IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD

In the *Inter Partes Review* (IPR) of U.S. Patent No. 8,822,438

DECLARATION OF DEFOREST MCDUFF, Ph.D.

I, DeForest McDuff, Ph.D., declare as follows:

I. Introduction

A. Qualifications

- 1. I am a Vice President of Intensity Corporation and an expert in applied business economics, with more than ten years of experience in consulting, finance, and economic research. I provide expert witness testimony and consulting in a variety of areas, including lost profits, reasonable royalties, unjust enrichment, commercial success, finance, statistics, valuation, and business optimization.
- 2. My expertise and experience span a variety of topics, including intellectual property, competition, antitrust, finance, labor, employment, and class action. My work in intellectual property spans the life sciences (including pharmaceuticals, biotechnology, diagnostics, and medical devices), electronics

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(including consumer electronics, semiconductors, computers, and

telecommunications), and has included projects on a diverse range of other

industries (such as scuba diving equipment, golf clubs, and contact lenses). I

frequently provide expertise and analysis in evaluating commercial success in the

pharmaceutical industry.

3. I earned my Ph.D. in economics from Princeton University. At

Princeton, I received a National Science Foundation Graduate Research Fellowship

for academic research studying economic and statistical properties of housing

markets and financial derivatives. I have published research in several peer-

reviewed academic journals. I graduated summa cum laude with undergraduate

degrees in economics and mathematics from the University of Maryland.

4. My curriculum vitae, provided in Attachment A-1, contains more

details on my background, experience, publications, and prior expert testimony.

B. Scope of Work

5. Intensity Corporation has been retained by McNeely, Hare & War,

LLP on behalf of Amerigen Pharmaceuticals Limited in connection with my work

in this matter. Intensity Corporation is being compensated at a rate of \$700 per

hour for my work and at lower rates for time spent by others on my team. The

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compensation of Intensity Corporation is not dependent on the substance of my

testimony or the outcome of this matter.

6. For this declaration, I was asked to evaluate aspects of commercial

success, from an economic perspective, as it pertains to Zytiga (abiraterone

acetate) and U.S. Patent No. 8,822,438. This declaration is a statement of my

opinions in this matter and the basis and reasons for those opinions. In forming the

opinions expressed in this declaration, I have relied upon my education,

experience, and knowledge of the subjects discussed. I have also reviewed,

considered, or relied upon documents and other materials, which are cited herein

and/or listed in Attachment A-2.

7. This declaration summarizes only my current opinions, which are

subject to change depending upon additional information and/or analysis. The

entirety of my declaration, including attachments and referenced materials,

supplies the basis for my analysis and conclusions. The organizational structure of

the declaration is for convenience. To the extent that facts, economic analysis, and

other considerations overlap, I generally discuss such issues only once for the sake

of brevity. Neither the specific order in which each issue is addressed nor the

organization of my declaration or attachments affects the ultimate outcome of my

analysis.

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II. Background

A. Prostate cancer

8. Prostate cancer occurs in the male prostate, a small gland that produces the seminal fluid that nourishes and transports sperm.¹ Prostate cancer is one of the most common types of cancer in men,² with a one-in-seven lifetime risk

AMERIGEN 1051: Mayo Clinic Website, Prostate cancer, http://www.mayoclinic.org/diseases-conditions/prostate-cancer/basics/definition/con-20029597?p=1 (accessed 7/24/2015).

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AMERIGEN 1051: Mayo Clinic Website, Prostate cancer, http://www.mayoclinic.org/diseases-conditions/prostate-cancer/basics/definition/con-20029597?p=1 (accessed 7/24/2015).

HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY of being diagnosed.³ In recent years, estimates for prostate cancer indicate over 220,000 new cases and more than 27,000 deaths annually in the US alone.⁴

9. Patients diagnosed with prostate cancer may undergo a variety of treatments options, including: (1) active surveillance (*i.e.*, no action taken until disease progresses);⁵ (2) radiation therapy (*i.e.*, using high-powered energy to kill

AMERIGEN 1041: Cancer.org (ACS), "What are the key statistics about prostate cancer?"

http://www.cancer.org/cancer/prostatecancer/detailedguide/prostatecancerke ystatistics (accessed 8/20/2015).

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