle progression. *PLoS pathogens* **16**, e1008455 (2020).
54. R. Daly *et al.*, Changes in Plasma Itaconate Elevation in Early Rheumatoid Arthritis Patients Elucidates Disease Activity Associated Macrophage Activation. *Metabolites* **10**, 241 (2020).
55. M. Crotti, C. E. Adams, K. R. Elmer, Population genomic SNPs from epigenetic RADs: Gaining genetic and epigenetic data from a single established next-generation sequencing approach. *Methods in Ecology and Evolution* **11**, 839-849 (2020).
56. P. E. Cockram, E. A. Dickie, M. P. Barrett, T. K. Smith, Halogenated tryptophan derivatives disrupt essential transamination mechanisms in bloodstream form *Trypanosoma brucei*. *PLoS neglected tropical diseases* **14**, e0008928 (2020).
57. B. Cheaib *et al.*, Unpicking the mysterious symbiosis of *Mycoplasma* in salmonids. *bioRxiv*, 2020.2007.2017.209767 (2020).
58. J. D. Burgon *et al.*, Functional colour genes and signals of selection in colour-polymorphic salamanders. *Mol Ecol* **29**, 1284-1299 (2020).
59. G. Blackburn *et al.*, Running on Empty: A Metabolomics Approach to Investigating Changing Energy Metabolism during Fasted Exercise and Rest. *Metabolites* **10**, 399 (2020).
60. M. Biddau *et al.*, Lipoic acid biosynthesis is essential for *Plasmodium falciparum* transmission and influences redox response and carbon metabolism of parasite asexual blood stages. *bioRxiv*, 2020.2005.2017.099630 (2020).
61. M. A. Al-Rawhani *et al.*, Multimodal Integrated Sensor Platform for Rapid Biomarker Detection. *IEEE Trans Biomed Eng* **67**, 614-623 (2020).
62. J. Wijek, B. van Basten, G. Hamilton, S. J. Yarwood, Genome-Wide Mapping Defines a Role for C/EBPbeta and c-Jun in Non-Canonical Cyclic AMP Signalling. *Cells* **8**, 1253 (2019).
63. K. Wang *et al.*, Multi-Layer Controls of Cas9 Activity Coupled With ATP Synthase Over-Expression for Efficient Genome Editing in *Streptomyces*. *Front Bioeng Biotechnol* **7**, 304 (2019).
64. J. Wandy *et al.*, In Silico Optimization of Mass Spectrometry Fragmentation Strategies in Metabolomics. *Metabolites* **9**, 219 (2019).
65. D. A. Vargas *et al.*, Pharmacometabolomics of Meglumine Antimoniate in Patients With Cutaneous Leishmaniasis. *Front Pharmacol* **10**, 657 (2019).
66. S. Taponen *et al.*, Bovine milk microbiome: a more complex issue than expected. *Vet Res* **50**, 44 (2019).
67. S. Rogers *et al.*, Deciphering complex metabolite mixtures by unsupervised and supervised substructure discovery and semi-automated annotation from MS/MS spectra. *Faraday Discuss* **218**, 284-302 (2019).
68. N. J. Rankin *et al.*, High-throughput quantification of carboxymethyl lysine in serum and plasma using high-resolution accurate mass Orbitrap mass spectrometry. *Ann Clin Biochem* **56**, 397-407 (2019).
69. A. W. Pountain *et al.*, Genomic instability at the locus of sterol C24-methyltransferase promotes amphotericin B resistance in *Leishmania* parasites. *PLoS neglected tropical diseases* **13**, e0007052 (2019).
70. M. J. Ormsby, E. Grahame, R. Burchmore, R. L. Davies, Comparative bioinformatic and proteomic approaches to evaluate the outer membrane proteome of the fish pathogen *Yersinia ruckeri*. *J Proteomics* **199**, 135-147 (2019).
71. G. A. McCanney *et al.*, Low sulfated heparins target multiple proteins for central nervous system repair. *Glia* **67**, 668-687 (2019).
72. M. J. Keuss *et al.*, Unanchored tri-NEDD8 inhibits PARP-1 to protect from oxidative stress-induced cell death. *EMBO J* **38**, (2019).
73. K. Johnston *et al.*, Mapping the metabolism of five amino acids in bloodstream form *Trypanosoma brucei* using U-(13)C-labelled substrates and LC-MS. *Biosci Rep* **39**, (2019).
74. F. Giordani *et al.*, Novel Minor Groove Binders Cure Animal African Trypanosomiasis in an in Vivo Mouse Model. *Journal of medicinal chemistry* **62**, 3021-3035 (2019).
75. M. Ernst *et al.*, MolNetEnhancer: Enhanced Molecular Networks by Integrating Metabolome Mining and Annotation Tools. *Metabolites* **9**, (2019).



76. J. Buckley, R. Daly, C. A. Cobbold, K. Burgess, B. K. Mable, Changing environments and genetic variation: natural variation in inbreeding does not compromise short-term physiological responses. *Proc Biol Sci* **286**, 20192109 (2019).
77. E. Briggs *et al.*, Trypanosoma brucei ribonuclease H2A is an essential R-loop processing enzyme whose loss causes DNA damage during transcription initiation and antigenic variation. *Nucleic acids research* **47**, 9180-9197 (2019).
78. H. Acosta *et al.*, Proteomic analysis of glycosomes from Trypanosoma cruzi epimastigotes. *Mol Biochem Parasitol* **229**, 62-74 (2019).
79. N. Zhang *et al.*, Host-parasite co-metabolic activation of antitrypanosomal aminomethyl-benzoxaboroles. *PLoS pathogens* **14**, e1006850 (2018).
80. J. Wandy *et al.*, Ms2lda.org: web-based topic modelling for substructure discovery in mass spectrometry. *Bioinformatics* **34**, 317-318 (2018).
81. S. J. Waddell *et al.*, Biomimetic oyster shell-replicated topography alters the behaviour of human skeletal stem cells. *J Tissue Eng*. 2018 (10.1177/2041731418794007).
82. J. J. J. van der Hooft *et al.*, Unexpected differential metabolic responses of Campylobacter jejuni to the abundant presence of glutamate and fucose. *Metabolomics* **14**, 144 (2018).
