

**Shine “Sean” Tu**  
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**Education:**

May 2008

**University of Chicago Law School, J.D. with Honors**  
Research Assistant to Judge Richard A. Posner- United States Court of Appeals for the Seventh Circuit

**Bar Admissions:** Virginia State Bar, District of Columbia Bar, U.S. Court of Appeals for the Federal Circuit, Eastern District of Virginia, and the U.S. Patent & Trademark Office.

Jan. 2003

**Cornell University Graduate School, Ph.D.**  
Doctor of Philosophy in Pharmacology / Minor in Cancer Cell Biology

May 1997

**University of Florida Undergraduate, B.S./B.S.**  
Bachelor of Science in Chemistry  
Bachelor of Science in Microbiology

**Experience:**

2011-Present

**Professor of Law- West Virginia University College of Law.**

- **Teaching: Property Law, Patent Law; Patent Prosecution and Claim Drafting; Trademark Law; Copyright Law; Genetic Property; Food and Drug Law; Law and Science.**
- Tu, S. *Office Action Grant Ratio (OGR): A New Metric for Patent Examiner Activity*. (in manuscript)
- Port, K., Tu, S., and Reid, A., *International Encyclopaedia of Laws*, (in manuscript).
- Tu, S. *Invalidated Patents and Associated Examiners* 18 *Vanderbilt Journal of Entertainment and Technology* 135 (2015).
- Goodwin, M., Tu, S., and Paris, J. *Biotechnology, Bioethics, and the Law*. LexisNexis (2014).
- Tu, S. *Understanding the Backlog Problems Associated with Requests for Continued Examination Practice*, 13 *Duke Law and Technology Review* 216 (2015).
- Tu, S. *Patent Examiners and Litigation Outcomes*. 17 *Stanford Technology Law Review* 507 (2014).
- Tu, S. *Luck/Unluck of the Draw: An Empirical Study of Examiner Allowance Rates*. 10 *Stanford Technology Law Review* 1 (2012)
- Tu, S. *Funk Brothers: An Exercise in Obviousness*. 80 *UMKC Law Review* 637 (2012)

2008-2011

**Intellectual Property Associate at Foley & Lardner LLP.**

- Prosecuted hundreds of patents at the PTO
- Successfully litigated *In re Ochiai* changing law on obviousness type double patenting rejections

2003-2005

**Post-Doctoral Fellow with Dr. Douglas Green. La Jolla Institute for Allergy and Immunology.**

- 1998- 2003                   **Graduate Student with Dr. Richard Cerione. College of Veterinary Medicine. Cornell University.**
- 1997-1998                   **Graduate Student with Dr. Gary Johnson. College of Medicine. National Jewish Hospital**

