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~~**UNITED STATES DISTRICT COURT**~~

~~**FOR THE CENTRAL DISTRICT OF CALIFORNIA**~~

~~(SOUTHERN DIVISION)~~~~CHROMADEX~~ChromaDex, ~~INC~~Inc.,

Plaintiff,

v.

~~ELYSIUM HEALTH~~Elysium Health, ~~INC~~Inc.,

Defendant.

~~)~~Case No. 8:16-~~cv-~~02277-~~CJC-DFM~~ CJC (DFM)

~~SECOND~~ THIRD AMENDED COUNTERCLAIMS ~~DEMAND FOR JURY TRIAL~~

Elysium Health, Inc.,

Counterclaimant,

v.

ChromaDex, Inc.,

Counter-Defendant.

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COUNTERCLAIMS

Defendant Elysium Health, Inc. ("Elysium"), by and through its undersigned counsel, files these Counterclaims against ChromaDex, Inc. ("ChromaDex") and alleges on personal knowledge as to its own acts and on information and belief as to all other matters as follows:

NATURE OF THE CASE

1. This is an action for fraud, breach of contract, unfair competition, unjust enrichment and declaratory judgment. Elysium and ChromaDex were parties to three contracts: (1) the Niagen Supply Agreement, dated February 3, 2014, as amended by the Amendment to Supply Agreement, dated February 19, 2016 (the "NR Supply Agreement"); (2) the pTeroPure Supply Agreement, dated June 26, 2014 (the "PT Supply Agreement," and, together with the NR Supply Agreement, the "Supply Agreements"); and (3) the Trademark License and Royalty Agreement, dated February 3, 2014 (the "License and Royalty Agreement") (collectively, "the Agreements").

2. Elysium sells a dietary supplement, Basis, that combines nicotinamide riboside (sometimes called "NR") and pterostilbene (sometimes called "PT").

3. Pursuant to the Supply Agreements, ChromaDex provided Elysium with nicotinamide riboside and pterostilbene. ChromaDex sells nicotinamide riboside under the name ~~NIAGEN~~Niagen®, a federally registered trademark.

4. At the time the NR Supply Agreement and License and Royalty Agreement were executed, ChromaDex had, and still has, market power in the market for supply of nicotinamide riboside in the United States and worldwide. It is currently the sole commercial supplier of nicotinamide riboside.

5. ChromaDex has in-licensed several patents relating to nicotinamide riboside. ChromaDex's market power comes from, among other things, the patents it

has in-licensed. Although the NR Supply Agreement includes no express license to ChromaDex's patent rights, ChromaDex's supply of nicotinamide riboside under the NR Supply Agreement necessarily includes an implied sublicense for Elysium to use ChromaDex's license under principles of patent exhaustion and other law.

6. ChromaDex has committed patent misuse and engaged in unfair competition by leveraging its market power in the supply of nicotinamide riboside to impose conditions on its customers that impermissibly broaden the scope of the patent grant with anticompetitive effect. For example, on multiple occasions ChromaDex has conditioned its sale of nicotinamide riboside on the purchaser's agreement to license ChromaDex's trademarks and pay ChromaDex substantial royalties on product sales based on that trademark license. With respect to Elysium, ChromaDex conditioned its execution of the NR Supply Agreement on Elysium's simultaneous execution of the License and Royalty Agreement, which forced Elysium to pay a substantial royalty to ChromaDex on all Elysium products containing ingredients supplied by ChromaDex under the NR Supply Agreement, even if Elysium does not use, and does not want to use, any ChromaDex marks.

7. ChromaDex induced Elysium to sign the License and Royalty Agreement by insisting, falsely, that ChromaDex required all of its nicotinamide riboside customers to sign similar royalty agreements.

8. The NR Supply Agreement also contains multiple covenants that have been breached by ChromaDex. Under the NR Supply Agreement, Elysium is entitled to receive pricing on nicotinamide riboside that is at least as favorable as the price at which ChromaDex supplies nicotinamide riboside or a substantially similar product to other purchasers, but never more than a certain maximum price (the "Most Favored Nations Provision" or "MFN Provision").

9. The MFN Provision further provides that ChromaDex must promptly issue a refund or credit to Elysium in the event that ChromaDex sells nicotinamide riboside or a substantially similar product to another purchaser for an amount less than Elysium has paid for nicotinamide riboside.

10. As amended, the NR Supply Agreement prohibits ChromaDex from selling, or licensing or enabling any third party to manufacture or sell, a product containing both nicotinamide riboside and either pterostilbene or any ingredient substantially similar to pterostilbene, either in combination or in separate form but marketed together (the "Exclusivity Provision").

11. The NR Supply Agreement warrants that all nicotinamide riboside ChromaDex sells to Elysium will be manufactured in accordance with good manufacturing practices contained in Parts 210 and 211 of Title 21 of the United States Code of Federal Regulations ("Pharmaceutical cGMPs") and with other applicable laws and regulations in the United States (the "cGMP Provision").

12. The NR Supply Agreement further obligates ChromaDex to promptly inform Elysium in writing of any information of which it becomes aware that concerns or that could potentially impact the safety, identity, strength, quality or purity of the nicotinamide riboside it was selling to Elysium (the "Product Purity Provision").

~~11~~13. ChromaDex materially breached the MFN Provision ~~and~~, the Exclusivity Provision, the cGMP Provision and the Product Purity Provision of the NR Supply Agreement.

~~12~~14. With respect to the MFN Provision, on June 13, 2016, in response to a request from Elysium for information regarding ChromaDex's compliance with the MFN Provision, ChromaDex's CEO, Frank Jaksch, provided Elysium with a manipulated and misleading Excel spreadsheet (the "Fraudulent Spreadsheet")

purporting to list the prices at which ChromaDex was selling nicotinamide riboside to purchasers other than Elysium under various supply agreements.

~~13~~15. The Fraudulent Spreadsheet was described by Mr. Jaksch as a "blinded" list of the prices at which ChromaDex was selling nicotinamide riboside to other customers, without revealing those customers' identities. As part of the Fraudulent Spreadsheet, however, Jaksch inadvertently neglected to delete two tabs containing "unblinded" sheets apparently used as a basis for preparing the Fraudulent Spreadsheet. Those "unblinded" sheets listed additional customers that Jaksch notably omitted from the "blinded" sheets, and confirm – contrary to Jaksch's intended deception – that ChromaDex had agreed to sell nicotinamide riboside to other purchasers at a price more favorable than the price at which ChromaDex had sold nicotinamide riboside to Elysium. Moreover, the Fraudulent Spreadsheet revealed, contrary to what ChromaDex had represented to induce Elysium to execute the License and Royalty Agreement, that some ChromaDex customers were not required to sign similar license and royalty agreements. The Fraudulent Spreadsheet thus revealed not only that ChromaDex had been acting in violation of the MFN Provision, but also that it had fraudulently induced Elysium to enter into the License and Royalty Agreement.

~~14~~16. On a June 30, 2016 phone call with two of Elysium's co-founders, Eric Marcotulli and Dan Alminana, Jaksch confirmed that other purchasers of nicotinamide riboside had been paying a price substantially lower than Elysium had been paying, in violation of the MFN Provision.

~~15~~17. On June 30, 2016, Elysium submitted purchase orders for 3000 kg of nicotinamide riboside and 580 kg of pterostilbene, with the understanding that ChromaDex would promptly issue a refund or credit to Elysium on account of ChromaDex's breach of the MFN Provision (the "June 30 Purchase Orders").

~~16~~18. After submitting the June 30 Purchase Orders, Elysium discovered another breach of the NR Supply Agreement. With respect to the Exclusivity Provision, around August 2016, Elysium learned that other products containing both nicotinamide riboside and pterostilbene or nicotinamide riboside and resveratrol, a product substantially similar to pterostilbene, were being sold on the market by other ChromaDex customers.