83. P. C. Steketee *et al.*, Benzoxaborole treatment perturbs S-adenosyl-L-methionine metabolism in Trypanosoma brucei. *PLoS neglected tropical diseases* **12**, e0006450 (2018).
84. K. M. Rattigan *et al.*, Metabolomic profiling of macrophages determines the discrete metabolomic signature and metabolomic interactome triggered by polarising immune stimuli. *PLoS one* **13**, e0194126 (2018).
85. A. S. Prakash, A. M. F. Kabli, N. Bulleid, R. Burchmore, Mix-and-Match Proteomics: Using Advanced Iodoacetyl Tandem Mass Tag Multiplexing To Investigate Cysteine Oxidation Changes with Respect to Protein Expression. *Analytical chemistry* **90**, 14173-14180 (2018).
86. G. Perrella *et al.*, ZINC-FINGER interactions mediate transcriptional regulation of hypocotyl growth in Arabidopsis. *Proceedings of the National Academy of Sciences of the United States of America* **115**, E4503-E4511 (2018).
87. M. M. Page *et al.*, Common and unique transcriptional responses to dietary restriction and loss of insulin receptor substrate 1 (IRS1) in mice. *Aging (Albany NY)* **10**, 1027-1052 (2018).
88. J. Newton *et al.*, Minimally-destructive atmospheric ionisation mass spectrometry authenticates authorship of historical manuscripts. *Scientific reports* **8**, 10944 (2018).
89. M. A. V. Mudaliar, University of Glasgow, (2018).
90. R. Mitchell *et al.*, Targeting BCR-ABL-Independent TKI Resistance in Chronic Myeloid Leukemia by mTOR and Autophagy Inhibition. *J Natl Cancer Inst* **110**, 467-478 (2018).
91. A. Megalios, R. Daly, K. Burgess, MetaboCraft: building a Minecraft plugin for metabolomics. *Bioinformatics* **34**, 2693-2694 (2018).
92. J. Kovarova *et al.*, Deletion of transketolase triggers a stringent metabolic response in promastigotes and loss of virulence in amastigotes of Leishmania mexicana. *PLoS pathogens* **14**, e1006953 (2018).
93. S. A. Cumming *et al.*, De novo repeat interruptions are associated with reduced somatic instability and mild or absent clinical features in myotonic dystrophy type 1. *Eur J Hum Genet* **26**, 1635-1647 (2018).
94. J. P. R. Connolly *et al.*, Host-associated niche metabolism controls enteric infection through fine-tuning the regulation of type 3 secretion. *Nat Commun* **9**, 4187 (2018).
95. M. Ciosi *et al.* (Research Square, 2018).
96. M. Carruthers *et al.*, De novo transcriptome assembly, annotation and comparison of four ecological and evolutionary model salmonid fish species. *BMC Genomics* **19**, 32 (2018).
97. E. Briggs, G. Hamilton, K. Crouch, C. Lapsley, R. McCulloch, Genome-wide mapping reveals conserved and diverged R-loop activities in the unusual genetic landscape of the African trypanosome genome. *Nucleic acids research* **46**, 11789-11805 (2018).
98. D. Begolo *et al.*, The trypanocidal benzoxaborole AN7973 inhibits trypanosome mRNA processing. *PLoS pathogens* **14**, e1007315 (2018).
99. S. A. Babayan *et al.*, The Immune and Non-Immune Pathways That Drive Chronic Gastrointestinal Helminth Burdens in the Wild. *Front Immunol* **9**, 56 (2018).
100. S. AlQarni *et al.*, Lymphomas driven by Epstein-Barr virus nuclear antigen-1 (EBNA1) are dependant upon Mdm2. *Oncogene* **37**, 3998-4012 (2018).

101. R. Zambelloni *et al.*, Novel compounds targeting the enterohemorrhagic *Escherichia coli* type three secretion system reveal insights into mechanisms of secretion inhibition. *Mol Microbiol* **105**, 606-619 (2017).
102. J. Wandy *et al.*, ShinyKGode: an interactive application for ODE parameter inference using gradient matching. *Bioinformatics*, (2017).
103. J. J. J. van der Hooft *et al.*, Unsupervised Discovery and Comparison of Structural Families Across Multiple Samples in Untargeted Metabolomics. *Analytical chemistry* **89**, 7569-7577 (2017).
104. P. M. Tsimbouri *et al.*, Stimulation of 3D osteogenesis by mesenchymal stem cells using a nanovibrational bioreactor. *Nat Biomed Eng* **1**, 758-770 (2017).
105. M. E. Rodie *et al.*, Androgen-responsive non-coding small RNAs extend the potential of HCG stimulation to act as a bioassay of androgen sufficiency. *Eur J Endocrinol* **177**, 339-346 (2017).
106. R. Mwenechanya *et al.*, Sterol 14alpha-demethylase mutation leads to amphotericin B resistance in *Leishmania mexicana*. *PLoS neglected tropical diseases* **11**, e0005649 (2017).
107. M. Mudaliar, F. C. Thomas, P. D. Eckersall, in *Periparturient Diseases of Dairy Cows: A Systems Biology Approach*, B. N. Ametaj, Ed. (Springer International Publishing, Cham, 2017), pp. 139-183.
108. L. C. Lee *et al.*, Nanotopography controls cell cycle changes involved with skeletal stem cell self-renewal and multipotency. *Biomaterials* **116**, 10-20 (2017).
109. T. Klymenko *et al.*, RNA-Seq Analysis of Differentiated Keratinocytes Reveals a Massive Response to Late Events during Human Papillomavirus 16 Infection, Including Loss of Epithelial Barrier Function. *J Virol* **91**, (2017).
110. J. Haggarty, K. E. V. Burgess, Recent advances in liquid and gas chromatography methodology for extending coverage of the metabolome. *Curr Opin Biotechnol* **43**, 77-85 (2017).
111. K. E. V. Burgess, Y. Borutzki, N. Rankin, R. Daly, F. Jourdan, MetaNetter 2: A Cytoscape plugin for ab initio network analysis and metabolite feature classification. *J Chromatogr B Analyt Technol Biomed Life Sci* **1071**, 68-74 (2017).
