COURSE SYLLABUS

Ethics in Biopharmaceutical Patent and Regulatory Law
Spring 2019, Biotechnology GU4161

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Course Objective

This course – the first of its kind at Columbia – introduces students to a vital subfield of ethics focusing on patent and regulatory law in the biotech and pharmaceutical sectors. The course combines lectures, structured debate and research to best present this fascinating and nuanced subject. Successful completion of Biotechnology Law (GU4160) is a course prerequisite. That is because properly exploring this branch of bioethics requires an in-depth understanding of biotech and pharmaceutical patent and regulatory law.

Course Overview

In recent years, ethics disputes relating to biotech and pharmaceutical patent and regulatory law have become ubiquitous. The news has been filled with stories of public outrage over everything from denial of compassionate drug use to unaffordable biologic drugs, and from questionable clinical trial practices to so called "pay-for-delay" settlement agreements between generic and brand name drug companies. These issues, and many more, show just how often biotech and pharmaceutical patent and regulatory laws conflict with society's sense of right and wrong.

Legislatures, courts and industry leaders alike continue to address these controversies through law, policy and practice as best they can. Yet, such efforts often fall short.

Understanding these important ethics issues naturally requires familiarity with the underlying science and law. However, identifying, understanding, writing about, debating and resolving ethics issues – particularly those at the crossroads of such complex fields – also requires practice. This course offers precisely that.

Toward that end, the course combines three approaches: (i) traditional lectures with questions and discussion as needed; (ii) student research papers (i.e., "position" papers);

and (iii) structured student-on-student "debates." The research papers and debates warrant some brief remarks here.

Research Assignments

Each student will write two "solo" research papers, and participate in two "group" research-based assignments. The Research Writing Assignments Memorandum provides all details regarding these assignments.

Briefly, though, in each four-page solo research paper, each student will engage in written role-playing by separately advocating *both sides* of a suitable bioethics issue of her/his choice. Each "side" will be advocated *as a defined figure* (e.g., a CEO, NGO leader, or government official) likely to take that side of the issue.

In each of the two short group research assignments, each student (i.e., each group) will again engage in written role-playing, this time by advocating *one side* of a pre-assigned ethics issue. The opposing group will then rebut the position advocated, followed in turn by a counter-rebuttal. This is, in essence, a written debate.

These assignments improve writing ability generally. Importantly, they also strengthen the ability to identify and deal with weaknesses in a given position on an issue.

Debates

The debates will also stress role-playing, and will be akin to interactive panel discussions and news interviews conducted between opposing parties. For example, in a debate, one student might assume the role of a biotech company's CEO, while the other would play the director of a patient advocacy group opposed to the company's allegedly unethical patent and pricing strategies. These exercises differ in format, tone and purpose from "traditional" debates where, typically, the emphasis is on scoring as many "points" as possible within a given time limit. Here, our goal is to be as persuasive as possible given the scenario at hand – a task often best accomplished by slowly and artfully making one or two key points.

Most debates will be student-on-student. Some, however, will be group-on-group. Importantly, students will *switch positions* mid-debate so that they can reap the benefits of arguing both sides of each issue.

The use of debates and position-based research papers arms qualified students with vital skills throughout their careers in science, industry, venture capital and government. These include the ability to spot and understand patent and regulatory ethics issues, lead others in navigating them and, when necessary, persuade others of the merits of one position over another.

The two solo research papers are each worth 50% of the course grade. The group research assignments are critiqued and discussed, but not graded. Class participation,

particularly in debates, is required. This participation will not be graded, although there will be a grade deduction of up to 10% in the unlikely event of non-participation.

Class Schedule

The class schedule is provided below. Within reason, the material to be covered is subject to change, particularly to accommodate changes in the law and the addition of relevant topics based on student demand. Likewise, the timing of each class relative to its corresponding debate is also subject to change.

Class 1 – January 23, 2019

Course overview.

Lecture 1 – The practice of "compassionate use" by a drug company, whereby the company provides its investigational new drug to a critically ill patient outside the context of a clinical trial, *before* the FDA approves the company's NDA or BLA for the drug. This practice's potential risks and benefits for drug companies, compassionate use recipients, and target patient populations.

Class 2 – January 30, 2019

Debate 1 – Compassionate use.

Lecture 2 – Litigious corporate behavior in the agricultural biotech industry, and the ethical tension between legitimately defending one's own patent rights and pursuing individual farmers and merchants suspected of *unintentional* infringement. The matter of Monsanto's right to assert its Roundup Ready® seed patents against unintentionally infringing organic farmers.

Class 3 – February 6, 2019

Debate 2 – Agricultural patent enforcement.

Lecture 3 – Ethically flawed informed consent procedures in foreign clinical trials. The question of which informed consent standard should apply to a U.S. drug company conducting a trial in a developing country. The case of *Abdullahi v. Pfizer* and Pfizer's catastrophic Nigerian Trovan® trial in 1996.

