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## 所属 Affiliation

岐阜大学大学院連合創薬医療情報研究科・教授

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| 専門<br>Research Area    | 嫌気性菌学 臨床細菌学<br>Anaerobic Bacteriology and Clinical Microbiology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 研究課題<br>代表的な研究         | <p>① <b>偏性嫌気性菌の抗菌薬感受性に関する研究</b></p> <p>ヒトや動物の常在細菌叢に占める偏性嫌気性菌の割合は極めて大きく、頭頸部感染症、歯科感染症、呼吸器感染症、腹腔内感染症、皮膚軟部組織感染症などおおくの内因性感染症から分離される。これら感染症材料から分離される嫌気性菌の抗菌薬感受性については医療現場での測定が困難なことも多く、経験的治療の指標となる情報が限られている。効果的な抗菌化学療法を行うにはこれらの情報は不可欠であり、感染症からよく分離される偏性嫌気性菌と、頻度は低く極めて情報が乏しいながら重症感染症から分離される偏性嫌気性菌の薬剤感受性を検討しその傾向を解析する。</p> <p>② <b>偏性嫌気性菌の病原的意義に関する研究</b></p> <p>偏性嫌気性菌は培養が困難なものも少なくなく、ヒトや動物の感染症における病巣の菌叢や常在細菌叢についても未知の部分がある。これらの菌叢についての疫学的検討を行い病原性嫌気性菌の検索を行う。また、従来感染症から分離されることが知られている一部の菌種について、病原因子としての菌体成分の検索を行う。</p> <p>③ <b>偏性嫌気性グラム陰性桿菌の抗菌薬耐性に関する研究</b></p> <p>一部の偏性嫌気性菌は幅広い薬剤耐性をもっている。その機構については一部の菌種で解析されているのみで、その耐性が何に起因するのか明らかになっていないものも多い。治療の障害となると考えられるこれらの薬剤耐性菌について耐性因子の検索を行う。</p>                                                                                                                                                                                                                                                                                                          |
| Main Research Projects | <p>① <b>Antimicrobial susceptibility of obligate anaerobes</b></p> <p>Obligate anaerobes are a major constituent of normal flora in humans and other animals. In addition, they can be recovered from individuals with endogenous infections, such as cervicofacial, dental, respiratory, intra-abdominal, soft tissue infections. Determination of antimicrobial susceptibility of obligate anaerobes is crucial for effective antimicrobial therapy. However, it is often difficult to determine antimicrobial susceptibility of obligate anaerobes recovered from clinical samples in routine hospital diagnostic test, so only limited information is available on empiric therapy. We therefore aim to analyze the antimicrobial susceptibility of frequent anaerobes recovered mainly from clinical specimens as well as from those with severe infections (albeit rarer cases) to obtain characteristic antibiogram.</p> <p>② <b>Pathogenic significance of obligate anaerobes</b></p> |

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|                                 | <p>Culturing obligate anaerobes is often difficult, and flora in infectious disease lesions and normal flora have not been well studied. We therefore aim to find pathogenic anaerobes by epidemiologically analyzing the above flora. Moreover, we are examining known pathogenic anaerobes recovered from patients with infectious disease with the aim of searching for pathogenic factors in bacterial cells.</p> <p>③ <b>Antimicrobial resistance of obligate anaerobic Gram-negative bacilli</b></p> <p>Some anaerobes shows resistance to a wide variety of antimicrobial agents, but its underlying mechanism has been examined in only a limited number of species. High resistance prevents effective therapy, but factors contributing to high resistance remain largely unknown in anaerobes. We aim to identify the factors associated with high antibacterial resistance by examining resistance strains.