

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENOME & COMPANY,
Petitioner

v.

THE UNIVERSITY OF CHICAGO,
Patent Owner

Case No. PGR2019-00002
U.S. Patent 9,855,302 B2

DECLARATION OF ANDREW SCHULTZ

I, Andrew Schultz, do hereby declare:

I am an attorney with the law firm Nelson Mullins Riley & Scarborough LLP, One Post Office Square, 30th Floor, Boston, Massachusetts 02109. I submit this declaration in support of Genome & Company Petitioner's Reply to Patent Owner's Response. On information and belief:

1. Attached as Exhibit 1041 of Petitioner's Reply is a true and accurate copy of Charlene M. Fares *et al.*, *Mechanisms of Resistance to Immune Checkpoint Blockade: Why Does Checkpoint Inhibitor Immunity Not Work for All Patients?*, American Society of Clinical Oncology Educational Book, 39:147-164 (May 17, 2019).
2. Attached as Exhibit 1044 of Petitioner's Reply is a true and accurate copy of Borja Sánchez *et al.*, *The Effects of Bifidobacterium breve on Immune Mediators and Proteome of HT29 Cells Monolayers*, BioMed Research International, 2015 (Article ID 479140):1-6 (2015).
3. Attached as Exhibit 1045 of Petitioner's Reply is a true and accurate copy of Vanessa K. Ridaura *et al.*, *Gut Microbiota from Twins Discordant for Obesity Modulate Metabolism in Mice*, Science, 341:1079, 1241214 (2013).

4. Attached as Exhibit 1046 of Petitioner's Reply is a true and accurate copy of Gavin P. Dunn *et al.*, *The Three Es of Cancer Immunoediting*, *Annu. Rev. Immunol.*, 22:329-360 (2004).
5. Attached as Exhibit 1047 of Petitioner's Reply is a true and accurate copy of Patrick Blanco *et al.*, *Dendritic cells and cytokines in human inflammatory and autoimmune diseases*, *Cytokine & Growth Factor Reviews*, 19 (Issue 1):41-52 (2008).
6. Attached as Exhibit 1048 of Petitioner's Reply is a true and accurate copy of Reza Aghebati Maleki *et al.*, *Effects of some natural immunomodulatory compounds in combination with thalidomide on survival rate and tumor size in fibrosarcoma-bearing mice*, *Advanced Pharmaceutical Bulletin*, 4, Suppl 1:465-470 (2014).
7. Attached as Exhibit 1049 of Petitioner's Reply is a true and accurate copy of Blanda Di Luccia *et al.*, *Lactobacillus gasseri SF1183 Affects Intestinal Epithelial Cell Survival and Growth*, *PLoS ONE*, 8(7):e69102 (2013).
8. Attached as Exhibit 1050 of Petitioner's Reply is a true and accurate copy of Mario Uccello *et al.*, *Potential role of probiotics on colorectal cancer prevention*, *BMC Surgery*, 12 (Suppl 1):S35(1-8) (2012).

9. Attached as Exhibit 1051 of Petitioner's Reply is a true and accurate copy of Yu-Jie Zhang *et al.*, *Impacts of Gut Bacteria on Human Health and Diseases*, *Int. J. Mol. Sci.*, 16:7493-7519 (2015).
10. Attached as Exhibit 1052 of Petitioner's Reply is a true and accurate copy of Natarajan Sithranga Boopathy *et al.*, *Effect of Mangrove Tea Extract from *Ceriops decandra* (Griff.) Ding Hou. on Salivary Bacterial Flora of DMBA Induced Hamster Buccal Pouch Carcinoma*, *Indian Journal of Microbiology*, 51(3):338-344 (2011).
11. Attached as Exhibit 1053 of Petitioner's Reply is a true and accurate copy of Yoram Bouhnik *et al.*, *Four-week short chain fructo-oligosaccharides ingestion leads to increasing fecal bifidobacteria and cholesterol excretion in healthy elderly volunteers*, *Nutrition Journal*, 6 (42):1-7 pages (2007).
12. Attached as Exhibit 1054 of Petitioner's Reply is a true and accurate copy of Yan Yin *et al.*, *Therapeutic efficacy of *Bifidobacterium longum*-mediated human interleukin-2 with endostatin or TRAIL in transplanted tumors in mice*, *Experimental and Therapeutic Medicine*, 3:481-486 (2012).

13. Attached as Exhibit 1055 of Petitioner's Reply is a true and accurate copy of Rakesh K. Jain *et al.*, *Can engineered bacteria help control cancer?*, PNAS, 98(26):14748-14750 (2001).
14. Attached as Exhibit 1056 of Petitioner's Reply is a true and accurate copy of I. Brook, *Isolation of non-sporing anaerobic rods from infections in children*, J Med Microbiol., 45(1):21-26 (1996).
15. Attached as Exhibit 1057 of Petitioner's Reply is a true and accurate copy of Emmanuelle Weber *et al.*, *Bifidobacterium Species Bacteremia: Risk Factors in Adults and Infants*, Clin Infect Dis., 61(3):482-484 (2015).
16. Attached as Exhibit 1058 of Petitioner's Reply is a true and accurate copy of Hilde Cheroutre *et al.*, *The light and dark sides of intestinal intraepithelial lymphocytes*, Nature Reviews Immunology, 11(7):445-456 (2011).

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