~~17~~19. Elysium also learned after submitting the June 30 Purchase Orders that ChromaDex was not only enabling other customers to manufacture and sell products that combined nicotinamide riboside and pterostilbene or the substantially similar ingredient resveratrol, but was actively recommending to other customers that they create such products to compete with Elysium's Basis, in violation of the Exclusivity Provision.

~~18~~20. In violation of the NR Supply Agreement, ChromaDex has failed to issue a refund or credit to remedy its breaches of the MFN Provision since filling the June 30 Purchase Orders. It also has failed adequately to remedy the more recently discovered violations of the Exclusivity Provision.

21. Even more recently, Elysium learned that (a) none of the nicotinamide riboside shipped by ChromaDex to Elysium was manufactured in accordance with Pharmaceutical cGMPs and (b) ChromaDex had repeatedly failed to inform Elysium of information of which it had learned concerning the quality and purity of the nicotinamide riboside it sold to Elysium, placing ChromaDex in material breach of the cGMP Provision and Product Purity Provision, respectively. To conceal its breaches of the Product Purity Provision from Elysium, ChromaDex provided Elysium with lot-specific Certificates of Analysis with each shipment that failed to disclose material information impacting the quality and purity of the nicotinamide riboside.

~~19~~22. As a result of ChromaDex's breaches ~~of the MFN Provision and Exclusivity Provision~~ of the NR Supply Agreement, and its fraudulent and coercive conduct in inducing Elysium into executing the License and Royalty Agreement, Elysium has sustained, and continues to sustain, damages. Because only ChromaDex knows the full extent of its breaches of the NR Supply Agreement, and because such breaches are continuing in nature, Elysium cannot yet calculate its damages with precision.

~~20~~23. Through these Counterclaims, Elysium seeks to obtain restitution and to recover for the damages, the full amount of which is yet unknown, that it has sustained as a result of ChromaDex's breaches of contract and fraud.

~~21~~24. Elysium further seeks a declaratory judgment that ChromaDex's patent rights are unenforceable due to ChromaDex's patent misuse in conditioning access to its patent rights to a purchase of a license to ChromaDex's trademarks. Elysium further seeks a declaration that ChromaDex has not purged its misuse and has not dissipated the effects of the misuse. Elysium also seeks restitution for its injuries and ChromaDex's unjust enrichment as a result of the misuse.

JURISDICTION AND VENUE

~~22~~25. This Court has jurisdiction over this action pursuant to 28 U.S.C. § 1332 in that it is an action between citizens of different states and the matter in controversy exceeds the sum or value of $75,000 exclusive of interest and costs.

~~23~~26. Venue is proper in this District because ChromaDex resides within the District.

THE PARTIES

~~24~~27. Counterclaimant Elysium is a Delaware corporation with its principal place of business in New York. Elysium manufactures and sells the dietary

supplement Basis, which combines nicotinamide riboside, pterostilbene and other ingredients.

~~25~~28. Counterdefendant ChromaDex is a California corporation with its principal place of business in California. ChromaDex distributes, among other things, nicotinamide riboside and pterostilbene.

FACTUAL ALLEGATIONS

ChromaDex Exploits Market Power in the Market For Supply of NR

~~26~~29. Nicotinamide riboside is a pyridine nucleoside form of Vitamin B_3 that functions as an efficient precursor to oxidized nicotinamide adenine dinucleotide (NAD+). NAD+ is a coenzyme found in all living cells that plays an essential role in hundreds of metabolic processes.

~~27~~30. Nicotinamide riboside is found in nature, including in milk. ChromaDex marketing materials admit that nicotinamide riboside is "naturally-occurring" and state that ChromaDex's nicotinamide riboside product, Niagen, is "nature-identical." Niagen® is the federally registered trademark used by ChromaDex to market its nicotinamide riboside product.

~~28~~31. Despite the fact that nicotinamide riboside is a naturally-occurring product, at the time the parties executed the NR Supply Agreement, ChromaDex had, and still has, market power in the market for supply of nicotinamide riboside in the United States and worldwide.

~~29~~32. At all relevant times, ChromaDex has had no competitors in the market for supply of nicotinamide riboside. ChromaDex has been the sole commercial supplier of nicotinamide riboside, and every nicotinamide riboside product in the global market today, save for Basis, is supplied by ChromaDex. ChromaDex's website states that Niagen is "the world's first and only commercially available nicotinamide riboside."

~~30~~33. On multiple occasions, Jaksch stated to Elysium that "I am NR," referring to nicotinamide riboside.

~~31~~34. ChromaDex does not itself manufacture nicotinamide riboside nor does it have the manufacturing capabilities to do so. Instead, ChromaDex is solely a middleman in supplying nicotinamide riboside to the market. ChromaDex obtains its nicotinamide riboside from a third-party contract manufacturer. ChromaDex's contract manufacturer is under an exclusive dealing arrangement, and is prohibited by ChromaDex from selling nicotinamide riboside to any customer other than ChromaDex. ChromaDex then resells the nicotinamide riboside at a substantial markup to the global market.

~~32~~35. As a consequence of its market power, ChromaDex is able to control output of nicotinamide riboside and to charge prices for nicotinamide riboside that are substantially in excess of ChromaDex's marginal cost for obtaining it. ChromaDex is also able to dictate different prices for nicotinamide riboside to its different customers.

~~33~~36. ChromaDex's market power comes from, among other things, patents it has in-licensed relating to nicotinamide riboside. These include U.S. Patent Nos. 8,383,086 ("the '086 patent") and 8,197,807 ("the '807 patent"), which are assigned to the Trustees of Dartmouth College ("Dartmouth"). ChromaDex has exclusively licensed the '086 and '807 patents from Dartmouth.

~~34~~37. Claim 1 of the '086 patent, its only independent claim, claims:

> 1. A pharmaceutical composition comprising nicotinamide riboside in admixture with a carrier, wherein said composition is formulated for oral administration.

~~35~~38. Claim 1 of the '807 patent, its only independent claim, claims:

> 1. A composition comprising isolated nicotinamide riboside in combination with one or more of tryptophan, nicotinic acid, or nicotinamide, wherein said combination is in admixture with a carrier comprising a sugar, starch, cellulose, powdered tragacanth, malt, gelatin, talc, cocoa butter, suppository wax, oil, glycol, polyol, ester, agar, buffering agent, alginic acid, isotonic saline, Ringer's solution, ethyl alcohol, polyester, polycarbonate, or polyanhydride, wherein said composition is formulated for oral administration and increases NAD+ biosynthesis upon oral administration.

~~36~~39. ChromaDex's website lists a number of other patents relating to nicotinamide riboside and its manufacture, including U.S. Patent Nos. 8,106,184 ("the '184 patent"), 8,114,626 ("the '626 patent") and 7,776,326 ("the '326 patent").

~~37~~40. ChromaDex has exclusively licensed the '184 patent from Cornell University, the '626 patent from Dartmouth and the '326 patent from Washington University.

~~38~~41. ChromaDex's website repeatedly publicizes the patents it has obtained for nicotinamide riboside and its manufacture and the "proprietary" nature of its asserted rights to a naturally-occurring molecule.

~~39~~42. ChromaDex has leveraged its market power in the supply of nicotinamide riboside to impose conditions on its customers that impermissibly broaden the scope of the patent grant with anticompetitive effect. In particular, ChromaDex has sometimes conditioned its sale of nicotinamide riboside on the purchaser's agreement to license ChromaDex's trademarks and pay substantial royalties to ChromaDex based on that trademark license.

~~40~~43. In some instances, ChromaDex has required purchasers not only to license, but also to use ChromaDex trademarks in order to obtain a supply of nicotinamide riboside.