## **Publications**

### Law Related Articles

1. Tu, S. *Office Action Grant Ratio (OGR): A New Metric for Patent Examiner Activity*. (Journal of the Patent and Trademark Office Society, *in press*)
2. Port, K., Tu, S., and Reid, A., *International Encyclopaedia of Laws*, (in manuscript).
3. Rai, A., Reilly, G., Lemley, M., Tu, S., et al. Amicus Brief *Oil States Energy Services LLC, v. Greene’s Energy Group LLC*. (October 2017).
4. Dolin, G., Epstein, R.A., Frerking, C., Haber, S., Hansen, H., Hartline, D., Holman, C., Hurwitz, J., LaBelle, M., Levine, D.S., Lybecker, K., Matteo, D.C., Mossoff, A., Nguyen, X., O’Connor, S., Orozco, D., Osenga, K., Schultz, M., Sichelman, T.M., Tu, S., Vishnubhakat, S., Wagner, R.P. Amicus Brief *TC Heartland LLC, v. Kraft Foods Group Brands LLC*. (March 2017).
5. Cotropia, C.A., Dolin, G., Epstein, R., Freking, C., Ghosh, S., Grunner, R., Haber, S., Hansen, H., Holman, C., Hurwitz, G., Khan, B.Z., LaBelle, M., Lybecker, K., Matteo, D., Mossoff, A., Nguyen, X., O’Connor, S., Oranburg, S., Orozco, D., Osenga, K., Popadak, J., Schultz, M., Sichelman, T., Taylor, D., Teece, D., Tu, S., Vishnubhakat, S., Wagner, R.P. *Letter to Congress about VENUE Act*. (August 2016).
6. Goodwin, M., Tu, S., Paris, J.J. *Biotechnology, Bioethics, and the Law* (2015) LexisNexis.
7. Burk, D., Chao, B., Clifford, R., Cotropia, C., Dolan, G., Epstein, R., Frerking, C., Heled, Y., Holbrook, T., Holman, C., Hurwitz, G., Janis, M., Mossoff, A., O’Connor, S., Osenga, K. Petherbridge, L., Risch, M. Schultz, M., Seymore, S., Sichelman, T., Simon, B., Tu, S., Vishnubhakat, S. Amicus Brief *Ariosa Diagnostics, Inc. v. Sequenom, Inc.* (August 2015)
8. Tu, S. *Invalidated Patents and Associated Examiners* 18 Vanderbilt Journal of Entertainment and Technology 135 (2015).
9. Tu, S. *Understanding Requests for Continued Examination Practice*, 13 Duke Law and Technology Review 216 (2015).
10. Schwartz, D., Kesan, J., Abrams, D., Allison, J., Cockburn, I., Cotropia, C., Crouch, D., Frakes, M., Glasso, A., Hegde, D., Lamoreaux, N., Lemley, M., Mann, R., Meurer, M., Petherbridge, L., Rai, A., Rantanen, J., Risch, M., Schankerman, M., Seaman, C., Sichelman, T., Spitzer, M., Tu, S., Wasserman, M., Wright, b., Ziedonis, R. *Request for Comments on Enhancing Patent Quality* (May, 2015)
11. Letter to Congress from 40 Law and Economics Professors regarding abusive patent litigation. (March, 2015)
12. “Our Call to the PTO: Release SAWS Data” February 4, 2015, Patently-O guest post.
13. Tu, S *Patent Examiners and Litigation Outcomes* 17 Stanford Technology Law Review 507 (2014).
14. Response to “Pervasive Sequence Patents Cover the Entire Human Genome” 6 Genome Medicine 14 (2014).
15. Tu, S *The Indeterminacy Critique and the Trespass Fallacy* 65 Florida Law Review 6 (2013).
16. “Uneven Distribution in the RCE Backlog” March 28, 2013, Patently-O guest post.

17. Tu, S. *Luck/Unluck of the Draw: An Empirical Study of Examiner Allowance Rates*. 10 Stanford Technology Law Review 1 (2012). [#1 downloaded article for the Journal of IRPN: Innovation & Microeconomics]
18. “An Empirical Study of Examiner Allowance Rates” April 26, 2012, Patently-O guest post. (over 250 comments)
19. Tu, S. *Funk Brothers: An Exercise in Obviousness*. 80 UMKC Law Review 637 (2012).
20. Tu, S., Rosen, D., Bent, S., White, M. “Generic Protections: A Synopsis of the Generic Approval Process in the U.S., Japan, China, and the European Union” BNA, 2011.
21. Tu, S., Wu, B., Maebius, S. “The Road More Traveled: Common Pitfalls on the Way to a Patent” WIREs Nanomedicine and Nanobiotechnology 3(1):1-4 (2011).
22. Tu, S., Dudas, J., Kiko, P., Wilson, B. “A Perfect Storm is Brewing Against Personalized Medicine” Bloomberg Law Reports, February 2010.
23. Scher, R., Peet, R., Wright, J., Tu, S., Schorr, K., Berkowitz, B. Amicus Brief Association for Molecular Pathology v. Myriad Genetics. January 11, 2010.
24. Tu, S., Maebius, S., Dudas, J. “Squeezing more patent protection from a smaller budget without compromising quality.” Landslide, November / December 2009 2(2): 35-37.
25. Dudas, J., Frisch, J., Tu, S. “Patent Reform Legislation in the US: Where is it Going?” Lexis-Nexis China Legal Review Volume 29, September 2009.
26. Dudas, J., Maebius, S., Tu, S. “Let the PTO pay its own way” The National Law Journal, October 26, 2009.
27. Dudas, J., Maebius, S., Tu, S. “Cost effective patent prosecution without compromising quality” August 2009 AIPPI Japan Newsletter.
28. Tu, S., Hakim, A., Maebius, S. “Legal aid- ABCs of patent protection” FirstMonday. September 1, 2009.
29. Dudas, J., Maebius, S. Tu, S. "New roads to patent allowance," IP Law 360, 2009.
30. Maebius, S., Waltz, J.A., Rosen, D., Tu, S. "Patenting risk evaluation & mitigation strategies for pharmaceuticals: A New Life Cycle Management Target for Patents?" Pharmaceutical Law & Industry, 7(1): 1-3, 2009.