112. K. J. H. Alzahrani *et al.*, Functional and genetic evidence that nucleoside transport is highly conserved in *Leishmania* species: Implications for pyrimidine-based chemotherapy. *International journal for parasitology. Drugs and drug resistance* **7**, 206-226 (2017).
113. E. V. Alakpa *et al.*, Improving cartilage phenotype from differentiated pericytes in tunable peptide hydrogels. *Scientific reports*. 2017 (10.1038/s41598-017-07255-z).
114. E. V. Alakpa *et al.*, Nacre Topography Produces Higher Crystallinity in Bone than Chemically Induced Osteogenesis. *ACS Nano* **11**, 6717-6727 (2017).
115. S. Akpunarlieva *et al.*, Integration of proteomics and metabolomics to elucidate metabolic adaptation in *Leishmania*. *J Proteomics* **155**, 85-98 (2017).
116. S. Weidt *et al.*, A novel targeted/untargeted GC-Orbitrap metabolomics methodology applied to *Candida albicans* and *Staphylococcus aureus* biofilms. *Metabolomics* **12**, (2016).
117. I. M. Vincent, D. E. Ehmann, S. D. Mills, M. Perros, M. P. Barrett, Untargeted Metabolomics To Ascertain Antibiotic Modes of Action. *Antimicrobial agents and chemotherapy* **60**, 2281-2291 (2016).
118. I. M. Vincent *et al.*, Metabolomics Identifies Multiple Candidate Biomarkers to Diagnose and Stage Human African Trypanosomiasis. *PLoS neglected tropical diseases* **10**, e0005140 (2016).
119. C. N. Velanis, P. Herzyk, G. I. Jenkins, Regulation of transcription by the Arabidopsis UVR8 photoreceptor involves a specific histone modification. *Plant Molecular Biology*, (2016).
120. J. J. J. van Der Hooft, J. Wandy, M. P. Barrett, K. E. V. Burgess, S. Rogers, Topic modeling for untargeted substructure exploration in metabolomics. *Proceedings of the National Academy of Sciences of the United States of America*, (2016).
121. J. J. J. van der Hooft, S. Padmanabhan, K. E. V. Burgess, M. P. Barrett, Urinary antihypertensive drug metabolite screening using molecular networking coupled to high-resolution mass spectrometry fragmentation. *Metabolomics* **12**, (2016).
122. J. Van Der Hooft, S. Padmanabhan, K. Burgess, M. Barrett, Erratum to: Urinary antihypertensive drug metabolite screening using molecular networking coupled to high-resolution mass spectrometry fragmentation. *Metabolomics* **12**, (2016).
123. H. Trewby *et al.*, Use of bacterial whole-genome sequencing to investigate local persistence and spread in bovine tuberculosis. *Epidemics* **14**, 26-35 (2016).
124. F. Thomas *et al.*, Mastitomics, the integrated omics of bovine milk in an experimental model of *Streptococcus uberis* mastitis: 3. Untargeted metabolomics. *Molecular BioSystems* **12**, 2762-2769 (2016).

125. L. H. Stipetic *et al.*, A novel metabolomic approach used for the comparison of *Staphylococcus aureus* planktonic cells and biofilm samples. *Metabolomics* **12**, (2016).
126. C. D. Shaw *et al.*, In vitro selection of miltefosine resistance in promastigotes of *Leishmania donovani* from Nepal: genomic and metabolomic characterization. *Mol Microbiol* **99**, 1134-1148 (2016).
127. J. N. Roberts *et al.*, Dynamic surfaces for the study of mesenchymal stem cell growth through adhesion regulation. *ACS Nano* **10**, 6667-6679 (2016).
128. N. J. Rankin, D. Preiss, P. Welsh, N. Sattar, Applying metabolomics to cardiometabolic intervention studies and trials: past experiences and a roadmap for the future. *International Journal of Epidemiology*, (2016).
129. D. Preiss *et al.*, Effect of metformin therapy on circulating amino acids in a randomized trial: the CAMERA study. *Diabetic Medicine* **33**, 1569-1574 (2016).
130. S. F. Parker, I. P. Silverwood, N. G. Hamilton, D. Lennon, Structural and spectroscopic characterisation of C4 oxygenates relevant to structure/activity relationships of the hydrogenation of α,β -unsaturated carbonyls. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **153**, 289-397 (2016).
131. M. J. Ormsby *et al.*, *Yersinia ruckeri* isolates recovered from diseased Atlantic Salmon (*Salmo salar*) in Scotland are more diverse than those from Rainbow Trout (*Oncorhynchus mykiss*) and represent distinct subpopulations. *Applied and Environmental Microbiology* **82**, 5785-5794 (2016).
132. D. Monckton *et al.*, A2 Cryptic polyglutamine repeat sequence variation and somatic instability in huntington's disease: drivers of pathology? *Journal of Neurology, Neurosurgery & Psychiatry* **87**, A1.2-A1 (2016).
133. B. Merlet *et al.*, A Computational Solution to Automatically Map Metabolite Libraries in the Context of Genome Scale Metabolic Networks. *Front Mol Biosci* **3**, 2 (2016).
134. S. Meek *et al.*, Reduced levels of dopamine and altered metabolism in brains of HPRT knock-out rats: a new rodent model of Lesch-Nyhan Disease. *Scientific Reports* **6**, (2016).
135. V. Marasco, P. Herzyk, J. Robinson, K. A. Spencer, Pre- and post-natal stress programming: developmental exposure to glucocorticoids causes long-term brain-region specific changes to transcriptome in the Japanese quail. *Journal of Neuroendocrinology* **28**, (2016).
136. Á. E. Lobo-Rojas *et al.*, *Trypanosoma cruzi* contains two galactokinases; molecular and biochemical characterization. *Parasitology International* **65**, 472-482 (2016).
137. J. S. Grewal *et al.*, PNT1 Is a C11 Cysteine Peptidase Essential for Replication of the Trypanosome Kinetoplast. *J Biol Chem* **291**, 9492-9500 (2016).
138. N. Gomez-Roman, K. Stevenson, L. Gilmour, G. Hamilton, A. Chalmers, A novel 3D human glioblastoma cell culture system for modeling drug and radiation responses. *Neuro-Oncology*, (2016).