Class 4 – February 13, 2019

Debate 3 – Informed consent procedures in foreign clinical trials.

Lecture 4 – The recently implemented federal statute governing the labeling of GMO foods in the United States. The ethical facets of label types permitted under the new regulations.

Class 5 – February 20, 2019

Debate 4 – GMO labeling

Lecture 5 – Compulsory licenses and parallel imports, and the degree to which they should be permitted in response to humanitarian crises, i.e., the ethical considerations of choosing between a government's need to protect its citizens from grave harm and industry's need for a functioning patent system. The AIDS crisis, and South Africa's introduction of Section 15C into its Medicines and Related Substances Control Act (MRSCA). Article 31(k) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and the ethically proper scope of parallel importation via back-to-back compulsory licenses.

Class 6 – February 27, 2019

Debate 5 – Compulsory licenses and parallel imports.

Lecture 6 – The ethics of using trade secret protection with respect to the genetic information of another. Myriad Genetics' reliance on trade secret protection in maintaining a proprietary database of correlations between specific BRCA1/2 gene mutations and cancer prognoses, and this business model's implications for healthcare transparency and the patient's right to understand her own prognosis and its underlying genetic basis.

Class 7 – March 6, 2019

Debate 6 – Keeping genetic information as a trade secret.

Lecture 7 – The controversial practice of "product hopping" in the pharmaceutical industry used to prolong market dominance for a drug beyond the expiration of its earliest filed patents. The case of *New York v. Actavis*, and the anti-trust implications of Actavis' plan to thwart generic competition by prematurely withdrawing its Alzheimer's drug Namenda IR from the market and replacing it with its newer product Namenda XR.

Class 8 – March 13, 2019

Debate 7 – Product hopping.

Lecture 8 – The practice whereby an innovator company sells its drug as a brand-name product *and* as a generic product – known as an "authorized generic." The ethics of authorized generics, particularly in relation to ANDA exclusivity. The case of Mylan's authorized generic version of EpiPen® in the wake of public outcry over the cost of its brand-name version of that product.

Class 9 – March 27, 2019

Debate 8 – Authorized generics.

Lecture 9 – The role of Risk Evaluation and Mitigation Strategies (REMS) in the FDA's drug approval scheme. The case of Celgene's REMS for its anti-cancer drugs Thalomid and Revlimid, and assertions by generic competitors that they violate antitrust law.

Class 10 – April 3, 2019

Debate 9 – REMS.

Lecture 10 – The recent practice of publicly challenging a pharmaceutical company's patents via *inter partes* review while, at the same time, financially benefitting from "shorting" that company's stock. The case of hedge fund manager Kyle Bass and his Coalition for Affordable Drugs.

Class 11 – April 10, 2019

Debate 10 – Pharmaceutical stock shorting via IPR patent challenges.

Lecture 11 – Emerging ethics issues in biopharmaceutical patent and regulatory law [tbd].

Class 12 – April 17, 2019

Debate 11 – Emerging ethics issues in biopharmaceutical patent and regulatory law [tbd].

Students briefly present their first solo research papers.

Class 13 – April 24, 2019

Students finish briefly presenting their first solo research papers.

Class discussion of the two group assignments.

Class 14 – May 1, 2019

Students briefly present their second research papers.

Preliminary Reading List

Lectures and Debates

A. Caplan and K. Moch, "Rescue Me: The Challenge Of Compassionate Use In The Social Media Era", Health Affairs Blog (2014)
http://healthaffairs.org/blog/2014/08/27/rescue-me-the-challenge-of-compassionate-use-in-the-social-media-era/

C. Klugman, "Cost of Compassionate Use is Simply Too High", Bioethics Research Library of Georgetown University (2015)
https://bioethics.georgetown.edu/2015/05/cost-of-compassionate-use-is-simply-too-high/

OSGATA v. Monsanto, Petition for Writ of Certiorari to the U.S. Supreme Court (2013)
http://www.pubpat.org/assets/files/seed/OrganicSeedSCTPetition.pdf

C. Silver, "Monsanto versus the people", Al Jazeera (2013)
http://www.aljazeera.com/indepth/opinion/2013/01/201311071754973439.html

G. Annas, "Globalized Clinical Trials and Informed Consent", N.E.J.M. 360:20 (2009)
http://www.ncbi.nlm.nih.gov/pubmed/19439740

M. Afolabi, et al., "Informed consent comprehension in African research settings", Tropical Medicine and International Health, Vol. 19, No. 6, pp. 625-642 (2014)
http://onlinelibrary.wiley.com/doi/10.1111/tmi.12288/epdf

Abdullahi v. Pfizer, 562 F.3d 163 (2d Cir. 2009)
https://casetext.com/case/abdullahi-v-pfizer-inc

A. Harmon, "G.M.O. Foods Will Soon Require Labels. What Will the Labels Say?", New York Times (2018)
https://www.nytimes.com/2018/05/12/us/gmo-food-labels-usda.html

"National Bioengineered Food Disclosure Standard", Federal Register (December 21, 2018)
https://www.federalregister.gov/documents/2018/12/21/2018-27283/national-bioengineered-food-disclosure-standard

C. Siegner, "USDA issues final GMO-labeling guidelines for food", FoodDive (December 21, 2018)
https://www.fooddive.com/news/usda-issues-final-gmo-labeling-guidelines-for-food/544944/

J.H. Reichman, "Compulsory licensing of patented pharmaceutical inventions: evaluating the options", J. Law Med. Ethics (2010)
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2893582/

W. Fisher III and C. Rigamonti, "The South Africa AIDS Controversy: A Case Study in Patent Law and Policy", The Law and Business of Patents, Harvard Law Review (2005)
http://cyber.law.harvard.edu/people/tfisher/South%20Africa.pdf

R. Cook-Deegan, et al., "The Next Controversy in Genetic Testing: Clinical Data as Trade Secrets?", European J. of Human Genetics (2012)
http://www.nature.com/ejhg/journal/v21/n6/full/ejhg2012217a.html

New York v. Actavis, No. 14-4624 (2nd Cir., May 22, 2015)
http://www.ag.ny.gov/sites/default/files/pdfs/bureaus/antitrust/NY_v.Actavis-CA2_public_opinion.pdf

M.S. Royall, et al., "Antitrust Scrutiny of Pharmaceutical 'Product Hopping'", Antitrust (2013)
http://www.gibsondunn.com/publications/Documents/RoyallAntitrustScrutinyABA.pdf

Z. Brennan, "Authorized Generics: Why Mylan Would Compete With Itself in the EpiPen Market", Regulatory Focus (2016)
https://www.raps.org/regulatory-focus%E2%84%A2/news-articles/2016/8/authorized-generics-why-mylan-would-compete-with-itself-in-the-epipen-market

"Authorized Generics", Global Policy & International Public Affairs, Pfizer (2018)
https://www.pfizer.com/files/about/Authorized_Generics_2018.pdf

N.S. Banait, "Authorized Generics: Antitrust Issues and the Hatch-Waxman Act", Fenwick & West LLP (2005)
https://www.fenwick.com/FenwickDocuments/Authorized_Generics.pdf

"FDA Basics Webinar: A Brief Overview of Risk Evaluation and Mitigation Strategies (REMS)", FDA Website
https://www.fda.gov/aboutfda/transparency/basics/ucm325201.htm

"Risk Evaluation and Mitigation Strategies: Modifications and Revisions Guidance for Industry", CDER and CBER (2015)
https://www.fda.gov/downloads/drugs/guidancecomplianceregulatoryinformation/guidances/ucm441226.pdf

T. Sullivan, "Antitrust Lawsuit Against Celgene Over Thalomid and Revlimid Focuses on REMS Requirements", Policy & Medicine (2018)
https://www.policymed.com/2014/08/antitrust-lawsuit-against-celgene-over-thalomid-and-revlimid-focuses-on-rems-requirements.html

J. Walker and R. Copeland, "New Hedge Fund Strategy: Dispute the Patent, Short the Stock", The Wall Street Journal (2014)
http://www.wsj.com/articles/hedge-fund-manager-kyle-bass-challenges-jazz-pharmaceuticals-patent-1428417408

Group Written Debate Assignments

Mayo v. Prometheus, 132 S. Ct. 1289 (2012)
https://www.law.cornell.edu/supremecourt/text/10-1150

Ariosa v. Sequenom, 788 F.3d 1371 (Fed. Cir. 2015)
http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/14-1139.Opinion.6-10-2015.1.PDF

E. Marandett, "Ariosa v. Sequenom Signals Trouble Ahead For Life Sciences", Law360 (2015)
http://www.law360.com/articles/718236/ariosa-v-sequenom-signals-trouble-ahead-for-life-sciences

FTC v. Actavis, 570 U.S. 756 (2013)
https://www.law.cornell.edu/supremecourt/text/12-416

M. Carrier, "FTC v. Actavis: Where We Stand After 5 Years", IP Watchdog (2018)
https://www.ipwatchdog.com/2018/06/18/ftc-v-actavis-stand-5-years/id=98536/

"FTC Report on Drug Patent Settlements Shows Potential Pay-for-Delay Deals Decreased Substantially in the First Year Since Supreme Court's Actavis Decision", Federal Trade Commission (2016)
https://www.ftc.gov/news-events/press-releases/2016/01/ftc-report-drug-patent-settlements-shows-potential-pay-delay

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