#### Scientific Articles

1. Tu, S., McStay, G., Beere, H.M., Green, D.R. In situ “Trapping” of activated initiator caspases reveals a role for caspase-2 in heat shock-induced apoptosis. 2006. Nature Cell Biol. 8(1):72-6.
2. Pagliari L.J., Kuwana, T., Bonzon, C., Newmeyer, D.D., Tu, S., Beere, H.M., Green, D.R. The multidomain proapoptotic molecules Bax and Bak are directly activated by heat. 2005 PNAS 102(50):17975-80.
3. Tu, S., Wu, W.J., Wang, J., Cerione, R. Epidermal grow-factor dependent regulation of Cdc42 is mediated by the Src tyrosine kinase. 2003. J. Biol. Chem. 279: 49293-300.
4. Wu W., Tu, S., Cerione, R. Cdc42 mediates EGF receptor downregulation through c-Cbl. 2003. Cell 114: 715-725.
5. Tu S., Wu, W.J., Yang, W., Nalbant, P., Hahn, K., Cerione, R. An anti-apoptotic Cdc42 mutant is an activator of malignant transformation. 2002. Biochemistry 41: 12350-58
6. Tu S., Cerione, R. Cdc42 is a substrate for caspase and influences Fas-induced apoptosis. 2001. J. Biol. Chem. 276: 19565-19663.
7. Gibson, S., Tu, S., Oyer, R., Anderson, S.M., Johnson, G.L. Epidermal growth factor protects epithelial cells against Fas-induced apoptosis. 1999. J. Biol. Chem. 274: 17612-17618.

#### Conferences & Presentations & News Commentary

1. Better Patents Now Podcast- Episode #XX- *Patent Examiner Examination*.
2. 2018 Intellectual Property Scholarship Redux Conference. Invited Speaker. “Office Action Grant Ratio: A New Metric for Patent Examiner Activity.” April 6-7, 2018.