~~41~~44. ChromaDex's tying of its patent rights to a trademark license has substantial anticompetitive effects and secures rights and monopolies that extend beyond the patent grant. By conditioning access to nicotinamide riboside to payment of royalties on product sales under a trademark license for ChromaDex's Niagen® mark, ChromaDex coerced customers into paying for the right to use a mark they do not need or may not want to use. To the extent customers do use ChromaDex's licensed marks, the effect is to strengthen the association of nicotinamide riboside with ChromaDex, thereby further extending ChromaDex's market power in the supply of nicotinamide riboside even beyond the expiration of ChromaDex's patent estate.

ChromaDex Fraudulently Induces Elysium to Sign the License and Royalty Agreement and Conditions Its Supply of Nicotinamide Riboside to Elysium on an Agreement to License and Pay Royalties for ChromaDex Trademarks that Elysium Does Not Use and Does Not Want to Use

~~42~~45. Elysium is a dietary supplement company that currently sells a single product, Basis, which combines nicotinamide riboside, pterostilbene and certain inactive ingredients.

~~43~~46. In the summer and early fall of 2013, Elysium engaged in discussions with ChromaDex about obtaining a supply of nicotinamide riboside.

~~44~~47. From the outset, ChromaDex emphasized to Elysium the onerous terms it had been able to require from its business partners. In an August 26, 2013 e-mail to Leonard Guarente, one of Elysium's co-founders, Jaksch said that ChromaDex sought to require upfront cash payments, minimum purchase commitments, royalties

and even equity positions from businesses seeking to use ChromaDex as a source for the supply of nicotinamide riboside.

~~45~~48. In response, Elysium stated its enthusiasm for NAD-related products, but explained that it had limited resources and likely could not meet all of ChromaDex's onerous requirements. However, Elysium expressed interest in exploring solutions that would benefit ChromaDex, Elysium and consumers through increased access to NAD-based products.

~~46~~49. On November 8, 2013, Marcotulli sent a draft patent license and supply agreement under which ChromaDex agreed to supply nicotinamide riboside to Elysium for a maximum price. The draft also included a patent and know-how license permitting Elysium to make, use, sell, offer to sell or import products containing nicotinamide riboside, including a license granting Elysium the right to manufacture nicotinamide riboside on its own if it wished. The agreement did not contain a trademark license.

~~47~~50. ChromaDex, through Jaksch, responded by email on December 13, 2013, attaching a revised draft supply agreement and stating that ChromaDex would require Elysium not only to enter into a supply agreement, but also a brand license agreement, which Jaksch would send later. Jaksch explained that this forthcoming agreement would include royalty obligations.

~~48~~51. In its December 13, 2013 draft of the supply agreement, apparently trying to avoid an obligation to pay patent sublicensing fees to its licensors, ChromaDex removed all references to a patent license. In sending the revised draft to Elysium, ChromaDex included a note that it "will include licensing rights in the Niagen [trademark] in a separate agreement which will also contain the Royalty Payments."

~~49~~52. On December 16, 2013, on a phone call between Jaksch, Marcotulli and Alminana, Jaksch falsely represented that all of ChromaDex's customers who signed purchase agreements to obtain nicotinamide riboside were also required to sign separate trademark license and royalty agreements, whether they wanted to or intended to use ChromaDex marks or not.

~~50~~53. Four days later, on December 20, 2013, Jaksch sent another e-mail reemphasizing that ChromaDex would require a "Niagen TM Agreement" that would include royalty requirements.

~~51~~54. On December 27, 2013, Jaksch sent a draft trademark license agreement along with a revised supply agreement. The draft trademark license, like the supply agreement, omitted any express patent license.

~~52~~55. In reliance on ChromaDex's false representation that it required all of its customers to execute trademark license and royalty agreements, Elysium concluded that the issue was non-negotiable, and instead focused its efforts on negotiating the other provisions of the NR Supply Agreement.

~~53~~56. Ultimately, given ChromaDex's position at the time as the sole commercial supplier of nicotinamide riboside, and given ChromaDex's representation that all customers who obtained nicotinamide riboside were required to pay royalties on sales under a trademark license agreement, Elysium determined it had no choice but to agree to ChromaDex's requirement that it also license ChromaDex's trademarks, and agree to pay substantial royalties on Elysium product sales under the trademark license if it wished to obtain access to nicotinamide riboside.

~~54~~57. The parties executed the NR Supply Agreement and License and Royalty Agreement on February 3, 2014. Under the NR Supply Agreement, ChromaDex agreed to supply Elysium with nicotinamide riboside at or below a

designated maximum price. That maximum price, and the price that Elysium in fact has paid ChromaDex for nicotinamide riboside, is substantially higher than ChromaDex's marginal cost for obtaining nicotinamide riboside.

ChromaDex Unlawfully Tied Royalty Payments Under the License and Royalty Agreement to the Price of ChromaDex's Supply

~~55~~58. As noted, the NR Supply Agreement contains no express license to ChromaDex's patent rights. However, because ChromaDex itself was supplying nicotinamide riboside under the agreement for use in Elysium's products, its supply of that ingredient included an implied sublicense to ChromaDex's patents under principles of patent exhaustion and other applicable law. ChromaDex's sale of nicotinamide riboside to Elysium is an authorized sale of nicotinamide riboside and constitutes ChromaDex's compensation for its nicotinamide riboside product.

~~56~~59. The License and Royalty Agreement granted Elysium a license to use ChromaDex's trademarks, including Niagen®. The License and Royalty Agreement was expressly tied to ChromaDex's supply of nicotinamide riboside. It could not be terminated by Elysium without ChromaDex's consent, unless the NR Supply Agreement also was terminated.

~~57~~60. In exchange for the trademark license, Elysium was required to pay a substantial royalty on all products containing any ingredients supplied by ChromaDex under the NR Supply Agreement upon any sale of those products. This was true whether or not Elysium used any ChromaDex marks at all.

~~58~~61. Not only is the royalty obligation unconnected to use of ChromaDex's trademarks, but the royalty rate also changes for reasons unrelated to use of any trademarks. Instead, for example, the royalty rate increased as Elysium's annual worldwide net sales of products containing ingredients supplied by ChromaDex increases.

~~59~~62. The License and Royalty Agreement also provided that the royalty rate for access to ChromaDex's trademarks increase, by as much as 50%, as Elysium's per-kilogram price under the NR Supply Agreement dropped. This forced royalty step-up had the effect of increasing Elysium's royalty burden even as ChromaDex's ability to extract higher prices diminishes – such as, for example, when its patent rights expire and its market power diminishes. It also insulated ChromaDex from the effects of patent expiration and invalidity, eventually providing ChromaDex with unlawful post-expiration royalties for sales of unpatented products.

~~60~~63. By tying payments of royalties under the trademark license (which must be paid even if the trademarks are not used) inversely to the price of ChromaDex's supply, the agreement provided additional means for ChromaDex to protect its market power in nicotinamide riboside, unlawfully extend ChromaDex's patent monopoly, and adversely affect competition.

The MFN ~~and~~, Exclusivity, cGMP and Product Purity Provisions

~~61~~64. Under the NR Supply Agreement's MFN Provision, Elysium agreed to pay to ChromaDex a specified maximum price for nicotinamide riboside. However, if "ChromaDex supplies [nicotinamide riboside] (or a substantially similar product) to a Third Party at a price that is lower than that at which [nicotinamide riboside] is supplied to Elysium under this Agreement, then the price of [nicotinamide riboside] supplied under this Agreement shall be revised to such Third Party price with effect from the date of the applicable sale to such Third Party."

~~62~~65. The MFN Provision further provides that "ChromaDex shall promptly provide Elysium Health with any refund or credits thereby created [by virtue of ChromaDex's sale of nicotinamide riboside to a third party for a lesser price],

provided Elysium Health purchases equal volumes or higher volumes than the Third Party."

~~63~~66. The parties amended the NR Supply Agreement on February 19, 2016. The amendment provides that "ChromaDex shall not, directly or indirectly, sell, transfer or otherwise provide to any Third Party, or license or otherwise enable any Third Party to make, any products containing" nicotinamide riboside and either pterostilbene or any other ingredient "substantially similar" to pterostilbene, "whether in the same delivery mechanism . . . or packaging or in separate form or packaging but marketed together."

~~64~~67. ChromaDex and Elysium knew that, if another ChromaDex customer were permitted to manufacture a substantially similar combination to Basis, Elysium's business – which involves selling that single combination as its only currently marketed product – could be irreparably damaged.

68. Under the NR Supply Agreement's cGMP Provision, ChromaDex warranted that "the Niagen sold hereunder shall be . . . manufactured in accordance with [Pharmaceutical] cGMP[s] and applicable laws and regulations in the United States[.]"

69. Pharmaceutical cGMPs constitute a more stringent standard than the standards specified by the U.S. Food and Drug Administration (the "FDA") for the manufacture of dietary supplements like Basis. Elysium's securing of ChromaDex's representation that its nicotinamide riboside would be manufactured in accordance with Pharmaceutical cGMPs is consistent with Elysium's efforts to exceed applicable standards and ensure superior product quality, which is an essential part of its business model and commitment to customers.

70. Under the NR Supply Agreement's Product Purity Provision, ChromaDex promised to promptly "inform Elysium Health in writing of any

information concerning or that can potentially impact the safety, identity, strength, quality or purity of any Niagen of which it becomes aware, and shall provide supporting documentation."

71. ChromaDex and Elysium knew that, if ChromaDex were permitted to sell to Elysium nicotinamide riboside that was not manufactured in accordance with Pharmaceutical cGMPs or applicable laws and regulations, or that engendered concerns about the product's quality or purity, Elysium's business could be irreparably damaged. Moreover, the parties knew that nicotinamide riboside would be substantially less valuable to the extent it failed to conform to Elysium's expectations about quality, purity and legal and regulatory compliance.

ChromaDex Breaches the NR Supply Agreement and Inadvertently Discloses Its Own Breach in Another Attempt to Defraud Elysium

~~65~~72. On May 29, 2016, Alminana requested from Jaksch data listing the prices at which ChromaDex was selling nicotinamide riboside to other customers. At the time Alminana made this request, Elysium recognized that it was an exemplary customer of ChromaDex, even "self-policing" the parties' contracts to ensure that ChromaDex was receiving the payments prescribed by the contracts. Alminana's friendly request was intended to confirm that, in light of Elysium's orders of substantial volumes of nicotinamide riboside and its full performance under the contracts, ChromaDex was similarly upholding its end of the bargain by providing Elysium with the lowest price.

~~66~~73. On June 13, 2016, in response to that request, Jaksch sought to defraud Elysium by transmitting the Fraudulent Spreadsheet, which purported to list in "blinded" form the prices at which ChromaDex was selling nicotinamide riboside to purchasers other than Elysium, without identifying those other purchasers by name. Jaksch apparently meant to provide Elysium with only his blinded spreadsheet, as he

indicated in the text of his e-mail: "Attached is a blinded summary of supply agreements for NR."

~~67~~74. The "blinded" sheet of the Fraudulent Spreadsheet purported to list all of ChromaDex's customers who purchased nicotinamide riboside along with the per-kilogram price and royalty rates of each. The "blinded" sheet plainly was intended to convince Elysium that it was receiving the lowest price ChromaDex charged for nicotinamide riboside and that ChromaDex was in compliance with the MFN Provision.

~~68~~75. ChromaDex might have succeeded in deceiving Elysium had Jaksch not inadvertently neglected to delete two "unblinded" sheets contained in the Excel spreadsheet that apparently provided the information from which ChromaDex concocted the "blinded" sheet. The "unblinded" sheets list additional customers that Jaksch notably omitted from the "blinded" sheet. The list of omitted customers confirms that ChromaDex had, in fact, agreed to sell nicotinamide riboside to other purchasers at a price far more favorable than the price at which ChromaDex had sold nicotinamide riboside to Elysium.

~~69~~76. The "unblinded" sheets of the Fraudulent Spreadsheet also confirm, contrary to what Jaksch had represented to Marcotulli and Alminana by phone on December 16, 2013 to induce them to sign the License and Royalty Agreement, that some purchasers of nicotinamide riboside were not required to sign license and royalty agreements or pay royalties. The Fraudulent Spreadsheet further disclosed that at least one of these customers, in ChromaDex's own words, "pre-dates Elysium," thus confirming that Jaksch's representation was false when made.

~~70~~77. The Fraudulent Spreadsheet, while sent to convince Elysium falsely that ChromaDex was complying with the NR Supply Agreement, thus revealed not only

that ChromaDex had been acting in violation of the MFN Provision, but also that it had fraudulently induced Elysium to enter into the License and Royalty Agreement.

~~71~~78. When pressed for an explanation, Jaksch sent a follow-up email on June 14, 2016 conceding that at least one ChromaDex customer had paid less per kilogram for nicotinamide riboside than Elysium had paid – and that this customer did not have a royalty agreement in place. Jaksch's admission – made just one day after he sent the Fraudulent Spreadsheet to Elysium – only serves to confirm ChromaDex's intent to deceive Elysium, because this customer, which Jaksch obviously knew about, was not included on the "blinded" sheet.

~~72~~79. On a June 30, 2016 phone call with Marcotulli and Alminana, Jaksch further confessed that other purchasers had been paying far less per kilogram for nicotinamide riboside than Elysium had been paying, in violation of the MFN Provision.

~~73~~80. ChromaDex explained on the June 30 phone call that it also promised one customer that it would provide nicotinamide riboside for an even more substantial discount, also in violation of the MFN Provision.

~~74~~81. Although not disclosed by ChromaDex at this time (or ever), discovery has revealed further breaches, including ChromaDex's extension of pricing to one customer totaling less than half of the price ChromaDex had offered to Elysium, and just over 60% of the revised price offered by Jaksch on the June 30 phone call, which constituted (Jaksch had falsely represented) the best pricing for any customer regardless of volume. At the time Elysium discovered ChromaDex's breaches of the MFN Provision, it had fully performed all of its obligations under the Agreements. In fact, Elysium had been an exemplary customer, even "self-policing" its contracts with ChromaDex to ensure that it had been paying all that it had agreed to pay under the Agreements.

~~75~~82. Acting under the assumption that ChromaDex would provide a prompt credit or refund for its breach of the MFN Provision, as it was required to do under the contract, Elysium submitted the June 30 Purchase Orders for both nicotinamide riboside and pterostilbene.

~~76~~83. After it submitted the June 30 Purchase Orders, Elysium discovered that ChromaDex's breach of the NR Supply Agreement was not limited to the breach of the MFN Provision. With respect to the Exclusivity Provision, Elysium learned, after the June 30 Purchase Orders were submitted, that other products containing both nicotinamide riboside and pterostilbene or resveratrol were being sold on the market by other ChromaDex customers.

~~77~~84. Resveratrol is substantially similar to pterostilbene. ChromaDex's own website refers to pterostilbene as "closely related to resveratrol," an "analog of resveratrol," and a "derivative of resveratrol." And, in an April 27, 2010 press release, ChromaDex called pterostilbene a "next generation resveratrol."

~~78~~85. During negotiations for the NR Supply Agreement, ChromaDex acknowledged that resveratrol was among those ingredients that would be considered "substantially similar" to pterostilbene. In fact, ChromaDex never disputed the substantial similarity between pterostilbene and resveratrol until it became advantageous for it to do so – that is, when ChromaDex was confronted with its breaches of the Exclusivity Provision. Only when Elysium advised ChromaDex that it had learned ChromaDex was violating the Exclusivity Provision did ChromaDex abruptly change its tune and begin to deny that pterostilbene and resveratrol are substantially similar, despite ChromaDex's many prior statements to the contrary. ChromaDex did, however, admit that it was, and had been, selling NR and resveratrol in combination.

~~79~~86. Elysium also learned after submitting the June 30 Purchase Orders that ChromaDex was not only enabling other customers to manufacture and sell products that combined nicotinamide riboside and pterostilbene or the substantially similar ingredient resveratrol, but was actively recommending to other customers that they create such products to compete with Elysium's Basis, in further violation of the Exclusivity Provision.

87. Since learning of ChromaDex's breaches of the MFN Provision and Exclusivity Provision, Elysium also learned that none of the nicotinamide riboside shipped by ChromaDex to Elysium had been manufactured in accordance with Pharmaceutical cGMPs as specified in the NR Supply Agreement, placing ChromaDex in breach of the cGMP Provision from the outset of the parties' relationship.

88. Elysium did not know, and had no reason to know at the time, that the nicotinamide riboside sold and shipped to it by ChromaDex was not manufactured in accordance with Pharmaceutical cGMPs. Elysium only discovered this latent violation after the parties' relationship ended, including through discovery produced by ChromaDex reflecting ChromaDex's advertisement to potential customers that Niagen was produced in compliance with a substantially less stringent standard than "good manufacturing practices ('cGMP') contained in Parts 210 and 211 of Title 21 of the United States Code of Federal Regulations" as the cGMP Provision required. ChromaDex's shipment of nicotinamide riboside that was not manufactured in accordance with Pharmaceutical cGMPs was not discoverable from a reasonable inspection of the product shipped.

89. Thus, Elysium could not have practically benefited from the cGMP Provision's limited warranty for non-conforming goods, which purports to require Elysium to make any claim for non-conforming nicotinamide riboside within 30 days

of delivery. To the extent the cGMP Provision purports to waive, after a 30-day period, Elysium's right to any remedy for ChromaDex's sale of nicotinamide riboside that was not manufactured in accordance with Pharmaceutical cGMPs and that did not comply with other applicable laws and regulations, the provision is unenforceable because it fails of its essential purpose, and enforcing it as written would deprive Elysium of the value of its bargain.

90. Also since learning of ChromaDex's other breaches of the NR Supply Agreement, Elysium discovered that ChromaDex failed to promptly inform Elysium of information of which it learned potentially concerning the quality and purity of the nicotinamide riboside it sold to Elysium, placing ChromaDex in material breach of the Product Purity Provision.

91. This non-disclosed information included that Niagen manufactured by ChromaDex and sold to Elysium contained amounts of a substance, the "Regulated Substance," that is subject to strict labeling requirements under a California voter initiative that requires that notice be given to consumers of products that contain more than threshold amounts of potentially hazardous chemicals.

92. Although, to Elysium's knowledge, the Regulated Substance is not subject to regulation by FDA and is not generally considered to be hazardous to human health, the California voter initiative allows for the imposition of liability and penalties on parties that sell products containing the Regulated Substance above a specified level (the "Safe Harbor Limit") without affixing a warning label.

93. ChromaDex's knowledge of this initiative and its labeling requirements cannot be disputed. Until October 2017, ChromaDex boasted an analytical testing service offering a "comprehensive suite of analytical services" and even "litigation support" for claims brought pursuant to the California voter initiative.

94. In fact, ChromaDex regularly provided to customers statements signed by the company's Director of Quality Assurance attesting to the fact that its nicotinamide riboside was tested for chemicals subject to strict labeling requirements under that California voter initiative and that such testing results would be reported on each lot's certificate of analysis.

95. ChromaDex moreover on occasion sought indemnification from its customers for liability pursuant to that California voter initiative, demonstrating its awareness of that law and importantly its attendant risks of liability. ChromaDex sought no such indemnification from Elysium, however.

96. Thus, at all relevant times, ChromaDex was fully capable of testing its products for the presence of chemicals subject to the labeling requirements of the California voter initiative, was aware of the potential for liability if its customers were to sell products without complying with that law, and regularly conducted such tests of the nicotinamide riboside it was supplying.

97. ChromaDex was aware that at all relevant times, Elysium intended to and did sell Basis to consumers in California but never informed it that the Niagen it sold to Elysium contained the Regulated Substance in levels that far exceeded the Safe Harbor Limit.

98. This information, detailing the presence of a regulated contaminant in the Niagen sold by ChromaDex, constitutes information "concerning or that [could] potentially impact the safety, identity, strength, quality or purity" of the Niagen sold by ChromaDex as contemplated by the Product Purity Provision.

99. Elysium discovered this information, and ChromaDex's failure to disclose it in breach of the Product Purity Provision, through testing of the Niagen purchased from ChromaDex in 2017. Elysium had undertaken testing after it learned that the Regulated Substance was a byproduct of the nicotinamide riboside

manufacturing process, which Elysium has undertaken significant efforts to remove from the nicotinamide riboside incorporated in Basis after its transition away from incorporation of ChromaDex's Niagen.

100. To confirm the presence of the Regulated Substance in Niagen and the existence of ChromaDex's breach of the Product Purity Provision, in the fall of 2017, Elysium also undertook to test a selection of Niagen-containing products on the market against the baseline of the Safe Harbor Limit of the Regulated Substance.

101. Nine of the eleven Niagen-containing products, including ChromaDex's own direct-to-consumer product, "TruNiagen," contained levels of the Regulated Substance in excess of the Safe Harbor Limit. The results were as follows:

Seller	**Product**	**Substance Levels in Comparison to Baseline Limit (*per Suggested Serving Size*)**	**Above Baseline?**
ProHealth, Inc.	NAD+ Ignite	428%	yes
Life Extension	NAD+ Cell Generator	365%	yes
Thrive Now Health	Niagen 300	318%	yes
High Performance Nutrition, Inc. (HPN)	Niagen N(r) NAD+ Booster	295%	yes
Genex Formulas	Niagen Nicotinamide Riboside	168%	yes
Nordic Clinical	Mitoboost	138%	yes
ChromaDex	**TruNiagen**	**129%**	**yes**
Thorne Research	NiaCel	108%	yes
Live Cell	NR-1	108%	yes
MAAC10	Ultra NR	81%	
Rejuvenation Therapeutics	NiaSun	59%	

102. ChromaDex's awareness of this information detailing the presence of a regulated contaminant in Niagen—and conscious decision not to disclose that information to Elysium, in breach of the Product Purity Provision—may be inferred from a number of facts.

103. First, ChromaDex claims in numerous regulatory submissions to FDA that the Regulated Substance is "undetectable" in Niagen, indicating that it conducts testing of Niagen for the Regulated Substance.

104. Next, as described above, ChromaDex at all relevant times possessed an in-house comprehensive suite of analytical services, and specifically boasted expertise in testing related to the California voter initiative.

105. ChromaDex put that expertise to use. As is also described above, ChromaDex conducted testing of its nicotinamide riboside for substances regulated by the California voter initiative, and provided statements signed by ChromaDex's Director of Quality Assurance to its customers that such testing had been carried out and the testing results were reported on certificates of analysis that accompanied each shipment of nicotinamide riboside sold.

106. Elysium's testing of Niagen-containing products on the market is further support that ChromaDex was aware of the presence of the Regulated Substance in Niagen, given the magnitude of the levels of the Regulated Substance found, particularly in comparison with the baseline Safe Harbor Limit.

107. Events postdating these testing results provide additional support to show that ChromaDex was aware of this information. Subsequent testing of the same products revealed that ChromaDex, although it did not submit a New Dietary Ingredient Notice to the FDA, had apparently altered its manufacturing process so as to reduce levels of the Regulated Substance to below the Safe Harbor Limit: Each

product tested, with the exception of "NAD+ Cell Regenerator" sold by Life Extension, contained levels of the Regulated Subtance below the Safe Harbor Limit.

108. Notably, during the period that ChromaDex apparently modified its manufacturing process, it was ramping up promotion of its own direct-to-consumer product, TruNiagen and thus exposing itself to potential direct liability under the California voter initiative. That ChromaDex expended efforts to reduce levels of the Regulated Substance only at this point is further evidence that it was previously aware of the presence of the Regulated Substance in Niagen during the period of time it was selling Niagen to Elysium, yet consciously failed to inform Elysium of that material information concerning the Niagen's quality and purity, in violation of the Product Purity Provision.

109. Moreover, in addition to failing to disclose known information concerning Niagen's quality and purity, ChromaDex in fact affirmatively concealed this information by providing lot-specific certificates of analysis that purported to disclose quality control information about each shipment yet entirely omitted mention of the presence of the Regulated Substance.

110. These certificates of analysis, which ChromaDex routinely provided to its NR customers, were intended to reassure its customers that the NR ChromaDex provided had been tested and met applicable quality and safety standards. As described above, ChromaDex represented to customers that the certificates of analysis would reflect testing results for chemicals subject to the California voter initiative in particular.

111. Given these certificates of analysis and ChromaDex's representation through the Product Purity Provision that it would provide information concerning or potentially impacting the purity and quality of the Niagen it sold, Elysium had no

reason to commission further special testing of the Niagen for the Regulated Substance at the time it received the shipments from ChromaDex.

112. Thus, Elysium had no reason to suspect that those certificates of analysis omitted the presence of the Regulated Substance above the Safe Harbor Limit, information that ChromaDex knew and that concerned and potentially impacted the quality and purity of the Niagen sold by ChromaDex. This inequitable conduct precludes ChromaDex from enforcing the NR Supply Agreement, seeking payment for exactly those non-conforming products whose defects ChromaDex fraudulently concealed, against Elysium.

~~80~~113. ChromaDex's breaches of the MFN Provision ~~and~~, Exclusivity Provision, cGMP Provision and Product Purity Provision have caused Elysium substantial damages, including, but not limited to, consequential damages. Had Elysium in fact been paying the lowest price for nicotinamide riboside, it would have had more cash on hand to purchase more new inventory and to market or create new products. And, because Elysium was not the exclusive producer of a combination of nicotinamide and pterostilbene (or a substantially similar ingredient) as a result of the breach of the Exclusivity Provision, other customers likely bought competitors' products and compromised Elysium's market share. Furthermore, had Elysium known that ChromaDex was not complying with either the cGMP Provision or Product Purity Provision and was supplying a product of lower purity or quality than warranted, it would not have agreed to purchase nicotinamide riboside from ChromaDex under the terms of the NR Supply Agreement.

ChromaDex Fails to Remedy Its Breaches, Despite Elysium's Best Efforts to Resolve the Parties' Disputes

~~81~~114. Elysium expended significant effort attempting to resolve this dispute amicably. Elysium had several conversations with ChromaDex officers and

directors, including Jaksch, Will Black (ChromaDex's Vice President of Sales and Marketing) and Rob Fried (a ChromaDex director), an in-person meeting with Jaksch and Fried in California and a subsequent follow-up call with Jaksch and Steve Block (a ChromaDex director). Those discussions led to the exchange of proposals between ChromaDex and Elysium, but were hampered by ChromaDex's refusal to provide information to Elysium necessary to calculate the credit due for ChromaDex's breach of the MFN Provision.

~~82~~115. Despite knowing that it was in material breach of the Agreements, ChromaDex failed to provide Elysium with the credit to which it is entitled, or even to engage in good faith discussions with Elysium to remedy the breaches.

~~83~~116. Indeed, rather than simply provide the information Elysium sought, Block's proposal was for Elysium to conduct an audit to determine the credit to which it is entitled.

~~84~~117. On December 7, 2016, Elysium requested such an audit from Tom Varvaro, ChromaDex's Chief Financial Officer.

~~85~~118. Elysium's request for an audit was ignored. Instead, ChromaDex responded by issuing a "non-renewal" notice purporting to terminate the NR Supply Agreement as of February 2, 2017.

~~86~~119. After Elysium requested the audit Block had offered, ChromaDex ceased communicating with Elysium through its officers and directors, and tasked Michael Brauser, one of its former directors who has, to Elysium's knowledge, no position within ChromaDex, to make a series of increasingly hostile and threatening calls to Elysium and one of its investors in an attempt to intimidate Elysium into forfeiting its rights and capitulating to ChromaDex's demands. When Elysium told Jaksch it would be pleased to continue discussions with ChromaDex management

but found Brauser's behavior counterproductive, ChromaDex responded with this lawsuit.

~~87~~120. ChromaDex's breaches not only damaged Elysium to an unknown extent, but also excused Elysium's further performance under the Agreements.

~~88~~121. Only ChromaDex can know the full extent of its breaches of the Supply Agreements. Those breaches injured Elysium and caused it to sustain damages in an amount to be proven at trial.

~~89~~122. Furthermore, ChromaDex fraudulently induced Elysium to execute the License and Royalty Agreement and to make substantial royalty payments under that contract. Elysium is entitled to recover those royalty payments and/or any further damages, in an amount to be proven at trial.

Elysium's Sale of Basis After Termination of the NR Supply Agreement

~~90~~123. Elysium, by virtue of ChromaDex's supply of NR under the NR Supply Agreement, had an implied license of any patent rights held by ChromaDex covering or related to NR or its manufacture.

~~91~~124. ChromaDex terminated the NR Supply Agreement effective February 2, 2017.

~~92~~125. In so doing, ChromaDex also terminated the implied license it had provided to Elysium in connection with the supply of NR.

~~93~~126. On information and belief, when ChromaDex terminated the NR Supply Agreement ChromaDex knew that Elysium intended to continue selling Basis and knew that, in order to do so, Elysium would need another source of NR other than ChromaDex.

~~94~~127. Despite the termination of the NR Supply Agreement, Elysium in fact does intend to continue, and has continued, to supply its customers with Basis, both now and in the future.

~~95~~128. Elysium sells Basis using NR that is not sourced from ChromaDex.

~~96~~129. In a May 2017 earnings call with investors, ChromaDex's CEO, Frank Jaksch, stated "[W]e are going to be focusing pretty heavily on ~~NIAGEN~~Niagen as ingredient technology. We have a substantial patent portfolio underlying in protecting it and we have multiple different ways."

~~97~~130. In an August 2017 earnings call with investors, Mr. Jaksch stated: "Elysium has stated that they have incorporated a new source of NR into their Basis product." Moments later, Mr. Jaksch continued, "Today ChromaDex has a comprehensive global patent portfolio of 16 patents and applications spanning the processing use and composition of nicotinamide riboside. We will vigorously defend this estate."

~~98~~131. In that same earnings call, ChromaDex's President and Chief Strategy Officer, Robert Fried, in reference to Elysium, stated that "[they] actually go out of their way to try to copy the ingredient and manufacture it who knows where and put it out in the marketplace."

~~99~~132. ChromaDex's public statements impliedly threaten Elysium with the assertion of ChromaDex's patent estate against Elysium based on Elysium's continued sale of Basis containing NR. ChromaDex has created a reasonable apprehension of imminent patent litigation against Elysium.

~~100~~133. There exists an actual and immediate controversy as to the enforceability of ChromaDex's patent estate against Elysium.

ChromaDex Has not Purged its Patent Misuse and Has Not Dissipated its Effects

~~101~~134. In its Third Amended Complaint ChromaDex alleged that it terminated the License and Royalty Agreement and that it was "unequivocally renounc[ing] any rights to collect or obtain royalties under the… License and Royalty Agreement with Elysium." ChromaDex also alleged that it was "further refunding and/or crediting any and all past royalties paid by all customers pursuant to all 'royalty-bearing trademark licenses.'" ChromaDex also alleged that "it will provide a credit to Elysium for all past royalties against the damages owed by Elysium in this case…." ChromaDex alleged that it has purged its patent misuse.

~~102~~135. ChromaDex did not allege, and has not alleged, that the effects of its patent misuse have been dissipated.

~~103~~136. Elysium has denied ChromaDex's allegation that ChromaDex has purged its misuse.

~~104~~137. ChromaDex has not purged its patent misuse and the effects of ChromaDex's misuse have not been dissipated. Therefore, ChromaDex's patent rights remain unenforceable.

~~105~~138. On information and belief, ChromaDex has not in fact refunded trademark royalties paid by customers other than Elysium. In fact, in its second quarter 2017 earnings conference call and in its second quarter 2017 securities filings, ChromaDex makes no mention of write-offs based on royalties owed by customers other than Elysium or losses based on royalties repaid to other customers. ChromaDex mentioned only royalties owed by Elysium.

~~106~~139. As for royalties paid by Elysium, ChromaDex has not actually returned to Elysium any of the royalties paid by Elysium under the License and

Royalty Agreement, much less the entire amount paid by ~~ChromaDex~~other customers.

~~107~~140. In fact, ChromaDex has told the SEC, its investors, and the public that it might not be required to provide restitution of those royalties unless it is "forced" to do so in litigation. ChromaDex stated in its second quarter 2017 Form 10-Q filed with the SEC in August 2017 that it "***may be forced*** to pay… restitution for any royalty payments that we received from" Elysium, but only if "we are unsuccessful in resolving the litigation on favorable terms to us."

~~108~~141. ChromaDex has also failed to dissipate other effects of its misuse. During the time in which ChromaDex unlawfully retained royalties obtained through its misuse, Elysium did not have access to those funds and lost the opportunity to use those funds for other purposes. ChromaDex has not repaid Elysium for the opportunity cost of its patent misuse or reasonable interest on the Elysium royalty payments ChromaDex has retained. ChromaDex has not compensated Elysium in any way on account of Elysium's unlawfully imposed royalty payments and has not dissipated the effects of ChromaDex's patent misuse.

~~109~~142. In addition, ChromaDex wrongly sued Elysium in an attempt to enforce the License and Royalty Agreement. As a result of that action, Elysium was required to expend substantial sums in attorneys' fees and costs. ChromaDex has not dissipated that additional effect of its patent misuse by repaying the fees and costs incurred by Elysium as a direct consequence of ChromaDex's attempt to enforce its unlawful agreement.

FIRST COUNTERCLAIM FOR RELIEF

(Breach of Contract – NR Supply Agreement)

~~110~~143. Elysium incorporates and re-alleges each and every allegation in paragraphs 1 to ~~109~~123 above as if fully set forth herein.

~~111~~144. The parties entered into the NR Supply Agreement on February 2, 2014.

~~112~~145. Elysium performed all of its obligations under the NR Supply Agreement, or its performance was excused by ChromaDex's breaches.

~~113~~146. The NR Supply Agreement unambiguously requires that ChromaDex issue a refund or credit to Elysium in the event that ChromaDex sells nicotinamide riboside or a substantially similar product to another purchaser for a lesser amount than Elysium paid for nicotinamide riboside. (NR Supply Agreement § 3.1.)

~~114~~147. ChromaDex sold nicotinamide riboside to other companies for a price less than the price at which ChromaDex sold nicotinamide riboside to Elysium but has not issued a refund or credit to Elysium, in breach of the NR Supply Agreement.

~~115~~148. The NR Supply Agreement, as amended by the Amendment to Supply Agreement, unambiguously covenants that ChromaDex will not sell, transfer or otherwise provide to any third party, or license or otherwise enable any third party to produce, both nicotinamide riboside and pterostilbene or any ingredient substantially similar to pterostilbene, either in combination or in separate form but marketed together. (NR Supply Agreement § 3.11.3.)

~~116~~149. ChromaDex has created or sold products containing both nicotinamide riboside and pterostilbene (or the substantially similar analog resveratrol) in combination or has enabled third parties, including its other customers, to create such products, in breach of the NR Supply Agreement.

~~117~~150. By failing to issue a refund or credit to Elysium, and by creating or selling, or permitting the creation or sale of, products other than Basis that contain both nicotinamide riboside and pterostilbene (or closely related analogs),

ChromaDex has materially breached the NR Supply Agreement and denied Elysium the benefit of its bargain.

151. The NR Supply Agreement also unambiguously covenants that all nicotinamide riboside ChromaDex sells to Elysium will be manufactured in accordance with Pharmaceutical cGMPs and applicable laws and regulations in the United States. (NR Supply Agreement § 3.7.)

152. By selling to Elysium nicotinamide riboside that was not manufactured in accordance with Pharmaceutical cGMPs, ChromaDex has materially breached the NR Supply Agreement and denied Elysium the benefit of its bargain.

153. To the extent the NR Supply Agreement purports to limit Elysium's remedies for ChromaDex's sale of nicotinamide riboside that was not manufactured in accordance with Pharmaceutical cGMPs and that did not comply with other applicable laws and regulations, such limited remedies are unenforceable because they fail of their essential purpose.

154. The NR Supply Agreement further unambiguously covenants that ChromaDex will promptly inform Elysium in writing of any information of which it becomes aware concerning or potentially impacting the safety, identity, strength, quality or purity of nicotinamide riboside sold to Elysium. (NR Supply Agreement § 3.9.)

155. By failing promptly to inform Elysium in writing of information of which it became aware concerning quality and purity of nicotinamide riboside sold to Elysium, ChromaDex has materially breached the NR Supply Agreement and denied Elysium the benefit of its bargain.

~~118~~156. Elysium has suffered damages and continues to be damaged as a result of ChromaDex's breaches, in an amount to be determined at trial.

SECOND COUNTERCLAIM FOR RELIEF

(Breach of the Implied Covenant of Good Faith and Fair Dealing – NR Supply Agreement)

~~119~~157. Elysium incorporates and re-alleges each and every allegation in paragraphs 1 to ~~118~~137 above as if fully set forth herein.

~~120~~158. The NR Supply Agreement contains an implied covenant of good faith and fair dealing (the "Implied Covenant"), which forbids either party from doing anything to defeat the reasonable expectations of the other.

~~121~~159. Elysium had the reasonable expectation that ChromaDex would not enable or encourage other companies to manufacture, sell or distribute products containing both nicotinamide riboside and pterostilbene or any substantially similar ingredient.

~~122~~160. ChromaDex violated the Implied Covenant by recommending to other customers that they create products containing both nicotinamide riboside and either pterostilbene or a substantially similar ingredient, which unfairly interfered with Elysium's right to receive the benefits of exclusivity under the NR Supply Agreement.

~~123~~161. Elysium has suffered damages and continues to be damaged as a result of ChromaDex's breach of the Implied Covenant.

THIRD COUNTERCLAIM FOR RELIEF

(Fraudulent Inducement – License and Royalty Agreement)

~~124~~162. Elysium incorporates and re-alleges each and every allegation in paragraphs 1 to ~~123~~142 above as if fully set forth herein.

~~125~~163. The parties entered into both the NR Supply Agreement and License and Royalty Agreement on February 2, 2014.

~~126~~164. During negotiations, ChromaDex falsely represented to Elysium that it required all of its customers who signed nicotinamide riboside supply agreements also to execute license and royalty agreements, under which customers agreed to pay royalties on product sales for use of ChromaDex marks, in addition to whatever amount they paid per kilogram for nicotinamide riboside.

~~127~~165. During a December 16, 2013 telephone call, Jaksch falsely represented to Marcotulli and Alminana that ChromaDex required all of its customers who purchased nicotinamide riboside to sign trademark license and royalty agreements, without regard to whether the customers wished or intended to use ChromaDex marks.

~~128~~166. This representation was knowingly false when made. The Fraudulent Spreadsheet confirms that at least one purchaser of nicotinamide riboside that contracted with ChromaDex before Elysium did was not required to sign a license and royalty agreement or pay royalties.

~~129~~167. Elysium justifiably relied on this misrepresentation because it believed ChromaDex's demand for a license and royalty agreement was non-negotiable, in view of ChromaDex's false claim that it required an agreement of this nature from each and every one of its customers. Elysium therefore forwent the opportunity to negotiate an agreement with ChromaDex that did not require the payment of royalties, and instead focused its efforts in negotiations on other aspects of the NR agreement. At the time ChromaDex made the misrepresentation, Elysium was ignorant of its falsity and believed it to be true and could not have reasonably discovered the true facts.

~~130~~168. The representation was made with the intent to deceive Elysium and induce it to enter into the License and Royalty Agreement and did, in fact, deceive and induce Elysium to enter into License and Royalty Agreement.

~~131~~169. As a result of ChromaDex's fraud, Elysium is entitled to the return of all royalties paid under that contract or, in the alternative, damages in an amount to be proven at trial.

FOURTH COUNTERCLAIM FOR RELIEF

(Declaratory Judgment of Patent Misuse)

~~132~~170. Elysium incorporates and re-alleges each and every allegation in paragraphs 1 to ~~131~~150 above as if fully set forth herein.

~~133~~171. ChromaDex has conditioned its supply of nicotinamide riboside, and access to patent rights accompanying such supply, on purchasers' (including Elysium's) agreement to license ChromaDex's trademarks, whether the purchasers want such a license or not.

~~134~~172. ChromaDex has market power in the supply of nicotinamide riboside, and its tying of access to its patent rights to a royalty-bearing trademark license impermissibly broadens the scope of those patent rights, with anticompetitive effect.

~~135~~173. ChromaDex's conduct constitutes misuse of its patent rights, including the '086 patent, the '807 patent and other patents asserted by ChromaDex as covering nicotinamide riboside or its use or manufacture.

~~136~~174. The '086 patent, the '807 patent and other patents asserted by ChromaDex as covering nicotinamide riboside or its use or manufacture are unenforceable by ChromaDex unless and until ChromaDex has fully purged its misuse and dissipated all of the effects of that misuse.

~~137~~175. ChromaDex has not purged its patent misuse and has not dissipated the effects of its misuse. ChromaDex has not, for example, actually returned any royalties paid by Elysium under the License and Royalty Agreement and, on information and belief, has not repaid any other customers. ChromaDex has

not paid interest on those monies or for the opportunity cost to Elysium resulting from ChromaDex's unlawful retention of the royalties paid by Elysium, and it has not repaid the costs and attorneys' fees incurred by Elysium due to ChromaDex's attempts to enforce its unlawful License and Royalty Agreement.

~~138~~176. Prior to February 2017, Elysium was an implied licensee of ChromaDex's patent rights as a consequence of ChromaDex's supply of NR to Elysium under the NR Supply Agreement.

~~139~~177. Prior to the filing of this lawsuit, ChromaDex terminated the NR Supply Agreement, effective February 2017, thereby also terminating its licenses of patent rights to Elysium.

~~140~~178. Elysium has been supplying, and intends to sell Basis to its customers.

~~141~~179. ChromaDex has continued to tout its patent rights to its investors and the public, has stated that it intends to defend its patent rights in the context of describing Elysium's continued sale of Basis containing NR, has accused Elysium of obtaining supply of NR from another source, and has accused Elysium of "copying" NR. ChromaDex's statements have impliedly threatened Elysium with patent litigation and created a reasonable apprehension of suit.

~~142~~180. ChromaDex has not provided Elysium with any covenant not to sue, let alone an irrevocable covenant not to sue, to enforce ChromaDex's patent estate against Elysium.

~~143~~181. As a consequence of the foregoing, a substantial controversy exists between Elysium and ChromaDex, having adverse interests, and of sufficient immediacy and reality to warrant relief with respect to a determination of the enforceability of ChromaDex's patent rights.

FIFTH COUNTERCLAIM FOR RELIEF

(Restitution for Unjust Enrichment)

~~144~~182. Elysium incorporates and re-alleges each and every allegation in paragraphs 1 to ~~143~~162 above as if fully set forth herein.

~~145~~183. ChromaDex's requirement, under the License and Royalty Agreement, that Elysium purchase a license and pay royalties for ChromaDex's trademarks, in exchange for access to ChromaDex's supply of NR and to ChromaDex's patent rights, was unlawful and constituted patent misuse.

~~146~~184. Elysium paid royalties under the License and Royalty Agreement.

~~147~~185. The License and Royalty Agreement was unlawful and unenforceable.

~~148~~186. ChromaDex is and was unjustly enriched by retaining royalties paid under an unlawful and unenforceable agreement.

~~149~~187. ChromaDex has not reimbursed Elysium for any royalties paid under the License and Royalty Agreement.

~~150~~188. Elysium is entitled to restitution of royalties paid under the unlawful License and Royalty Agreement, plus interest and attorneys' fees.

WHEREFORE, Counterclaimant Elysium prays for judgment:

(1) For all damages available by reason of ChromaDex's breaches of the NR Supply Agreement including, without limitation, offset of the amount, if any, Elysium may owe to ChromaDex;

(2) For all damages available by reason of ChromaDex's breaches of the implied covenant of good faith and fair dealing;

(3) For all remedies available by reason of ChromaDex's fraudulent inducement of Elysium to enter into the License and Royalty Agreement, including,

without limitation, compensatory damages, punitive damages and restitution of any royalty payments conveyed by Elysium pursuant to the agreement;

(4) Declaring that ChromaDex has misused the '086 and '807 patents and other patents asserted by ChromaDex as covering nicotinamide riboside or its use or manufacture;

(5) Declaring that ChromaDex has not purged its patent misuse and has not dissipated the effects of its misuse;

(6) Declaring that the '086 patent, the '807 patent and other patents asserted by ChromaDex as covering nicotinamide riboside or its use or manufacture are unenforceable by ChromaDex as a consequence of ChromaDex's patent misuse;

(7) For restitution of all royalties paid to ChromaDex by Elysium pursuant to the License and Royalty Agreement, and all interest that would otherwise have been earned on such royalties;

(8) For Elysium's costs and attorneys' fees;

(9) For such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Defendant/Counterclaimant Elysium respectfully requests a trial by jury on all issues so triable.

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DATED: ~~October 11, 2017~~February 22, 2018

SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP

FOLEY HOAG LLP

By: /s/ Joseph N. Sacca
JOSEPH N. SACCA
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Summary report: **Litéra® Change-Pro TDC 10.1.0.400 Document comparison done on 2/22/2018 9:44:34 PM**	
Style name: Option 3a Strikethrough Double Score No Moves	
Intelligent Table Comparison: Active	
Original DMS: dm://NYCSR03A/1514879/2	
Description: Elysium Second_Amended_Counterclaims_FINAL	
Modified DMS: dm://NYCSR03A/1532046/16	
Description: Elysium Third Amended Counterclaim	
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Move To	0
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Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format changes	1
Total Changes:	433