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>研究業績</b><br/>(過去 5 年)</p> | <ol style="list-style-type: none"> <li>1. Kidoguchi M, Imoto Y, Tanaka K, et al. Middle meatus microbiome in patients with eosinophilic chronic rhinosinusitis in a Japanese population. J Allergy Clin Immunol. 152(6):1669-1676.e3,(2023)(IF:11.4,CS:22.6) 査読あり</li> <li>2. Yokoyama S, Hayasi M, Goto T, Muto Y, Tanaka K. Identification of cfxA gene variants and susceptibility patterns in <math>\beta</math>-lactamase-producing Prevotella strains. Anaerobe. 79:102688,(2023) (IF:2.837, CS:5.6) 査読あり</li> <li>3. Kimura I, Kagawa S, Tsuneki H, Tanaka K, Nagashima F. Multitasking bamboo leaf-derived compounds in prevention of infectious, inflammatory, atherosclerotic, metabolic, and neuropsychiatric diseases. Pharmacology &amp; Therapeutics. 235:108159,(2022) (IF:13.4, CS:22.2) 査読あり</li> <li>4. Vu H, Muto Y, Hayashi M, Noguchi N, Tanaka K, Yamamoto Y. Complete genome sequences of three Phocaeicola vulgatus strains isolated from a healthy Japanese individual. Microbiology Resource Announcements. 11(2):e01124-21, (2022) (IF:0.78, CS:1.5) 査読あり</li> <li>5. Vu H, Hayashi H, Nguyenn TN,Kong DT, Tran HT, Yamamoto Y, Tanaka K. Comprison of phenotypic and genotypic patterns of antimicrobial-resistant Bacteroides fragilis group isolated from healthy individual in Vietnam and Japan. Infection and Drug Resistance, 14:5313-5.23, (2021) (IF:3.9, CS:5.6) 査読あり</li> <li>6. Sano H,Waku A, Hirabuki Y, Kawachi M, Washino J, Abiko Y, Mayanagi G, Yamaki K, Tanaka K, Takahashi N, Sato T. Profiling system of oral microbiota utilizing polymerase chain reaction-restriction fragment length polymorphism analysis. Journal of Oral Biosciences. 63(3):292-297,(2021) (IF:1.65, CS:5.8) 査読あり</li> <li>7. Wakui A, Sano H, Kawachi M, Aida A, Takenaka Y,Yonezawa A, Nakahata N, Moriyama S, Nishikatab M,Washio J, Abiko Y, Mayanagi G,Yamaki K, Sakashita R,Tanaka K, Takahashi N, Sato T. Bacterial concentration and composition in liquid baby formula and a baby drink consumed with an artificial nipple. Journal of Oral Biosciences. 63:161-168,(2021) (IF:1.65, CS:5.8) 査読あり</li> <li>8. Wakui A, Sano H, Hirabuki, Kawachi M, Aida A, Washio J, Abiko Y, Mayanagi G, Yamaki K, Tanaka K, Takahashi and Sato T. Profiling of Microbiota at the Mouth of Bottles and in Remaining Tea after Drinking Directly from Plastic Bottles of Tea. Dentistry journal. 9(6),58, (2021) (IF:4.99, CS:3.7) 査読あり</li> <li>9. Tanaka K, Vu H, Hayashi M. In vitroactivities and spectrum of lascefloxacin (KRP-AM1977) against anaerobes. Journal of Infection and Chemotherapy. 27:1265-1269,(2021) (IF:2.17, CS:4.1) 査読あり</li> <li>10. Tomida J, Akiyama-Miyoshi T, Tanaka K, Hayashi M, Kutsuna R, Fujiwara N, Kawamura Y. Fusobacterium watanabei sp. nov. As additional species within the genus Fusobacterium, isolated from human clinical specimens. Anaerobe. 