

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Avation Medical, Inc.,
Petitioner

v.

EMKinetics, Inc.,
Patent Owner

Case No. IPR2024-01375
U.S. Patent No. 11,224,742

EXHIBIT NO. 1053 — DECLARATION OF TODD R. TUCKER

1. I, Todd R. Tucker, submit this Declaration on behalf of Avation Medical, Inc. (“Avation” or “Petitioner”) in support of Avation’s Petition for Inter Partes Review of U.S. Patent No. 11,224,742.

2. I am a Partner at the law firm Calfee, Halter & Griswold LLP.

3. A true and correct copy of U.S. Patent No. 11,224,742 (“’742 patent”) is attached as **Exhibit No. 1001**.

4. A true and correct copy of File History of U.S. Patent No. 11,224,742 (“’742 patent file history”) is attached as **Exhibit No. 1002**.

5. A true and correct copy of Declaration of Dr. Brett Wingeier in Support of Petition for Inter Partes Review of U.S. Patent No. 11,224,742 (“Wingeier Decl.”) is attached as **Exhibit No. 1003**.
6. A true and correct copy of J. Svihra et al., “Neuromodulative treatment of overactive bladder – noninvasive tibial nerve stimulation,” Bratisl Lek Listy 103(12):480-483 (2002) (“Svihra”) is attached as **Exhibit No. 1004**.
7. A true and correct copy of G. Amarenco et al., “Urodynamic Effect of Acute Transcutaneous Posterior Tibial Nerve Stimulation in Overactive Bladder,” J. Urology 169: 2210-2215 (2003) (“Amarenco”) is attached as **Exhibit No. 1005**.
8. A true and correct copy of G. Willy Davila & Minda Neimark, “The Overactive Bladder: Prevalence and Effects on Quality of Life,” Clinical Obstetrics and Gynecology 45(1):173-181 (2002) (“Davila”) is attached as **Exhibit No. 1008**.
9. A true and correct copy of Alan J. Wein & Eric S. Rovner, “Definition and Epidemiology of Overactive Bladder,” Urology 60(Suppl 5A):7-12 (2002) (“Wein”) is attached as **Exhibit No. 1009**.
10. A true and correct copy of Paul Abrams et al., “Overactive Bladder Significantly Affects Quality of Life,” The American Journal of Managed Care 6(11, Sup.):580-590 (2000) (“Abrams”) is attached as **Exhibit No. 1010**.
11. A true and correct copy of Neeral Kohli & Peter L. Rosenblatt, “Neuromodulation Techniques for the Treatment of the Overactive Bladder,”

Clinical Obstetrics and Gynecology 45(1):218-232 (2002) (“Kohli”) is attached as **Exhibit No. 1011.**

12. A true and correct copy of Floor van der Pal et al., “Current opinion on the working mechanisms of neuromodulation in the treatment of lower urinary tract dysfunction,” Current Opinion in Urology 16(4):261-267 (2006) (“van der Pal”) is attached as **Exhibit No. 1012.**

13. A true and correct copy of Francisco Velasco, “Neuromodulation: An Overview,” Archives of Medical Research 31(3):232-236 (2000) (“Velasco”) is attached as **Exhibit No. 1013.**

14. A true and correct copy of J. Groen & J.L.H.R. Bosch, “Neuromodulation techniques in the treatment of the overactive bladder,” 87(8):723-731 (2001) (“Groen”) is attached as **Exhibit No. 1014.**

15. A true and correct copy of Marshall L. Stoller, “Afferent Nerve Stimulation for Pelvic Floor Dysfunction,” Scientific Non Discussion Poster Session 16(257):256 (1999) (“Stoller”) is attached as **Exhibit No. 1015.**

16. A true and correct copy of M. Queralto et al., “Preliminary results of peripheral transcutaneous neuromodulation in the treatment of idiopathic fecal incontinence,” International Journal of Colorectal Disease 21(2006):670-672 (2006) (“Queralto”) is attached as **Exhibit No. 1016.**

17. A true and correct copy of F. Monti et al., “Peripheral neuromodulation using surface electrode for treatment of overactive bladder (oab): initial experience,” Clinical Neurophysiology 117(2006):243 (2006) (“Monti”) is attached as **Exhibit No. 1017**.

18. A true and correct copy of L. Zhang & D.P. Rabussay, “Clinical evaluation of safety and human tolerance of electrical sensation induced by electric fields with non-invasive electrodes,” Bioelectrochemistry 56(1-2):233-236 (2002) (“Zhang”) is attached as **Exhibit No. 1024**.

19. A true and correct copy of U.S. Patent No. 6,341,236 to Osorio et al. (“‘236 patent”) is attached as **Exhibit No. 1025**.

20. A true and correct copy of U.S. Patent App. Pub. No. 2007/0021803 to Deem et al. (“US2007/0021803”) is attached as **Exhibit No. 1026**.

21. A true and correct copy of Katherine N. Moore, “Treatment of Urinary Incontinence in Men with Electrical Stimulation: Is Practice Evidence-Based?,” Journal of Wound, Ostomy and Continence Nursing 27(1):20-31 (2000) (“Moore”) is attached as **Exhibit No. 1027**.

22. A true and correct copy of Hermie J. Hermens et al., “Development of recommendations for SEMG sensors and sensor placement procedures,” Journal of Electromyography and Kinesiology 10(5):361-374 (2000) (“Hermens”) is attached as **Exhibit No. 1028**.

