

ORS MSKI ICM Vote

72
Responses

50:46
Average time to complete

Active
Status

1. Do joints have a natural microbiome, and does this affect joint infection?

● Agree	46
● Disagree	18
● Abstain	8



2. Does gut microbiome affect host immunity during MSKI?

● Agree	70
● Disagree	0
● Abstain	2



3. Does antibiotic therapy affect host immunity to MSKI?

● Agree	53
● Disagree	13
● Abstain	6



4. Are there validated models of host immunity and with quantitative outcome measures?

● Agree	65
● Disagree	2
● Abstain	5



5. Are there rigorous approaches for detecting and quantifying intracellular bacterial reservoirs?

● Agree	63
● Disagree	7
● Abstain	2



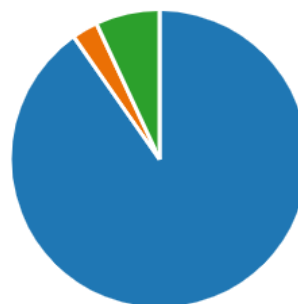
6. Can human immune responses be fully recapitulated in animal models of MSKI?

● Agree	64
● Disagree	3
● Abstain	5



7. Does antiinflammatory medication influence MSKI in preclinical models?

● Agree	65
● Disagree	2
● Abstain	5



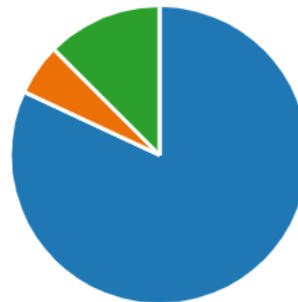
8. Does autoimmunity affect musculoskeletal infection in animal models?

● Agree	41
● Disagree	7
● Abstain	24



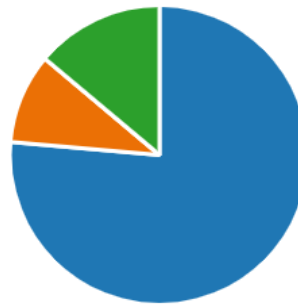
9. Is there an established immunization protocol (adjuvant, route of administration, time between boost) to assess novel vaccines for MSKI?

● Agree	59
● Disagree	4
● Abstain	9



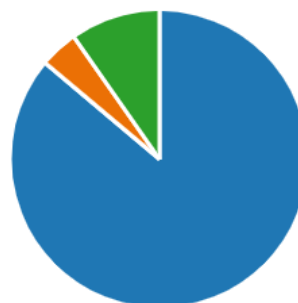
10. Are there interventions beyond vaccination known to boost host immunity to MSKI in animal models?

● Agree	55
● Disagree	7
● Abstain	10



11. Has the immune proteome been well-defined in animal models of MSKI?

● Agree	62
● Disagree	3
● Abstain	7



12. Are there vaccines/passive immunizations for MSKI in animal models? (e.g. *S. aureus*)?

● Agree	64
● Disagree	3
● Abstain	5



13. Does prior MSKI shape immune responses to subsequent bacterial infection?

● Agree	70
● Disagree	0
● Abstain	2



14. Is the antibody response to MSKI pathogen-specific?

● Agree	69
● Disagree	0
● Abstain	3



15. Are certain species more susceptible and resistant to MSKI based on host immunity than others?

● Agree	65
● Disagree	3
● Abstain	4



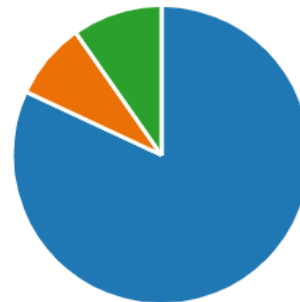
16. Is there a standard timeline or duration of treatment to best evaluate resolution of infection in animal models of MSKI?

● Agree	64
● Disagree	4
● Abstain	4



17. Does radiography score correlate to infection and treatment efficacy for bone?

● Agree	59
● Disagree	6
● Abstain	7



18. Are there any imaging techniques available that can effectively indicate the degree of infection or monitor the advancement of the disease in animal models of MSKI?

