# Oxidative Phosphorylation as a Target Space for Tuberc
Future Directions

Microbiology Spectrum

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| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A fluorescence-based reporter for monitoring expression of mycobacterial cytochrome bd in response to antibacterials and during infection. Scientific Reports, 2017, 7, 10665. | 1.6 | 18 |
| 2 | Anaerobic Mycobacterium tuberculosis Cell Death Stems from Intracellular Acidification Mitigated by the DosR Regulon. Journal of Bacteriology, 2017, 199, . | 1.0 | 14 |
| 3 | Bedaquiline Inhibits the ATP Synthase in Mycobacterium abscessus and Is Effective in Infected Zebrafish. Antimicrobial Agents and Chemotherapy, 2017, 61, . | 1.4 | 79 |
| 4 | Priming the tuberculosis drug pipeline: new antimycobacterial targets and agents. Current Opinion in Microbiology, 2018, 45, 39-46. | 2.3 | 40 |
| 5 | Small Molecules Targeting Mycobacterium tuberculosis Type II NADH Dehydrogenase Exhibit Antimycobacterial Activity. Angewandte Chemie, 2018, 130, 3536-3540. | 1.6 | 6 |
| 6 | Plasticity of <i>Mycobacterium tuberculosis</i> NADH dehydrogenases and their role in virulence. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1599-1604. | 3.3 | 58 |
| 7 | Small Molecules Targeting Mycobacterium tuberculosis Type II NADH Dehydrogenase Exhibit Antimycobacterial Activity. Angewandte Chemie - International Edition, 2018, 57, 3478-3482. | 7.2 | 42 |
| 8 | The Expanding Diversity of <i>Mycobacterium tuberculosis</i> Drug Targets. ACS Infectious Diseases, 2018, 4, 696-714. | 1.8 | 60 |
| 9 | The anti-mycobacterial activity of the cytochrome bcc inhibitor Q203 can be enhanced by small-molecule inhibition of cytochrome bd. Scientific Reports, 2018, 8, 2625. | 1.6 | 56 |
| 10 | Mycobacterial Membrane Proteins QcrB and AtpE: Roles in Energetics, Antibiotic Targets, and Associated Mechanisms of Resistance. Journal of Membrane Biology, 2018, 251, 105-117. | 1.0 | 13 |
| 11 | Combinations of Respiratory Chain Inhibitors Have Enhanced Bactericidal Activity against Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2018, 62, . | 1.4 | 31 |
| 12 | Antibiotic Lethality and Membrane Bioenergetics. Advances in Microbial Physiology, 2018, 73, 77-122. | 1.0 | 9 |
| 13 | Impact of Clofazimine Dosing on Treatment Shortening of the First-Line Regimen in a Mouse Model of Tuberculosis. Antimicrobial Agents and Chemotherapy, 2018, 62, . | 1.4 | 37 |
| 14 | <i>Mycobacterium tuberculosis</i> Metabolism. Microbiology Spectrum, 2019, 7, . | 1.2 | 19 |
| 15 | Anaerobic nitrate respiration in the aerobe <i>Streptomyces coelicolor</i> A3(2): helping maintain a proton gradient during dormancy. Environmental Microbiology Reports, 2019, 11, 645-650. | 1.0 | 9 |
| 16 | Naturally-Occurring Polymorphisms in QcrB Are Responsible for Resistance to Telacebec in <i>Mycobacterium abscessus</i>. ACS Infectious Diseases, 2019, 5, 2055-2060. | 1.8 | 9 |
| 17 | Carbon metabolism modulates the efficacy of drugs targeting the cytochrome bc1:aa3 in Mycobacterium tuberculosis. Scientific Reports, 2019, 9, 8608. | 1.6 | 26 |
| 18 | Inhibitors of enzymes in the electron transport chain of Mycobacterium tuberculosis. Annual Reports in Medicinal Chemistry, 2019, 52, 97-130. | 0.5 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Uncovering the Metabolic Strategies of the Dormant Microbial Majority: towards Integrative Approaches. MSystems, 2019, 4, . | 1.7 | 19 |