3. 2018 Works-in-Progress Intellectual Property (WIPIP) Colloquium. Invited Speaker. "Office Action Grant Ratio: A New Metric for Patent Examiner Activity." February 16, 2018.
4. Better Patents Now Podcast- Episode #16- *Where Do Litigated Patents Come From?* August 1, 2017.
5. Comment in *Copyrighting Biotech: a brief discussion on protecting intellectual properties*. Hoang Tran. West Virginia Record. November 1, 2015.  
<http://wvrecord.com/stories/510645879-copyrighting-biotech-a-brief-discussion-on-protecting-intellectual-properties>
6. Colorado Bar Association- Intellectual Property Section. Invited Speaker "Patent Examination and Litigation Outcomes" May 28-29, 2015.
7. Interview on "Medical Ethics" on WWVU-FM U92 Feedback program. October 1, 2015.
8. Monongalia River Colloquium. Participant. April 17, 2015.
9. Roundtable on Empirical Methods in Intellectual Property. Invited Speaker "Patent Examiners and Examination Quality." September 19-20, 2014. Chicago, IL.
10. Summer Institute in Patent Law- Invited Participant. July 23-25, 2014. Beaver Creek, CO.
11. Roundtable on Patented Innovation in Software and Software-Related Technology- Invited Participant. May 8-9, 2014. Cape Coral, FL.
12. Monongalia River Colloquium. Invited Speaker- "Patent Examination and Litigation Outcomes" April 11, 2014
13. Center for the Protection of Intellectual Property- Invited Speaker "Invalidated Patent Litigation Analysis." February 6-8, 2014. Captiva Island, FL
14. Global Entrepreneurship Week- Invited Speaker: "The Patent Application Process", November 21, 2013. West Virginia University
15. Eighth Annual Conference on Empirical Legal Studies. University of Pennsylvania Law School- Invited Presentation. October 24-26, 2013. Philadelphia, PA
16. Invited Speaker- TransTech Energy Business Development Conference. "Patent Law and Confidentiality" October 8, 2013. West Virginia University
17. Center for the Protection of Intellectual Property- Presentation: "Patent Examination and Patent Quality" October 3, 2013. George Mason University. Arlington, VA
18. Moderator- "The Commercial Function of Patents in Today's Innovation Economy" George Mason University College of Law- September 12-13, 2013. George Mason University. Arlington, VA
19. Southeastern Association of Law Schools- Invited Speaker: "Patentable Subject Matter: What's Patentable Today may not be Patentable Tomorrow", August 5, 2013. Fort Lauderdale, FL
20. Thomas Edison Innovation Fellow- Invited Fellow- July 24-26, 2013. Beaver Creek, CO
21. George Mason Law and Economics Center Workshop on Empirical Methods for Law Professors. May 20-24, 2013. Arlington, VA
22. Comment in *Prescription drug abuse a vicious cycle in W.Va.* Bryan Bumgardner. Daily Athenaeum. April 8, 2013
23. Invited Speaker- University of Maryland "Biotechnology and the Law." February 27, 2013. Baltimore, MD
24. American Association of Law Schools- BioLaw Panel- Invited Speaker "The Genes Speak: Reifying Race, Gender and Sex in the New Biopolitics" January 4, 2013. Washington, DC
25. Biopolitics Conference- Invitation only drafting of a biotechnology constitution. November 2012. Baltimore, MD
26. 2012 Intellectual Property Scholars Conference. "Patent Examination and Litigation Outcomes" August 2012 (paper presentation) Chicago, IL

27. Colorado Bar Association- Intellectual Property Section. "Patent Litigation Outcomes" July 12, 2012. Denver, CO
28. Invited Speaker "Patent Litigation Outcomes" June 14, 2012 Ohio Legal Scholarship Workshop. Pittsburgh, PA
29. Intellectual Property Issues of the 21<sup>st</sup> Century. "Patentability of Human Genetic Material" Moderator. February 24, 2012. West Virginia University.
30. Comment in *Law Center examines medical research*. Bryan Bumgardner. Daily Antheneum. February 24, 2012. <http://issuu.com/dailyatheneum/docs/20122402>
31. University of San Diego Second Annual Patent Law Conference. "Patent Litigation and Examiner Allowance Rates." January 20, 2012. San Diego, CA
32. Global Entrepreneurship Week 2011. Patents and Global Innovation: The Role of the USPTO. Moderator, November 17, 2011. West Virginia University
33. University of Missouri at Kansas City IP and Technology Transfer Symposium "Fueling Innovation: Hot Topics in Patent Law and Policy" October 14, 2011 (paper presentation). Kansas City, MO
34. University of Missouri- Kansas City School of Law Fueling Innovation: Hot Topics in Patent Law and Policy "Funk Brothers: An Exercise in Obviousness" October 14, 2011 (paper presentation). Kansas City, MO
35. 2011 Intellectual Property Scholars Conference. "Unluck of the Draw: An Empirical Study of Examiner Allowance Rates" August 2011 (paper presentation). Chicago, IL
36. Knowledge Congress "Patent Reform 2011" "Current Issues in Patent Reform- Impacts on Patent Prosecution" (paper presentation). August 31, 2011. Webinar

### **Honors / Licenses:**

Faculty Research Award (2015)  
 Q. Todd Dickinson Intellectual Property Chapter- American Inns of Court- Barrister (2014-present)  
 Thomas Edison Fellowship- Center for the Protection of Intellectual Property (2013-2014)  
 Editorial Board Member- Biotechnology Law Report (2012-Present)  
 Florida State Licensed Real Estate Agent  
 National Research Service Award Post-doctoral Grant (\$120,000)  
 Pharmaceutical Manufacturers of America Pre-doctoral Grant (\$20,000)

### **Professional Patent Prosecution Experience**

Prosecution of hundreds of patents in the field of biotechnology, genetics and diagnostic medicine.  
 Patent Reexamination experience- [Successful prosecution of Reexamination 90/004950- longest Reexamination currently prosecuted at the PTO]  
 Draft patent non-infringement and patent invalidity opinions  
 Appellate litigation of generic drug compound (ANDA litigation at the Court of Appeals for the Federal Circuit)

### **Job and Teaching Experience**

Associate at Foley & Lardner (Patent Law Group) 2008 - 2010  
 Research Assistant for Judge Richard A. Posner- United States Court of Appeals for the Seventh Circuit  
 Summer Associate at Foley & Lardner (Washington D.C. Office- Patent Law Group)  
 Summer Associate at the Office of Technology Licensing at University of Florida (Intellectual Property Office for the University of Florida)  
 Taught University of Florida General Chemistry Course

Founder/Trustee Gamma Alpha Scientific Society Non-Profit Organization  
President Florida Student Affiliates of the American Chemical Society

## **Service**

### Law School Service

Hosted Mr. Kery Fries of the US Patent and Trademark Office- Part of the 2011 Global Entrepreneurship Week  
Hosted Mr. Michael Risch- 2011 IP Law Society Conference  
Hosted Mr. Sean Flynn and Ms. Lisa Pessa from Mylan Pharmaceuticals- part of the 2011 IP Law Society Conference  
Hosted Dr. Lawrence Gostin- 2014 Fisher Lecturer  
Hosted Dr. Christopher Holman- 2015 Fisher Lecturer  
Case Study- Total Patent in concert with Lexis Nexis- WVU is the first law school to use this Lexis Nexis product, and Lexis Nexis is using WVU as a model  
Coach of the 2011 Entertainment Law Moot Court Competition (Jason Morgan won best oralist)  
Coach of the 2011 Tulane Sports Law Moot Court Competition  
Coach of the 2012-2013 Saul Lefkowitz Moot Court Competition  
2011-Present- Faculty Advisor for the West Virginia Intellectual Property Club  
2012-2013 Appointments Committee  
2012-2013 Library Director Search Committee  
2013-2014 Appointments Committee  
2014-2015 Law School Dean's Search Committee  
2014-2015 Appointments Committee  
2014-2015 American Bar Association Self-Study Review Committee  
2014-Present West Virginia University Graduate Counsel Member  
2015-2016 Appointments Committee School of Public Health  
2015-Present West Virginia University Faculty Senate  
2015-Present West Virginia University Committee on Faculty Welfare  
2016-Present Merit Review Committee  
2013 Dallas Kratzer Law Review Note Advisor "Up Up and Away: How DC Comics' Superman Survived the Right of Termination and the Policy Considerations Underlying Copyright Law Were Fulfilled"  
2015 Gary Stewart Law Review Note Advisor "A Three-Dimensional World in a Two-Dimensional Legal System: 3D Printing and the Importance of Claiming CAD Files"  
2018 Andrew Means- Adopt-a-Bar Taker Program

### Professional Service

Biotechnology Law Report- Editor (2012-Present)  
American Association of Law Schools- Biotech & Law Section Executive Committee Member (2013-Present)  
ABA Committee- Patent Legislation (2013-Present)  
ABA Committee- Patents in the Chemical and Life Sciences (2013-Present)  
Q. Todd Dickinson IP Inn of Court member (2014-Present)  
Jurimetrics Journal Peer Referee (2013-Present)  
Stanford Technology Law Review Peer Referee (2014-Present)

### Community Service

2013 "Dancing Through Time" Alzheimer's Association Benefit (won Dancing portion)  
2014 Dancing with our Mountaineer Stars

2014 "Dancing Through Time" Alzheimer's Association Benefit (won Dancing portion)

2014 "Dancing with our Marion County Stars" United Way Benefit (won Dancing portion)

2015 "Dancing Through Time" Alzheimer's Association Benefit