23. A true and correct copy of U.S. Patent No. 8,206,312 to Farquhar (“’312 patent”) is attached as **Exhibit No. 1029**.
24. A true and correct copy of S. Tahseen Hasan et al., “Transcutaneous Electrical Nerve Stimulation and Temporary S3 Neuromodulation in Idiopathic Detrusor Instability,” The Journal of Urology 155(6):2005-2011 (1996) (“Hasan”) is attached as **Exhibit No. 1030**.
25. A true and correct copy of U.S. Patent App. Pub. No. 2005/0075670 to Bengtsson (“’670 publication”) is attached as **Exhibit No. 1031**.
26. A true and correct copy of U.S. Patent App. Pub. No. 2007/0276449 to Gunter et al. (“’449 publication”) is attached as **Exhibit No. 1032**.
27. A true and correct copy of U.S. Patent No. 7,801,603 to Westlund et al. (“’603 patent”) is attached as **Exhibit No. 1033**.
28. A true and correct copy of U.S. Patent No. 8,712,546 to Kim et al. (“’546 patent”) is attached as **Exhibit No. 1034**.
29. A true and correct copy of Micael A. Crary et al., “Biomechanical Correlates of Surface Electromyography Signals Obtained During Swallowing by Healthy Adults,” Journal of Speech, Language, and Hearing Research 49(1):186-193 (2006) (“Crary”) is attached as **Exhibit No. 1035**.
30. A true and correct copy of U.S. Patent No. 7,206,630 to Tarler (“’630 patent”) is attached as **Exhibit No. 1036**.

31. A true and correct copy of Stephen A. Koff & Evan J. Kass, “Abdominal Wall Electromyography: A Noninvasive Technique To Improve Pediatric Urodynamic Accuracy,” The Journal of Urology 127(4):736-739 (1982) (“Koff”) is attached as **Exhibit No. 1037**.

32. A true and correct copy of Michael R. van Balken et al., “Posterior Tibial Nerve Stimulation as Neuromodulative Treatment of Lower Urinary Tract Dysfunction,” The Journal of Urology 166(3):914-918 (2001) (“van Balken”) is attached as **Exhibit No. 1038**.

33. A true and correct copy of J.L.H. Ruud Bosch, “Electrical neuromodulatory therapy in female voiding dysfunction,” BJU International 98(s1):43-48 (2006) (“Bosch”) is attached as **Exhibit No. 1039**.

34. A true and correct copy of Edward J. McGuire et al., “Treatment of Motor and Sensory Detrusor Instability by Electrical Stimulation,” The Journal of Urology 129(1):78-79 (1983) (“McGuire”) is attached as **Exhibit No. 1041**.

35. A true and correct copy of A.L. Hof, “EMG and Muscle Force: An Introduction,” Human Movement Science 3(1-2):119-153 (1984) (“Hof”) is attached as **Exhibit No. 1042**.

36. A true and correct copy of A Martens De Noordhout et al., “Percutaneous electrical stimulation of lumbosacral roots in man,” Journal of

Neurology, Neurosurgery, and Psychiatry 51(2):174-181 (1988) (“Noordhout”) is attached as **Exhibit No. 1043**.

37. A true and correct copy of U.S. Patent App. No. 11/866,329 to Burnett et al. (“‘329 application”) is attached as **Exhibit No. 1048**.

38. A true and correct copy of Avation Medical, Inc. v. EMKinetics, Inc. No. 3:24-cv-01702 (N.D. Cal.) First Amended Complaint, Dkt. No. 5 is attached as **Exhibit No. 1051**.

39. A true and correct copy of U.S. Patent Pub. App. Pub. No. 2006/0122660 to Boveja et al. filed Dec. 28, 2005, published Jun. 8, 2006 (“Boveja”) is attached as **Exhibit No. 1080**.

40. A true and correct copy of U.S. Patent No. 6,272,383 to Grey et al. (“Grey”) is attached as **Exhibit No. 1081**.

41. A true and correct copy of U.S. Patent No. 5,984,854 to Ishikawa et al. (“Ishikawa”) is attached as **Exhibit No. 1082**.

42. A true and correct copy of U.S. Patent No. 6,735,474 to Loeb et al. (“Loeb”) is attached as **Exhibit No. 1083**.

43. A true and correct copy of U.S. Patent No. 6,941,171 to Mann et al. (“Mann”) is attached as **Exhibit No. 1084**.

44. A true and correct copy of S N Ponsford, “Sensory conduction in medial and lateral plantar nerves,” Journal of Neurology, Neurosurgery, and Psychiatry 51(2):188-191 (1988) (“Ponsford”) is attached as **Exhibit No. 1085**.

45. A true and correct copy of U.S. Patent No. 5,995,873 to Rhodes (“Rhodes”) is attached as **Exhibit No. 1086**.

46. A true and correct copy of U.S. Patent No. 11,844,943 to Rajguru et al. (“‘943 patent”) is attached as **Exhibit No. 1087**.

47. A true and correct copy of excerpts from Gray’s Anatomy 1123-53 (Peter L. Williams et al. eds., 37th ed. 1989) is attached as **Exhibit No. 1088**.

I, Todd R. Tucker, declare under penalty of perjury that the foregoing Declaration is true and correct.

Dated: August 30, 2024

/s/ Todd R. Tucker

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