| 20 | Mycobacterium tuberculosis Rv0191 is an efflux pump of major facilitator superfamily transporter regulated by Rv1353c. Archives of Biochemistry and Biophysics, 2019, 667, 59-66. | 1.4 | 8 |
| 21 | Novel MenA Inhibitors Are Bactericidal against <i>Mycobacterium tuberculosis</i> and Synergize with Electron Transport Chain Inhibitors. Antimicrobial Agents and Chemotherapy, 2019, 63, . | 1.4 | 29 |
| 22 | Novel Antimycobacterial Compounds Suppress NAD Biogenesis by Targeting a Unique Pocket of NaMN Adenylyltransferase. ACS Chemical Biology, 2019, 14, 949-958. | 1.6 | 15 |
| 23 | 2-aminoimidazoles collapse mycobacterial proton motive force and block the electron transport chain. Scientific Reports, 2019, 9, 1513. | 1.6 | 23 |
| 24 | Mycobacterium tuberculosisMetabolism. , 2019, , 1107-1128. |  | 0 |
| 25 | Pyrazolo[1,5-<i>a</i>]pyridine Inhibitor of the Respiratory Cytochrome <i>bcc</i> Complex for the Treatment of Drug-Resistant Tuberculosis. ACS Infectious Diseases, 2019, 5, 239-249. | 1.8 | 74 |
| 26 | Intracellular and in vivo evaluation of imidazo[2,1-b]thiazole-5-carboxamide anti-tuberculosis compounds. PLoS ONE, 2020, 15, e0227224. | 1.1 | 26 |
| 27 | Decoding the similarities and specific differences between latent and active tuberculosis infections based on consistently differential expression networks. Briefings in Bioinformatics, 2020, 21, 2084-2098. | 3.2 | 2 |
| 28 | Emerging opportunities of exploiting mycobacterial electron transport chain pathway for drug-resistant tuberculosis drug discovery. Expert Opinion on Drug Discovery, 2020, 15, 231-241. | 2.5 | 14 |
| 29 | Potential therapeutic approaches for a sleeping pathogen: tuberculosis a case for bioinorganic chemistry. Journal of Biological Inorganic Chemistry, 2020, 25, 685-704. | 1.1 | 6 |
| 30 | Nitric Oxide Does Not Inhibit but Is Metabolized by the Cytochrome bcc-aa3 Supercomplex. International Journal of Molecular Sciences, 2020, 21, 8521. | 1.8 | 9 |
| 31 | <i>Mycobacterium tuberculosis</i> Survival in J774A.1 Cells Is Dependent on MenJ Moonlighting Activity, Not Its Enzymatic Activity. ACS Infectious Diseases, 2020, 6, 2661-2671. | 1.8 | 6 |
| 32 | SAR Analysis of Small Molecules Interfering with Energy-Metabolism in Mycobacterium tuberculosis. Pharmaceuticals, 2020, 13, 227. | 1.7 | 12 |
| 33 | Transcriptional Inhibition of the F <sub>1</sub> F <sub>0</sub> -Type ATP Synthase Has Bactericidal Consequences on the Viability of Mycobacteria. Antimicrobial Agents and Chemotherapy, 2020, 64, . | 1.4 | 17 |
| 34 | Features and Functional Importance of Key Residues of the <i>Mycobacterium tuberculosis</i> Cytochrome <i>bd</i> Oxidase. ACS Infectious Diseases, 2020, 6, 1697-1707. | 1.8 | 11 |
| 35 | Molecular Hydrogen Metabolism: a Widespread Trait of Pathogenic Bacteria and Protists. Microbiology and Molecular Biology Reviews, 2020, 84, . | 2.9 | 70 |
| 36 | Targeting the cytochrome oxidases for drug development in mycobacteria. Progress in Biophysics and Molecular Biology, 2020, 152, 45-54. | 1.4 | 29 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Discovery of a Novel Mycobacterial Fâ€ATP Synthase Inhibitor and its Potency in Combination with Diarylquinolines. Angewandte Chemie, 2020, 132, 13397-13406. | 1.6 | 4 |
| 38 | Oxidative Phosphorylationâ€"an Update on a New, Essential Target Space for Drug Discovery in Mycobacterium tuberculosis. Applied Sciences (Switzerland), 2020, 10, 2339. | 1.3 | 29 |
| 39 | Discovery of a Novel Mycobacterial Fâ€ATP Synthase Inhibitor and its Potency in Combination with Diarylquinolines. Angewandte Chemie - International Edition, 2020, 59, 13295-13304. | 7.2 | 28 |
| 40 | A systematic assessment of mycobacterial F<sub>1</sub>â€ATPase subunit Îµâ€™s role in latent ATPase hydrolysis. FEBS Journal, 2021, 288, 818-836. | 2.2 | 11 |
| 41 | Bacterial Oxidases of the Cytochrome<i>bd</i>Family: Redox Enzymes of Unique Structure, Function, and Utility As Drug Targets. Antioxidants and Redox Signaling, 2021, 34, 1280-1318. | 2.5 | 45 |
| 42 | A protet-based, protonic charge transfer model of energy coupling in oxidative and photosynthetic phosphorylation. Advances in Microbial Physiology, 2021, 78, 1-177. | 1.0 | 11 |
| 43 | Metabolic Versatility of Mycobacterium tuberculosis during Infection and Dormancy. Metabolites, 2021, 11, 88. | 1.3 | 26 |
| 44 | Understanding Metabolic Regulation Between Host and Pathogens: New Opportunities for the Development of Improved Therapeutic Strategies Against Mycobacterium tuberculosis Infection. Frontiers in Cellular and Infection Microbiology, 2021, 11, 635335. | 1.8 | 17 |
| 45 | ROS Defense Systems and Terminal Oxidases in Bacteria. Antioxidants, 2021, 10, 839. | 2.2 | 59 |
| 48 | Hydrostatic pressure boost rate and mode to enhance sterilization mediated by GroEL-interacting proteins. Food Control, 2021, 126, 108091. | 2.8 | 1 |
| 49 | Structure of mycobacterial CIII2CIV2 respiratory supercomplex bound to the tuberculosis drug candidate telacebec (Q203). ELife, 2021, 10, . | 2.8 | 19 |
| 51 | Opportunities for overcoming tuberculosis: Emerging targets and their inhibitors. Drug Discovery Today, 2021, 27, 326-326. | 3.2 | 13 |
| 52 | Study of the bioenergetics to identify the novel pathways as a drug target against Mycobacterium tuberculosis using Petri net. BioSystems, 2021, 209, 104509. | 0.9 | 7 |
| 53 | Bioenergetic Inhibitors: Antibiotic Efficacy and Mechanisms of Action in Mycobacterium tuberculosis. Frontiers in Cellular and Infection Microbiology, 2020, 10, 611683. | 1.8 | 21 |
| 54 | QcrB in <i>Mycobacterium tuberculosis</i>: The new drug target of antitubercular agents. Medicinal Research Reviews, 2021, 41, 2565-2581. | 5.0 | 16 |
| 55 | Dual inhibition of the terminal oxidases eradicates antibioticâ€tolerant <i>Mycobacterium tuberculosis</i>. EMBO Molecular Medicine, 2021, 13, e13207. | 3.3 | 47 |
| 56 | Terminal Respiratory Oxidases: A Targetables Vulnerability of Mycobacterial Bioenergetics?. Frontiers in Cellular and Infection Microbiology, 2020, 10, 589318. | 1.8 | 14 |
| 57 | Cytochrome bc1-aa3 oxidase supercomplex as emerging and potential drug target against tuberculosis. Current Molecular Pharmacology, 2021, 14, . | 0.7 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 58 | Proton Pumping and Non-Pumping Terminal Respiratory Oxidases: Active Sites Intermediates of These Molecular Machines and Their Derivatives. International Journal of Molecular Sciences, 2021, 22, 10852. | 1.8 | 15 |
| 59 | Determination of Bioenergetic Parameters in Mycobacterium ulcerans. Methods in Molecular Biology, 2022, 2387, 219-230. | 0.4 | 0 |