● Agree	66
● Disagree	2
● Abstain	4



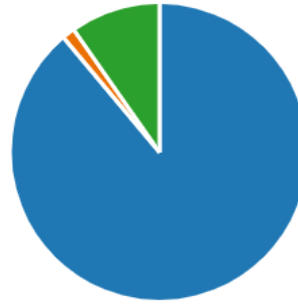
19. Are In Vivo Imaging Systems (IVIS) Using Fluorescence or Luminescence Complementary to Other Methods Such as Culture or PCR?

● Agree	67
● Disagree	3
● Abstain	2



20. Can techniques be employed to precisely evaluate the formation of biofilms on implants or infected bone in in vivo models of osteomyelitis?

● Agree	64
● Disagree	1
● Abstain	7



21. Is there an animal model representative of DAIR (debridement, antibiotics, and implant retention)?

● Agree	60
● Disagree	4
● Abstain	8



22. Is there a single predominant combination of bacterial species in humans that should be studied in animal models of polymicrobial MSKI?

● Agree	61
● Disagree	5
● Abstain	6



23. Are there immunological plasma biomarkers that are useful to measure infection or treatment effects in rat models of musculoskeletal infection?

● Agree	62
● Disagree	4
● Abstain	6



24. Can all standard-of-care antibiotics included in the clinical treatment guidelines for musculoskeletal infection be used in animal models?

● Agree	65
● Disagree	2
● Abstain	5



25. Question removed

26. Is a statistically significant reduction in bacterial burden clinically significant, if infection remains after treatment in animal models of infection?

● Agree	50
● Disagree	13
● Abstain	9



27. After using an antimicrobial-loaded biomaterial in an animal study, can you prevent false negative culture results due to antimicrobial carryover during sample processing in the lab?

● Agree	65
● Disagree	3
● Abstain	4



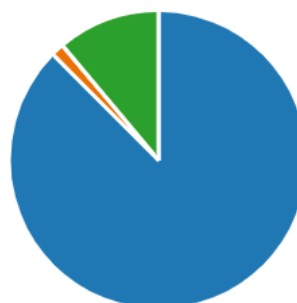
28. Should treatment of fracture and/or implant related infection always include debridement in animal models?

● Agree	51
● Disagree	13
● Abstain	8



29. Should synovial biomarkers be investigated for MSKI in large animal models?

● Agree	63
● Disagree	1
● Abstain	8



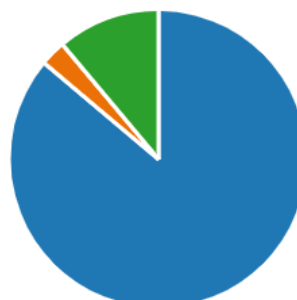
30. Are there any recommended diagnostics to monitor the safety of antibiotic therapy in animal models?

● Agree	55
● Disagree	4
● Abstain	13



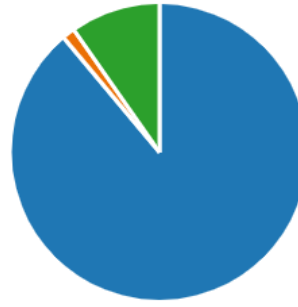
31. Do X-ray and advanced imaging have a role in diagnosing PJI using animal models?

● Agree	62
● Disagree	2
● Abstain	8



32. Are there specific animal tissues that need to be studied to diagnose MSKI and treatment outcomes?

● Agree	64
● Disagree	1
● Abstain	7



33. Are there unique pathophysiologic features of MSKI in the pediatric population?

● Agree	54
● Disagree	0
● Abstain	18



34. Does antibiotic use in patients with periprosthetic joint infection (PJI) increase the risk of antibiotic resistance compared to the general population?

● Agree	60
● Disagree	8
● Abstain	4



35. Are there generalizable negative and positive controls that be incorporated within all biofilm experiments to allow cross-referencing between experiments?

● Agree	48
● Disagree	3
● Abstain	21



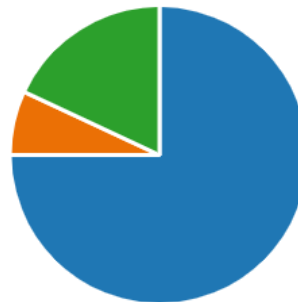
36. Can antibiotic tolerance be used to support the presence and maturity of a biofilm?