139. E. J. Gauson *et al.*, Failure to interact with Brd4 alters the ability of HPV16 E2 to regulate host genome expression and cellular movement. *Virus Research* **211**, 1-8 (2016).
140. M. D. Ballantyne *et al.*, Smooth Muscle Enriched Long Noncoding RNA (SMILR) Regulates Cell Proliferation. *Circulation* **133**, 2050-2065 (2016).
141. Enateri V. Alakpa *et al.*, Tunable Supramolecular Hydrogels for Selection of Lineage-Guiding Metabolites in Stem Cell Cultures. *Chem* **1**, 298-319 (2016).
142. A. Zoccarato *et al.*, Cardiac hypertrophy is inhibited by a local pool of cAMP regulated by phosphodiesterase 2. *Circulation Research* **117**, 707-719 (2015).
143. J. Wandy, R. Daly, R. Breitling, S. Rogers, Incorporating peak grouping information for alignment of multiple liquid chromatography-mass spectrometry datasets. *Bioinformatics* **31**, 1999-2006 (2015).
144. I. M. Vincent, M. P. Barrett, Metabolomic-based strategies for anti-parasite drug discovery. *Journal of biomolecular screening* **20**, 44-55 (2015).
145. J. van der Hooft, L. Ridder, M. P. Barrett, K. V. Burgess, Enhanced acylcarnitine annotation in high-resolution mass spectrometry data: fragmentation analysis for the classification and annotation of acylcarnitines. *Frontiers in Bioengineering and Biotechnology* **3**, 26 (2015).
146. A. Trochine, D. J. Creek, P. Faral-Tello, M. P. Barrett, C. Robello, Bestatin induces specific changes in *Trypanosoma cruzi* dipeptide pool. *Antimicrobial agents and chemotherapy* **59**, 2921-2925 (2015).
147. L. H. Stipetic *et al.*, Draft genome sequence of isolate *Staphylococcus aureus* LHSKBclinical, isolated from an infected hip. *Genome Announcements* **3**, (2015).
148. A. Srivastava *et al.*, Host reticulocytes provide metabolic reservoirs that can be exploited by malaria parasites. *PLoS pathogens* **11**, e1004882 (2015).
149. S. Shameer *et al.*, TrypanoCyc: a community-led biochemical pathways database for *Trypanosoma brucei*. *Nucleic acids research* **43**, D637-644 (2015).

150. H. Recknagel, A. Jacobs, P. Herzyk, K. R. Elmer, Double-digest RAD sequencing using Ion Proton semiconductor platform (ddRADseq-ion) with nonmodel organisms. *Molecular ecology resources* **15**, 1316-1329 (2015).
151. M. Mudaliar *et al.* (2015), pp. 70-70.
152. L. E. McNamara, L. A. Turner, K. V. Burgess, Systems Biology Approaches Applied to Regenerative Medicine. *Current pathobiology reports* **3**, 37-45 (2015).
153. M. Lindner *et al.*, Fibroblast growth factor signalling in multiple sclerosis: inhibition of myelination and induction of pro-inflammatory environment by FGF9. *Brain : a journal of neurology* **138**, 1875-1893 (2015).
154. D.-H. Kim, F. Achcar, R. Breitling, K. E. Burgess, M. P. Barrett, LC-MS-based absolute metabolite quantification: application to metabolic flux measurement in trypanosomes. *Metabolomics* **11**, 1721-1732 (2015).
155. H. Hajjaran *et al.*, Comparative proteomic profiling of *Leishmania tropica*: investigation of a case infected with simultaneous cutaneous and viscerotropic leishmaniasis by 2-dimensional electrophoresis and mass spectrometry. *Iranian Journal of Parasitology* **10**, 366-380 (2015).
156. Y. Hai, E. J. Kerkhoven, M. P. Barrett, D. W. Christianson, Crystal structure of an arginase-like protein from *Trypanosoma brucei* that evolved without a binuclear manganese cluster. *Biochemistry* **54**, 458-471 (2015).
157. J. Haggarty *et al.*, Serially coupling hydrophobic interaction and reversed-phase chromatography with simultaneous gradients provides greater coverage of the metabolome. *Metabolomics*, (2015).
158. K. Griffiths *et al.*, Prolonged transition time between colostrum and mature milk in a bear, the giant panda, *Ailuropoda melanoleuca*. *Royal Society Open Science* **2**, (2015).
159. C. D. Fyfe *et al.*, Structure of protease-cleaved *Escherichia coli* α -2-macroglobulin reveals a putative mechanism of conformational activation for protease entrapment. *Acta Crystallographica. Section D: Biological Crystallography* **71**, 1478-1486 (2015).
160. J. P. de Macedo *et al.*, An Atypical Mitochondrial Carrier That Mediates Drug Action in *Trypanosoma brucei*. *PLoS pathogens* **11**, e1004875 (2015).
161. E. Daskalaki *et al.*, A study of the effects of exercise on the urinary metabolome using normalisation to individual metabolic output. *Metabolites* **5**, 119-139 (2015).
162. D. J. Creek *et al.*, Probing the metabolic network in bloodstream-form *Trypanosoma brucei* using untargeted metabolomics with stable isotope labelled glucose. *PLoS Pathogens* **11**, (2015).
163. J. P. Connolly *et al.*, The host metabolite D-serine contributes to bacterial niche specificity through gene selection. *The ISME journal* **9**, 1039-1051 (2015).
164. J. A. Coles *et al.*, Intravital imaging of a massive lymphocyte response in the cortical dura of mice after peripheral infection by trypanosomes. *PLoS neglected tropical diseases* **9**, e0003714 (2015).
165. D. S. Chong *et al.*, Nanotopography and plasma treatment: redesigning the surface for vascular graft endothelialisation. *Eur J Vasc Endovasc Surg* **49**, 335-343 (2015).
166. K. Brunker *et al.*, Elucidating the phylodynamics of endemic rabies virus in eastern Africa using whole-genome sequencing. *Virus Evol* **1**, vev011 (2015).
167. N. Baker *et al.*, Vacuolar ATPase depletion affects mitochondrial ATPase function, kinetoplast dependency, and drug sensitivity in trypanosomes. *Proceedings of the National Academy of Sciences of the United States of America* **112**, 9112-9117 (2015).
168. A. A. Alkhalidi *et al.*, Potent trypanocidal curcumin analogs bearing a monoenone linker motif act on *trypanosoma brucei* by forming an adduct with trypanothione. *Molecular pharmacology* **87**, 451-464 (2015).
169. J. Yang *et al.*, Nanotopographical induction of osteogenesis through adhesion, bone morphogenic protein co-signaling and regulation of microRNAs. *ACS Nano* **8**, 9941-9953 (2014).
170. I. M. Vincent *et al.*, Untargeted metabolomic analysis of miltefosine action in *Leishmania infantum* reveals changes to the internal lipid metabolism. *International journal for parasitology. Drugs and drug resistance* **4**, 20-27 (2014).
171. P. Tsimbouri *et al.*, Nanotopographical effects on mesenchymal stem cell morphology and phenotype. *Journal of cellular biochemistry* **115**, 380-390 (2014).
172. A. Trochine, D. J. Creek, P. Faral-Tello, M. P. Barrett, C. Robello, Benzimidazole biotransformation and multiple targets in *Trypanosoma cruzi* revealed by metabolomics. *PLoS neglected tropical diseases* **8**, e2844 (2014).
173. I. W. Sutherland *et al.*, Chlorination reactions relevant to the manufacture of trichloroethene and tetrachloroethene; Part 2: Effects of chlorine supply. *Applied Catalysis A: General* **471**, 149-156 (2014).
174. J. Storm *et al.*, Phosphoenolpyruvate carboxylase identified as a key enzyme in erythrocytic *Plasmodium falciparum* carbon metabolism. *PLoS Pathogens* **10**, (2014).

175. C. M. Speakman *et al.*, Elevated O-GlcNAc levels activate epigenetically repressed genes and delay mouse ES cell differentiation without affecting naïve to primed cell transition. *Stem Cells* **32**, 2605-2615 (2014).
176. I. N. F. Shafie *et al.*, The chaperone protein clusterin may serve as a cerebrospinal fluid biomarker for chronic spinal cord disorders in the dog. *Cell Stress and Chaperones* **19**, 311-320 (2014).
177. J. Seras-Franzoso *et al.*, Topographically targeted osteogenesis of mesenchymal stem cells stimulated by inclusion bodies attached to polycaprolactone surfaces. *Nanomedicine* **9**, 207-220 (2014).
178. N. J. Rankin *et al.*, The emergence of proton nuclear magnetic resonance metabolomics in the cardiovascular arena as viewed from a clinical perspective. *Atherosclerosis* **237**, 287-300 (2014).
179. R. D. Oppenheim *et al.*, BCKDH: the missing link in apicomplexan mitochondrial metabolism is required for full virulence of *Toxoplasma gondii* and *Plasmodium berghei*. *PLoS pathogens* **10**, e1004263 (2014).
180. P. J. O'Shaughnessy, A. Monteiro, P. A. Fowler, I. D. Morris, Identification of Leydig cell-specific mRNA transcripts in the adult rat testis. *Reproduction* **147**, 671-682 (2014).
181. J. C. Munday *et al.*, Trypanosoma brucei aquaglyceroporin 2 is a high-affinity transporter for pentamidine and melaminophenyl arsenic drugs and the main genetic determinant of resistance to these drugs. *The Journal of antimicrobial chemotherapy* **69**, 651-663 (2014).
182. J. Kuleš *et al.*, Identification of serum biomarkers in dogs naturally infected with *Babesia canis canis* using a proteomic approach. *BMC Veterinary Research* **10**, 111 (2014).
183. C. Kremer *et al.*, Shape-dependent optoelectronic cell lysis. *Angewandte Chemie* **53**, 842-846 (2014).
184. A. I. Khalaf *et al.*, Structure-based design and synthesis of antiparasitic pyrrolopyrimidines targeting pteridine reductase 1. *Journal of medicinal chemistry* **57**, 6479-6494 (2014).
185. C. A. Huser *et al.*, Insertional mutagenesis and deep profiling reveals gene hierarchies and a Myc/p53-dependent bottleneck in lymphomagenesis. *PLoS genetics* **10**, e1004167 (2014).
186. N. G. Hamilton *et al.*, The application of inelastic neutron scattering to investigate CO hydrogenation over an iron Fischer-Tropsch synthesis catalyst. *Journal of Catalysis* **312**, 221-231 (2014).
187. G. Hamilton *et al.*, AKT regulates NPM dependent ARF localization and p53mut stability in tumors. *Oncotarget* **5**, 6142-6167 (2014).
188. F. Giordani *et al.*, Green fluorescent diamidines as diagnostic probes for trypanosomes. *Antimicrobial agents and chemotherapy* **58**, 1793-1796 (2014).
189. F. Giordani *et al.*, Characterization of a melamino nitroheterocycle as a potential lead for the treatment of human african trypanosomiasis. *Antimicrobial agents and chemotherapy* **58**, 5747-5757 (2014).
190. E. J. Gauson *et al.*, Regulation of human genome expression and RNA splicing by human papillomavirus 16 E2 protein. *Virology* **468-70**, 10-18 (2014).
191. S. Evans, K. E. V. Burgess, J. V. Gray, Recovery from Rapamycin: drug-insensitive activity of yeast target of rapamycin complex 1 (torc1) supports residual proliferation that dilutes rapamycin among progeny cells. *Journal of Biological Chemistry* **289**, 26554-26565 (2014).
192. H. Daneshvar *et al.*, Gentamicin-attenuated leishmania infantum vaccine: protection of dogs against canine visceral leishmaniasis in endemic area of southeast of Iran. *PLoS Neglected Tropical Diseases* **8**, e2757 (2014).
193. H. Daneshvar, Z. Mahmmodi, H. Kamiabi, R. S. Phillips, R. Burchmore, Dogs vaccinated with gentamicin-attenuated Leishmania infantum or infected with wild-type parasite can be distinguished by Western blotting. *Parasite Immunology* **36**, 218-224 (2014).
194. R. Daly *et al.*, MetAssign: probabilistic annotation of metabolites from LC-MS data using a Bayesian clustering approach. *Bioinformatics* **30**, 2764-2771 (2014).
195. D. J. Creek, M. P. Barrett, Determination of antiprotozoal drug mechanisms by metabolomics approaches. *Parasitology* **141**, 83-92 (2014).
196. A. Chokkathukalam, D. H. Kim, M. P. Barrett, R. Breitling, D. J. Creek, Stable isotope-labeling studies in metabolomics: new insights into structure and dynamics of metabolic networks. *Bioanalysis* **6**, 511-524 (2014).
197. F. Cecilian, D. Eckersall, R. Burchmore, C. Lecchi, Proteomics in veterinary medicine: applications and trends in disease pathogenesis and diagnostics. *Vet Pathol* **51**, 351-362 (2014).
198. K. Burgess, N. Rankin, S. Weidt, in *Handbook of Pharmacogenomics and Stratified Medicine*, S. Padmanabhan, Ed. (Academic Press, London, 2014), pp. 181-205.
199. R. Burchmore, Mapping pathways to drug resistance with proteomics. *Expert Rev Proteomics* **11**, 1-3 (2014).
200. Y. Bourquin *et al.*, Rare-cell enrichment by a rapid, label-free, ultrasonic isopycnic technique for medical diagnostics. *Angewandte Chemie* **53**, 5587-5590 (2014).



201. K. S. Beckham *et al.*, The metabolic enzyme AdhE controls the virulence of Escherichia coli O157:H7. *Mol Microbiol* **93**, 199-211 (2014).
202. M. P. Barrett, S. L. Croft, Emerging paradigms in anti-infective drug design. *Parasitology* **141**, 1-7 (2014).
203. A. Atrih *et al.*, Quantitative proteomics in resected renal cancer tissue for biomarker discovery and profiling. *Br J Cancer* **110**, 1622-1633 (2014).
204. E. Alakpa, K. Burgess, M. Dalby, M. Cusack, paper presented at the European Society for Biomaterials (ESB 2014), Liverpool, UK, 2014.
205. F. Achcar, E. J. Kerkhoven, M. P. Barrett, Trypanosoma brucei: meet the system. *Current opinion in microbiology* **20**, 162-169 (2014).
206. F. Achcar *et al.*, The silicon trypanosome: a test case of iterative model extension in systems biology. *Advances in microbial physiology* **64**, 115-143 (2014).
207. J. Wijek *et al.*, Genomic analysis of the role of transcription factor C/EBPdelta in the regulation of cell behaviour on nanometric grooves. *Biomaterials* **34**, 1967-1979 (2013).
208. F. P. Tso, G. Hamilton, R. Weber, C. S. Perkins, D. P. Pezaros. (2013), pp. 430-439.
209. F. P. Tso, G. Hamilton, K. Oikonomou, D. Pezaros. (2013), pp. 557-564.
210. P. M. Tsimbouri *et al.*, A genomics approach in determining nanotopographical effects on MSC phenotype. *Biomaterials* **34**, 2177-2184 (2013).
211. E. Sani, P. Herzyk, G. Perrella, V. Colot, A. Amtmann, Hyperosmotic priming of Arabidopsis seedlings establishes a long-term somatic memory accompanied by specific changes of the epigenome. *Genome biology* **14**, R59 (2013).
212. A. Rupp *et al.*, Anti-GM2 ganglioside antibodies are a biomarker for acute canine polyradiculoneuritis. *J Peripher Nerv Syst* **18**, 75-88 (2013).
213. P. Roncada, L. H. Stipetic, L. Bonizzi, R. J. Burchmore, M. W. Kennedy, Proteomics as a tool to explore human milk in health and disease. *J Proteomics* **88**, 47-57 (2013).
214. S. W. Robinson, P. Herzyk, J. A. Dow, D. P. Leader, FlyAtlas: database of gene expression in the tissues of Drosophila melanogaster. *Nucleic acids research* **41**, D744-750 (2013).
215. E. L. O'Reilly, R. J. Burchmore, P. D. Eckersall, N. H. C. Sparks, Abstracts 2013. *British Poultry Abstracts* **9**, 1-49 (2013).
216. E. Myburgh *et al.*, In vivo imaging of trypanosome-brain interactions and development of a rapid screening test for drugs against CNS stage trypanosomiasis. *PLoS neglected tropical diseases* **7**, e2384 (2013).
217. J. C. Munday *et al.*, Functional expression of TcoAT1 reveals it to be a P1-type nucleoside transporter with no capacity for diminazene uptake. *International journal for parasitology. Drugs and drug resistance* **3**, 69-76 (2013).
218. M. A. Mudaliar *et al.*, Comparative gene expression profiling identifies common molecular signatures of NF-kappaB activation in canine and human diffuse large B cell lymphoma (DLBCL). *PloS one* **8**, e72591 (2013).
219. N. Morrice, R. Burchmore, Editorial. *Journal of Proteomics* **88**, 1-3 (2013).
220. S. Monnerat *et al.*, Identification and Functional Characterisation of CRK12:CYC9, a Novel Cyclin-Dependent Kinase (CDK)-Cyclin Complex in Trypanosoma brucei. *PloS one* **8**, e67327 (2013).
221. Y. Millerieux *et al.*, The threonine degradation pathway of the Trypanosoma brucei procyclic form: the main carbon source for lipid biosynthesis is under metabolic control. *Mol Microbiol* **90**, 114-129 (2013).
222. V. Marasco, K. A. Spencer, J. Robinson, P. Herzyk, D. Costantini, Developmental post-natal stress can alter the effects of pre-natal stress on the adult redox balance. *General and comparative endocrinology* **191**, 239-246 (2013).
223. K. F. MacKenzie *et al.*, PGE(2) induces macrophage IL-10 production and a regulatory-like phenotype via a protein kinase A-SIK-CRTC3 pathway. *J Immunol* **190**, 565-577 (2013).
224. C. Lipina *et al.*, Mitochondrial substrate availability and its role in lipid-induced insulin resistance and proinflammatory signaling in skeletal muscle. *Diabetes* **62**, 3426-3436 (2013).
225. J. Limenitakis *et al.*, The 2-methylcitrate cycle is implicated in the detoxification of propionate in Toxoplasma gondii. *Mol Microbiol* **87**, 894-908 (2013).
226. D. H. Kim, M. P. Barrett, Metabolite-dependent regulation of gene expression in Trypanosoma brucei. *Mol Microbiol* **88**, 841-845 (2013).
227. E. J. Kerkhoven *et al.*, Handling uncertainty in dynamic models: the pentose phosphate pathway in Trypanosoma brucei. *PLoS computational biology* **9**, e1003371 (2013).
228. T. Hupp *et al.* (2013).

229. N. G. Hamilton *et al.*, Vibrational analysis of an industrial Fe-based Fischer-Tropsch catalyst employing inelastic neutron scattering. *Angewandte Chemie* **52**, 5608-5611 (2013).
230. S. Forbes *et al.*, A history of previous gestational diabetes mellitus is associated with adverse changes in insulin secretion and VLDL metabolism independently of increased intrahepatocellular lipid. *Diabetologia* **56**, 2021-2033 (2013).
231. X. Feng *et al.*, 'Transient' genetic suppression facilitates generation of hexose transporter null mutants in *Leishmania mexicana*. *Mol Microbiol* **87**, 412-429 (2013).
232. G. De Muylder *et al.*, A *Trypanosoma brucei* kinesin heavy chain promotes parasite growth by triggering host arginase activity. *PLoS pathogens* **9**, e1003731 (2013).
233. D. J. Creek, I. M. Vincent, M. P. Barrett, in *Trypanosomatid Diseases*. (2013), pp. 37-56.
234. D. J. Creek *et al.*, Metabolomics guides rational development of a simplified cell culture medium for drug screening against *Trypanosoma brucei*. *Antimicrobial agents and chemotherapy* **57**, 2768-2779 (2013).
235. A. Chokkathukalam *et al.*, mzMatch-ISO: an R tool for the annotation and relative quantification of isotope-labelled mass spectrometry data. *Bioinformatics* **29**, 281-283 (2013).
236. V. R. Chintapalli, J. Wang, P. Herzyk, S. A. Davies, J. A. Dow, Data-mining the FlyAtlas online resource to identify core functional motifs across transporting epithelia. *BMC Genomics* **14**, 518 (2013).
237. M. Braceland *et al.*, The serum proteome of Atlantic salmon, *Salmo salar*, during pancreas disease (PD) following infection with salmonid alphavirus subtype 3 (SAV3). *J Proteomics* **94**, 423-436 (2013).
238. M. P. Barrett, C. G. Gemmell, C. J. Suckling, Minor groove binders as anti-infective agents. *Pharmacology & therapeutics* **139**, 12-23 (2013).
239. M. M. Bain *et al.*, Enhancing the egg's natural defence against bacterial penetration by increasing cuticle deposition. *Anim Genet* **44**, 661-668 (2013).
240. M. J. Atherton *et al.*, Characterisation of the normal canine serum proteome using a novel electrophoretic technique combined with mass spectrometry. *Vet J* **196**, 315-319 (2013).
241. M. J. Atherton *et al.*, Changes in the serum proteome of canine lymphoma identified by electrophoresis and mass spectrometry. *Vet J* **196**, 320-324 (2013).
242. J. A. Ali *et al.*, Pyrimidine salvage in *Trypanosoma brucei* bloodstream forms and the trypanocidal action of halogenated pyrimidines. *Molecular pharmacology* **83**, 439-453 (2013).
243. E. Alakpa, V. Jayawarna, K. Burgess, R. Ulijn, M. Dalby, paper presented at the European Materials Research Society (E-MRS), Strasbourg, France, 2013.
244. F. Achcar, M. P. Barrett, R. Breitling, Explicit consideration of topological and parameter uncertainty gives new insights into a well-established model of glycolysis. *The FEBS journal* **280**, 4640-4651 (2013).
245. T. Zhang, D. J. Creek, M. P. Barrett, G. Blackburn, D. G. Watson, Evaluation of coupling reversed phase, aqueous normal phase, and hydrophilic interaction liquid chromatography with Orbitrap mass spectrometry for metabolomic studies of human urine. *Analytical chemistry* **84**, 1994-2001 (2012).
246. I. M. Vincent *et al.*, Untargeted metabolomics reveals a lack of synergy between nifurtimox and eflornithine against *Trypanosoma brucei*. *PLoS neglected tropical diseases* **6**, e1618 (2012).
247. S. J. van Beurden *et al.*, Anguillid herpesvirus 1 transcriptome. *J Virol* **86**, 10150-10161 (2012).
248. P. M. Tsimbouri *et al.*, Using nanotopography and metabolomics to identify biochemical effectors of multipotency. *ACS Nano* **6**, 10239-10249 (2012).
249. C. Tiengwe *et al.*, Identification of ORC1/CDC6-interacting factors in *Trypanosoma brucei* reveals critical features of origin recognition complex architecture. *PloS one* **7**, e32674 (2012).
250. E. k. T, R. Burchmore, P. Herzyk, R. Davies, Predicting the outer membrane proteome of *Pasteurella multocida* based on consensus prediction enhanced by results integration and manual confirmation. *BMC bioinformatics* **13**, 63 (2012).
251. S. Sanna-Cherchi *et al.*, Copy-number disorders are a common cause of congenital kidney malformations. *Am J Hum Genet* **91**, 987-997 (2012).
252. S. Rogers, R. Daly, R. Breitling. (2012).
253. D. Podar *et al.*, Metal selectivity determinants in a family of transition metal transporters. *J Biol Chem* **287**, 3185-3196 (2012).
254. S. F. Parker *et al.*, Characterization of C5 hydrocarbons relevant to catalysis. *J Phys Chem A* **116**, 333-346 (2012).
255. A. Menachery *et al.*, Counterflow dielectrophoresis for trypanosome enrichment and detection in blood. *Scientific reports* **2**, 775 (2012).

256. L. E. McNamara *et al.*, The role of microtopography in cellular mechanotransduction. *Biomaterials* **33**, 2835-2847 (2012).