69:102323, (2021). (IF:2.709, CS:5.2) 査読あり</li> <li>11. Khalifa ME, Elkhawass EA, Ninomiya N, Tanaka K, Koketsu M, Synthesis and In Vitro Evaluation of Anti-Leukemic Potencyof Some Novel Azo-Naphthol Dyes Conjugated with Metal Nanoparticles as Photosensitizers for Photodynamic Therapy. Chemistry Select. 5:8609-8615, (2020). (IF:1.81, CS:2.6) 査読あり</li> <li>12. Mohsin Mashkoor, Tanaka K, Kawahara R, Kondo S, Noguchi H, Motooka D, Nakamura S, Khong DT, Nguyen TN, Hoang TN, Yamamoto Y, Whole-genome sequencing and comparative analysis of the genomes of Bacteroides thetaiotaomicron and Escherichia coli isolated from a healthy resident in Vietnam. Journal of Grobal Antimicrobial Resistance. 21:65-67, (2020). (IF:2.469, CS:3.5) 査読あり</li> <li>13. Utari F, Itam A, Syafrizayanti S, Hasvini W, Ninomiya M, Koketsu M, Tanaka K, Efdi Mai. Isolation of flavonol rhamnosides from Pometia pinnata leaves and</li> </ol> |

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|    | <p>investigation of <math>\alpha</math>-glucosidase inhibitory activity of flavonol derivatives. Journal of Applied Pharmaceutical Science. 9(8):53-65,(2019). (IF:1.47, CS:2.2) 査読あり</p> <p>14. Sano H, Wakui A, Kawachi M, Kato R, Moriyama S, Nishikat M, Washino J, Abiko Y, Mayanagi G, Yamaki K, Sakashita E, Tomida J, Kawamura Y, Tanaka K, Takahashi N, Sato T. Profiling of microbiota in liquid baby formula consumed with an artificial nipple. Biomedical Research (Tokyo). 40(4):163-168, (2019). (IF:1.217, CS:2.6) 査読あり</p> <p>15. Utari F, Ninomiya M, Tanaka K, Myat Neo Win K, Nishina A, Koketsu M, N2-Methylaurantiamide acetate: a new dipeptide from <i>Mimosa pudica</i> L. Flowers. Medical Chemistry Research. 28:797-803, (2019) (IF:1.72, CS:3.2) 査読あり</p> <p>16. Kutsuna R, Miyoshi-Akiyama T, Mori K, Hayashi M, Tomida J, Morita Y, Tanaka K, Kawamura Y Description of <i>Paraclostridium bifermentans</i> subsp. <i>muricolitidis</i> subsp. nov., emended description of <i>Paraclostridium bifermentans</i> (Sasi Jyothsna et al., 2016), and creation of <i>Paraclostridium bifermentans</i> subsp. <i>bifermentans</i> subsp. nov. Microbiology and Immunology. 63:1-10, (2019). (IF:1.335, CS:2.8) 査読あり</p> <p>1. 田中香お里. 臨床検査で遭遇する嫌気性菌の新菌種. 日本臨床微生物学会雑誌, 29巻:1-6, (2019). 査読あり</p> |
| 略歴 | <p>昭和 63 年 3 月 岐阜大学大学院農学研究科修士課程修了</p> <p>平成 4 年 3 月 岐阜大学大学院医学研究科博士課程修了</p> <p>平成 4 年 4 月 岐阜大学助手 (医学部附属嫌気性菌実験施設)</p> <p>平成 15 年 4 月 岐阜大学助手 (生命科学総合実験センター)</p> <p>平成 19 年 4 月 岐阜大学助教 (生命科学総合研究支援センター)</p> <p>平成 19 年 10 月 岐阜大学准教授 (生命科学総合研究支援センター・岐阜大学大学院連合創薬医療情報研究科)</p> <p>平成 25 年 8 月 岐阜大学教授 (生命科学総合研究支援センター・岐阜大学大学院連合創薬医療情報研究科)</p> <p>平成 28 年 4 月 岐阜大学研究推進・社会連携機構 微生物遺伝資源保存センター (兼務)</p> <p>平成 30 年 4 月 岐阜大学教授 (研究推進・社会連携機構 科学研究基盤センター・岐阜大学連合創薬医療情報研究科)</p> <p>令和 2 年 4 月 岐阜大学教授 (高等研究院 科学研究基盤センター・岐阜大学連合創薬医療情報研究科・高等研究院微生物遺伝資源保存センター)</p> <p>令和 3 年 1 月 岐阜大学教授 (糖鎖生命コア研究所糖鎖分子科学研究センター・高等研究院 科学研究基盤センター・岐阜大学連合創薬医療情報研究科・高等研究院微生物遺伝資源保存センター)</p> <p>令和 5 年 1 月 岐阜大学教授 高等研究院 (One Medicine トランスショナルリサーチセンター COMIT)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |