EXHIBIT "A"

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

ROBERT SUTHERS and NIWANA MARTIN, Plaintiffs, v. AMGEN, INC., a Delaware Corporation, Defendant.	Docket No.:05 Civ. 4158 (PKC) A Civil Action

CERTIFICATION OF MICHAEL HUTCHINSON, M.D.

BACKGROUND

1. I am currently Associate Professor of Clinical Neurology at the New York University School of Medicine, where I have been on the faculty since 1994.

2. I am a board certified neurologist with a background and expertise in physics, MRI, and movement disorders.

3. I have published several peer-reviewed papers on Parkinson's Disease, notably on imaging and on the treatment of dementia.

4. I obtained a BSc in Chemical Physics from the University of Bristol in 1973.

5. Thereafter, I obtained a Ph.D. in microwave spectroscopy in 1977 under the mentorship of Sir Harold Kroto.

6. Between 1977 and 1985, I did theoretical research on the quantum mechanics of lasers and on the interaction of radiation with matter.

7. In 1985, I obtained N.I.H. sponsorship to study the physics of MRI. I invented an MRI scanning technique now known as parallel MRI. This technique forms the basis of modern Magnetic Resonance Imaging.

8. I obtained my M.D. in 1988 from the University of Miami, underwent Residency training in Neurology at the University of Washington, then, after a sabbatical at The Institute of Neurology, Queen Square, London, undertook fellowship training in the Neuroimaging of Movement Disorders, at U.C.L.A.

9. During this fellowship I analyzed Positron Emission Tomography scans of patients in the first study of nigral tissue transplants for Parkinson's Disease. I found no discernible effect from this procedure.

10. Since coming to New York I have personally examined, and cared for, over 1,000 patients with Parkinson's Disease (PD).

11. In 1999, and independently of Donald Gash ("Dr. Gash") and Steven Gill ("Mr. Gill"), I approached Amgen about the possibility of intraputamenal delivery of GDNF for the treatment of PD.

12. Despite Amgen's current assertions (Perlmutter Affidavit, ¶ 71), corporate interest in GDNF at that time was zero. I was told by Michael Klein, an employee of Amgen, that after the failed ICV study there was to be a moratorium on GDNF research.

13. Despite holding the patent rights to GDNF, Amgen appeared to be unaware that there is a primary deficiency of this protein in Parkinson's Disease, hence the rationale for its replacement. Amgen finally agreed to supply me with GDNF.

14. In early 1999, I wrote a clinical protocol for intraputamenal delivery of GDNF.

15. In October 1999, Dr. Gash provided me with toxicology data on four parkinsonian monkeys which had undergone intraputamenal infusion of GDNF. Clinical results were striking and the toxicology was unremarkable.

16. This enabled me to approach the Food and Drug Administration ("FDA") for permission to undertake a study of GDNF in humans.

17. In February 2002, as FDA approval was about to be given, I was telephoned by Dr. Traub, a neurologist working for Amgen, who told me that a human trial was underway in England, with very promising results.

18. Dr. Traub informed me that Amgen would not consider further support for my study, but invited me to participate in a multicenter clinical trial of GDNF that would be sponsored by Amgen. Dr. Gash had just obtained permission from the FDA to perform his own open-label study of GDNF in Kentucky.

19. Thereafter, at a total of seven centers (Bristol, NYU, Chicago, Toronto, Oregon, Duke and Virginia), thirty-four patients with PD entered a double-blind, placebo-controlled study of intraputamenal infusion of GDNF. In addition, the original 5 patients from Bristol continued to receive GDNF, as well as 10 patients in Kentucky.

EFFICACY OF GDNF IN TREATING PARKINSON'S DISEASE

20. By the time the double blind trial (DBT) began in the summer of 2003, all 15 patients (100%) in Bristol and Kentucky were showing remarkable improvements in their symptoms.

21. I respectfully disagree with the statement by Dr. Harper (Harper Affidavit ¶ 4) regarding the so-called "placebo effect." There is nothing in the history of medicine where a placebo effect of this magnitude has been witnessed. Nothing, whether surgical or non-surgical,

resembles this. To be precise, the fact that fifteen out of fifteen patients have become progressively better, year by year, in a disease where progressive worsening is inevitable, is unheard of in regard to a "placebo effect." Furthermore, there was no statistical evidence from the DBT of a significant placebo effect.

22. I am familiar with the details of the placebo effect seen in the previous trial of nigral tissue transplantation. The trial was about the same size as the current DBT of GDNF. Half the patients received sham surgery, where a burr hole was drilled in the skull but the patients were not initially transplanted. The other half of the patient group had a burr hole drilled in the skull and received nigral tissue. After one year both groups of patients were given a questionnaire and asked if they thought they had received the transplant. Approximately 25-30% of the patients in both arms of the study felt they had received the transplant, but the large majority did not. In those who thought they had received transplanted tissue there was minimal, if any, improvement in PD scores. This is a classic placebo effect.

23. Fifteen out of fifteen patients becoming objectively better over months and years, in a condition where worsening is otherwise inevitable, is not a placebo effect.

24. Therefore, in retrospect, a case could have been made that a DBT was not required. That is, in regard to Evidence Based Medicine, when something is extremely obvious there may be no need for a DBT (c.f. "The World is Round $p<0.05$", by Dr. J. Cohen, author of Power Analysis).

25. By a reductio ad absurdam, I shall illustrate what I mean. Consider testing whether parachutes can prevent serious injury or death in the instance of individuals jumping out of airplanes. Clearly, a DBT in this context would be completely unethical. This extreme example illustrates a fundamental limitation of DBT.

26. However there are other limitations. In regard to the present study, it became apparent in retrospect that it was underpowered. This is because it had been assumed that the statistical "noise," that is, the variation in repeated test scores by the same scorer, would be no more than fifteen percent. In fact, it was closer to thirty percent, practically guaranteeing that the study would fail to meet the preset clinical endpoint. This could not have been anticipated and was the fault of nobody.

27. Nevertheless, when the study is analyzed, as it should have been (given its small size and the lack of a bell-curve distribution), using non-parametric statistical methodologies (e.g. Wilcoxon Rank Sign Test or the Sign Test), rather than a Student t test, there is either a strong signal suggestive of drug efficacy (Wilcoxon) or evidence beyond reasonable scientific doubt of drug efficacy (Sign Test). This is despite the considerable noise in the data.

28. Most Phase II studies fail to show any signal suggestive of drug efficacy and are abandoned. Interestingly, of the small minority of Phase II studies which go on to Phase III, most have failed to meet their primary endpoints, but are recommended to go on to phase III because they show a signal suggestive of drug efficacy. This was such a study.

29. I therefore respectfully disagree with Drs. Nutt and Wooten. When a study has failed to meet the preset endpoints, it is not unscientific to do a post hoc analysis of the data. On the contrary, it is unscientific not to do one. It is of exceptional importance to know if "failure" represents lack of efficacy of a drug, or whether there were problems with the study such that the apparent failure may not have been real (i.e. a Type II error). This was such a study.

30. I also respectfully disagree with Dr. Lang that my opinions represent the minority view. In fact, they represent the majority view (seven investigators, representing 2/3 of the patients). Even if it were the minority view it would not necessarily be invalid.

31. I also respectfully disagree with Dr. Harper's characterization of the investigator meeting in November 2004 (Harper Affidavit ¶ 46). I presented one alternative interpretation of the data, that was very well received, to my personal knowledge, by at least six of the other investigators, as well as senior personnel at Medtronic, as well as at least one senior advisor to Amgen.

32. Because of the points raised above (26-31), I also respectfully disagree with Dr. Perlmutter (Perlmutter Affidavit ¶ 28) where he states that "The findings [from the phase II study] were unambiguous." In fact the findings from the study were so ambiguous that the paper submitted to the New England Journal of Medicine was rejected.

33. Indeed Perlmutter ¶ 28 appears to be inconsistent with Perlmutter ¶ 32. If the results from the study were unambiguous why would Amgen consider another Phase II trial?

34. Finally, Mr. Gill's first patient died recently of a heart attack, four years after starting GDNF infusion, at the age of 75. He had been infused only on one side of the brain. After autopsy a startling finding was made. Tyrosine hydroxylase staining of putamenal tissue (a measure of dopamine function) was five times greater on the infused side than on the other side. Furthermore, the infused side showed dramatic evidence of neuronal resprouting. These results provide direct evidence that GDNF is an effective treatment for Parkinson's Disease. They are incontrovertible and will shortly be published in the world's leading medical journal Nature Medicine.

35. Thus, GDNF is an effective treatment for Parkinson's Disease.