● Agree	57
● Disagree	9
● Abstain	6



37. Can drug clearance and protein binding be modeled in an in vitro system to predict efficacy of drugs?

● Agree	54
● Disagree	5
● Abstain	13



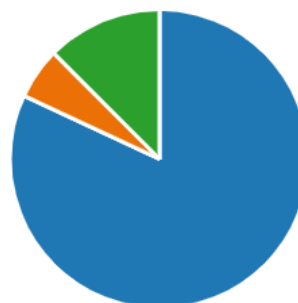
38. Can in vitro antimicrobial efficacy (CFU log 2 or log 3 reduction) be used to achieve the minimum rationale for moving into the animal?

● Agree	62
● Disagree	4
● Abstain	6



39. Is there a best method for assessing MBEC in vitro?

● Agree	59
● Disagree	4
● Abstain	9



40. Is there a "race for the surface" between bacteria and host cells that determines the clinical outcome of orthopaedic implant surgery?

● Agree	42
● Disagree	22
● Abstain	8



41. Is a minimum 1.5 log (95%) reduction in CFU on a surface, in vitro, sufficient for minimal antibacterial activity, in vivo, using a 10⁴-10⁵ CFU/mL inoculum?

● Agree	45
● Disagree	11
● Abstain	16



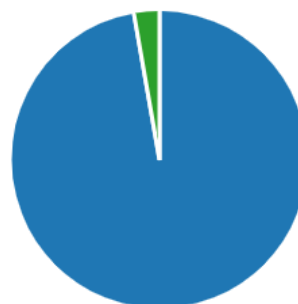
42. Does testing against a panel of *S. aureus* (MSSA and MRSA), *S. epidermidis*, GBS, *E. coli*, *P. aeruginosa*, *C. acnes* and *C. albicans* sufficiently capture the minimum required strains to claim universal antimicrobial efficacy when considering a novel prevention technology?

● Agree	50
● Disagree	9
● Abstain	12



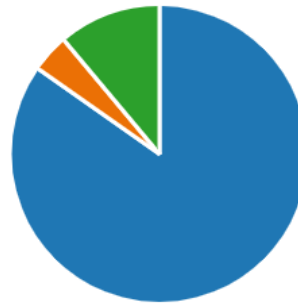
43. Should multiple outcome measures be used for accurately determining antibacterial efficacy in vitro.

● Agree	70
● Disagree	0
● Abstain	2



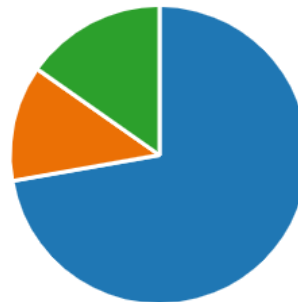
44. Is there a universal concentration for the bacteriological tests of (1) textured surfaces, (2) eluting surfaces, and (3) non-eluting (chemically modified) surfaces?

● Agree	61
● Disagree	3
● Abstain	8



45. Should Small Colony Variants or Persisters be detected in clinical samples?

● Agree	52
● Disagree	9
● Abstain	11



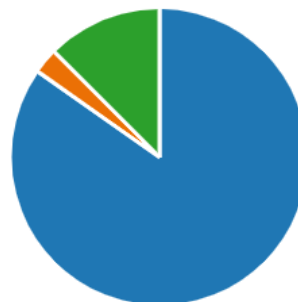
46. Should you use the same sterilization method in vitro as you will be using in vivo?

● Agree	67
● Disagree	2
● Abstain	3



47. Are there rigorous in vitro bone cell models for intracellular infection in osteomyelitis?

● Agree	61
● Disagree	2
● Abstain	9



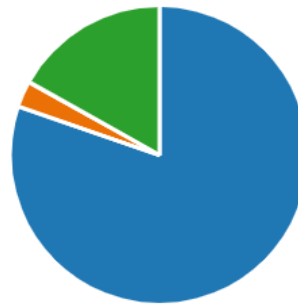
48. Is there a standard method to detach and quantify bacteria attached to surfaces?