257. V. Marasco, J. Robinson, P. Herzyk, K. A. Spencer, Pre- and post-natal stress in context: effects on the stress physiology in a precocial bird. *J Exp Biol* **215**, 3955-3964 (2012).
258. K. A. Lockman *et al.*, Oxidative stress rather than triglyceride accumulation is a determinant of mitochondrial dysfunction in in vitro models of hepatic cellular steatosis. *Liver international : official journal of the International Association for the Study of the Liver* **32**, 1079-1092 (2012).
259. C. M. Lee *et al.*, Simultaneous non-negative matrix factorization for multiple large scale gene expression datasets in toxicology. *PLoS one* **7**, e48238 (2012).
260. T. Kuboki, F. Kantawong, R. Burchmore, M. J. Dalby, S. Kidoaki, 2D-DIGE proteomic analysis of mesenchymal stem cell cultured on the elasticity-tunable hydrogels. *Cell Struct Funct* **37**, 127-139 (2012).
261. A. B. James *et al.*, Alternative splicing mediates responses of the Arabidopsis circadian clock to temperature changes. *Plant Cell* **24**, 961-981 (2012).
262. G. Hamilton, D. Pezaros. (2012).
263. G. Hamilton *et al.*, Alzheimer's disease risk factor complement receptor 1 is associated with depression. *Neurosci Lett* **510**, 6-9 (2012).
264. M. L. Ginger, P. G. McKean, R. Burchmore, K. M. Grant, Proteomic insights into parasite biology. *Parasitology* **139**, 1101-1102 (2012).
265. H. Daneshvar, S. Wyllie, S. Phillips, P. Hagan, R. Burchmore, Comparative proteomics profiling of a gentamicin-attenuated *Leishmania infantum* cell line identifies key changes in parasite thiol-redox metabolism. *J Proteomics* **75**, 1463-1471 (2012).
266. H. Daneshvar *et al.*, Alteration in mononuclear cell subpopulations in dogs immunized with gentamicin-attenuated *Leishmania infantum*. *Parasitology* **139**, 1689-1696 (2012).
267. D. J. Creek, A. Jankevics, K. E. Burgess, R. Breitling, M. P. Barrett, IDEOM: an Excel interface for analysis of LC-MS-based metabolomics data. *Bioinformatics* **28**, 1048-1049 (2012).
268. D. J. Creek *et al.*, Stable isotope-assisted metabolomics for network-wide metabolic pathway elucidation. *Analytical chemistry* **84**, 8442-8447 (2012).
269. R. L. Clark *et al.*, Identification and development of the 1,4-benzodiazepin-2-one and quinazoline-2,4-dione scaffolds as submicromolar inhibitors of HAT. *Bioorganic & medicinal chemistry* **20**, 6019-6033 (2012).
270. V. R. Chintapalli *et al.*, Functional correlates of positional and gender-specific renal asymmetry in *Drosophila*. *PLoS one* **7**, e32577 (2012).
271. K. Burgess, R. Burchmore, Strategies to dissect parasite proteomes. *Parasitology* **139**, 1119-1130 (2012).
272. R. Burchmore, Parasites in the brain? The search for sleeping sickness biomarkers. *Expert Rev Anti Infect Ther* **10**, 1283-1286 (2012).
273. M. P. Barrett, S. L. Croft, Management of trypanosomiasis and leishmaniasis. *British medical bulletin* **104**, 175-196 (2012).
274. E. V. Alakpa, K. Burgess, V. Jayawarna, R. Ulijn, M. Dalby, paper presented at the 3rd TERMIS World Congress, Vienna, Austria, 2012.
275. E. Alakpa, V. Jayawarna, K. Burgess, M. Dalby, Characterisation of peptide biomaterials & innate metabolites that direct stem cell differentiation in vitro. *European Cell and Materials* **23**, 50-50 (2012).
276. D. Wang *et al.*, Identification of bacterial target proteins for the salicylidene acylhydrazide class of virulence-blocking compounds. *J Biol Chem* **286**, 29922-29931 (2011).
277. A. Stangherlin *et al.*, cGMP signals modulate cAMP levels in a compartment-specific manner to regulate catecholamine-dependent signaling in cardiac myocytes. *Circ Res* **108**, 929-939 (2011).
278. S. Rogers, R. A. Scheltema, M. Barrett, R. Breitling, in *Handbook of Statistical Systems Biology*. (2011), pp. 467-476.
279. M. M. Reimer *et al.*, Rapid disruption of axon-glia integrity in response to mild cerebral hypoperfusion. *J Neurosci* **31**, 18185-18194 (2011).
280. L. E. McNamara, F. A. Kantawong, M. J. Dalby, M. O. Riehle, R. Burchmore, Preventing and troubleshooting artefacts in saturation labelled fluorescence 2-D difference gel electrophoresis (saturation DiGE). *Proteomics* **11**, 4610-4621 (2011).
281. R. J. McMurray *et al.*, Nanoscale surfaces for the long-term maintenance of mesenchymal stem cell phenotype and multipotency. *Nature materials* **10**, 637-644 (2011).

282. D. J. Creek *et al.*, Toward global metabolomics analysis with hydrophilic interaction liquid chromatography-mass spectrometry: improved metabolite identification by retention time prediction. *Analytical chemistry* **83**, 8703-8710 (2011).
283. K. Burgess, D. Creek, P. Dewsbury, K. Cook, M. P. Barrett, Semi-targeted analysis of metabolites using capillary-flow ion chromatography coupled to high-resolution mass spectrometry. *Rapid communications in mass spectrometry : RCM* **25**, 3447-3452 (2011).
284. I. M. Vincent *et al.*, A molecular mechanism for eflornithine resistance in African trypanosomes. *PLoS pathogens* **6**, e1001204 (2010).
285. A. Kamleh *et al.*, Metabolomic profiling using Orbitrap Fourier transform mass spectrometry with hydrophilic interaction chromatography: a method with wide applicability to analysis of biomolecules. *Rapid communications in mass spectrometry : RCM* **22**, 1912-1918 (2008).
286. D. J. Bridges *et al.*, Characterisation of the plasma membrane subproteome of bloodstream form *Trypanosoma brucei*. *Proteomics* **8**, 83-99 (2008).