| 60 | Impact of Hydrogen Sulfide on Mitochondrial and Bacterial Bioenergetics. International Journal of Molecular Sciences, 2021, 22, 12688. | 1.8 | 23 |
| 61 | Structure of Mycobacterium tuberculosis cytochrome bcc in complex with Q203 and TB47, two anti-TB drug candidates. ELife, 2021, 10, . | 2.8 | 22 |
| 62 | Multiplexed transcriptional repression identifies a network of bactericidal interactions between mycobacterial respiratory complexes. IScience, 2022, 25, 103573. | 1.9 | 10 |
| 63 | Screening Technologies. RSC Drug Discovery Series, 2022, , 101-128. | 0.2 | 0 |
| 64 | Recent advancement in drug development of nitro(<scp>NO<sub>2</sub></scp>)â€heterocyclic compounds as lead scaffolds for the treatment of <i>Mycobacterium tuberculosis</i>. Drug Development Research, 2022, 83, 842-858. | 1.4 | 5 |
| 66 | Recent Advances in Structural Studies of Cytochrome bd and Its Potential Application as a Drug Target. International Journal of Molecular Sciences, 2022, 23, 3166. | 1.8 | 21 |
| 67 | A review on enzyme complexes of electron transport chain from Mycobacterium tuberculosis as promising drug targets. International Journal of Biological Macromolecules, 2022, 212, 474-494. | 3.6 | 8 |
| 68 | Defining the Genes Required for Survival of Mycobacterium bovis in the Bovine Host Offers Novel Insights into the Genetic Basis of Survival of Pathogenic Mycobacteria. MBio, 2022, 13, . | 1.8 | 3 |
| 69 | Uncovering interactions between mycobacterial respiratory complexes to target drug-resistant Mycobacterium tuberculosis. Frontiers in Cellular and Infection Microbiology, 0, 12, . | 1.8 | 3 |
| 70 | Recent developments, challenges and future prospects in advanced drug delivery systems in the management of tuberculosis. Journal of Drug Delivery Science and Technology, 2022, 75, 103690. | 1.4 | 6 |
| 71 | Tocopherol-assisted magnetic Ag-Fe3O4-TiO2 nanocomposite for photocatalytic bacterial-inactivation with elucidation of mechanism and its hazardous level assessment with zebrafish model. Journal of Hazardous Materials, 2023, 442, 130044. | 6.5 | 12 |
| 72 | Response of Mycobacterium smegmatis to the Cytochrome bcc Inhibitor Q203. International Journal of Molecular Sciences, 2022, 23, 10331. | 1.8 | 2 |
| 73 | Synthesis and Biological Evaluation of Aurachin D Analogues as Inhibitors of <i>Mycobacterium tuberculosis</i> Cytochrome <i>bd</i> Oxidase. ACS Medicinal Chemistry Letters, 2022, 13, 1663-1669. | 1.3 | 6 |
| 74 | Redox Cycling Dioxonaphthoimidazoliums Disrupt Iron Homeostasis in Mycobacterium bovis Bacillus Calmette-GuÃ©rin. Microbiology Spectrum, 2022, 10, . | 1.2 | 1 |
| 75 | â€œIdentification of alkaloid compounds as potent inhibitors of Mycobacterium tuberculosis NadD using computational strategiesâ€. Computers in Biology and Medicine, 2023, 158, 106863. | 3.9 | 2 |
| 76 | Quantitative analysis of the bioenergetics of Mycobacterium tuberculosis along with Glyoxylate cycle as a drug target under inhibition of enzymes using Petri net. Computational Biology and Chemistry, 2023, 104, 107828. | 1.1 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 77 | Energy Pathways in Mycobacterium Tuberculosis. Integrated Science, 2023, , 541-569. | 0.1 | 0 |
| 78 | Multiomics Integration of Tuberculosis Pathogenesis. Integrated Science, 2023, , 937-967. | 0.1 | 0 |
| 89 | Cytochrome <i>bd</i> oxidase: an emerging anti-tubercular drug target. RSC Medicinal Chemistry, 2024, 15, 769-787. | 1.7 | 1 |