● Agree	59
● Disagree	5
● Abstain	8



49. Can existing ISTA/ASTM standards be used for constructing biofilm models on medical devices?

● Agree	57
● Disagree	2
● Abstain	12



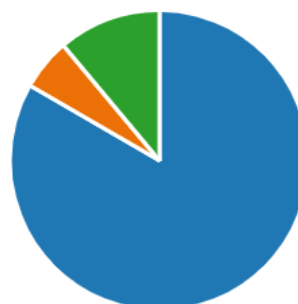
50. Should we (as the MSKI group) recommend certain models (and promote them) to have more homogenous experimental settings?

● Agree	66
● Disagree	3
● Abstain	3



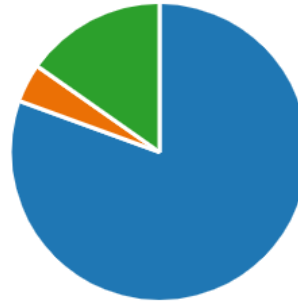
51. Are there specific preclinical animal models of musculoskeletal infection that are accepted by FDA and other regulatory agencies.

● Agree	60
● Disagree	4
● Abstain	8



52. Are there best practice guidelines for pivotal preclinical studies supporting regulatory submissions for drugs, devices, and drug-device combination products?

● Agree	58
● Disagree	3
● Abstain	11



53. Are there best practice guidelines for the duration of an antimicrobial effect from an orthopedic implant in vivo to prevent clinical infection?

● Agree	63
● Disagree	3
● Abstain	6



54. Are there any effective host immune responses against biofilm bacteria?

● Agree	46
● Disagree	5
● Abstain	19



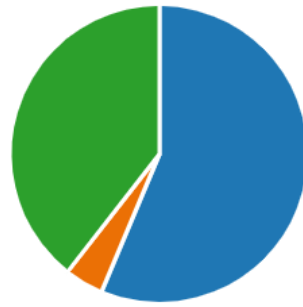
55. How does host immunity against a pathogen change based on the location of the MSKI?

● Agree	48
● Disagree	2
● Abstain	21



56. Are there any effective host immune responses against bacteria within the OLCN?

● Agree	40
● Disagree	3
● Abstain	28



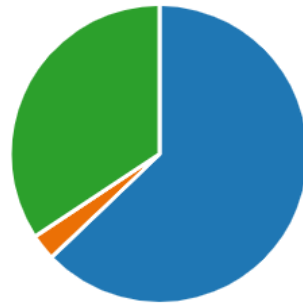
57. Do bone cells mount an immune response during MSKI?

● Agree	42
● Disagree	8
● Abstain	21



58. What are the proven outcome measures of host immunity during MSKI?

● Agree	44
● Disagree	2
● Abstain	24



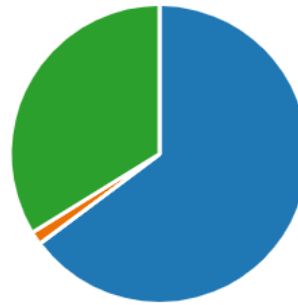
59. Is there host immunity against small colony variants and persister cells?

● Agree	45
● Disagree	3
● Abstain	22



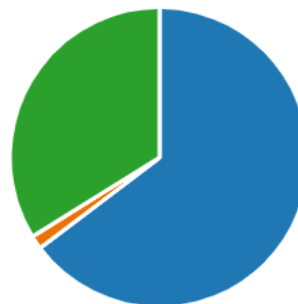
60. What is known about antigen specific T-cells in MSKI?

● Agree	46
● Disagree	1
● Abstain	24



61. What are the important antigen presenting cells in MSKI?

● Agree	44
● Disagree	1
● Abstain	23



62. Is septic non-union associated with host immunity?

● Agree	47
● Disagree	5
● Abstain	19



63. Do different pathogens influence host immunity against each other in polymicrobial MSKI?

● Agree	50
● Disagree	4
● Abstain	16



64. Are monoclonal antibodies capable of eradicating biofilms in animal models of MSKI?

● Agree	44
● Disagree	7
● Abstain	20



65. What are the best models to study T-cell responses during MSKI?

● Agree	47
● Disagree	1
● Abstain	23

