SHIVAPUTRA A. PATIL Ph.D.

Assistant Professor, Research, (O): HSB, Room 2.627 Pharmaceutical Sciences Department, College of Pharmacy Rosalind Franklin University of Medicine and Science 3333 Green Bay Road, North Chicago, IL 60064

Phone: 224-570-7426; Cell: 901 246 4515 E-mail: shivaputra.patil@rosalindfranklin.edu

shivaputrap@yahoo.com

REARCH FOCUS: Design and develop small molecules for cancer and viral diseases

Complete List of Published Work in My Bibliography

https://www.ncbi.nlm.nih.gov/sites/myncbi/shivaputra.patil.1/bibliography

/47879709/public/?sort=date&direction=descending

H-Index: 20; Citations: 1228; Publications: 67; Presentations: 51

Patent applications: 10; Book chapters: 2

Mendeley: https://www.mendeley.com/profiles/shivaputra-a-patil/

Scopus:https://www.scopus.com/authid/detail.uri?authorId=35499321200

PERSONAL: Citizenship: USA (By Naturalization).

EDUCATION:

Ph.D. (1998): Ph.D. Thesis topic: "Synthetic Studies on Nitrogen Heterocycles".

Karnatak University, Dharwad, India.

M. Sc. (1993): Organic Chemistry: Karnatak University, Dharwad, India.

B. Sc. (1991): *Chemistry:* Karnatak University, Dharwad, India.

EMPLOYMENT:

2015-Present: Assistant Professor, Research, Rosalind Franklin University, North Chicago, USA

2014-2015: Assistant Professor, Adjunct, Rosalind Franklin University, North Chicago, USA

2010-2014: Assistant Professor, Research, UTHSC, Memphis, TN, USA 2005-2010: Staff Research Associate, UTHSC, Memphis, TN, USA

2003-2005: Postdoctoral Fellow, UTHSC, Memphis, TN, USA

2002-2003: Postdoctoral Fellow, City College of CUNY, New York, USA.

2001-2002: Postdoctoral Fellow, University of WITS, Johannesburg, South Africa.

1999-2000: Technical Officer, ICI India Ltd., Mumbai, India. 1998-1999: Research Associate, ICI India Ltd., Mumbai, India.

PROFESSIONAL SOCIETY MEMBERSHIP:

2002 – Present: Member of American Chemical Society (ACS) including Chicago local ACS.

2017- Present: Member of American Association of Colleges of Pharmacy (AACP).

HONORS:

2019: Book chapter entitled "Bisbenzimidazoles: Anticancer Vacuolar (H+)-ATPase

Inhibitors" (Patil et al IntechOpen, 2019) achieved more downloads.

2018: Best Scientific Poster: Smith T, Deokar H, Patil SA, Walters E. Application of

Computational Chemistry Methods in Identifying Potential Jumonji Demethylase Inhibitors. All School Research Consortium (ASRC) March 21, **2018**, RFUMS,

North Chicago, IL.

2015: Research article highlights: *Medicinal Chemistry* (Bentham Science) selected our

research article for the cover page (**Patil SA***, Pfeffer SR, Seibel WL, Pfeffer LM, Miller DD. Identification of potent imidazoquinoline derivatives as

antiglioma agents from screening. *Medicinal Chemistry*, **2015**, 11(4), 400.)

2015: Featured Research article: Appeared in *ScienceDaily*, January 22nd; Promising

drug candidate protects against radiation exposure from nuclear fallout and also appeared in *NewScientist* Magazine (London), January 22nd; Anti-radiation drug

could work days after exposure.

Original article: Patil et al., *Chemistry & Biology- 2015*; "Combined Mitigation of the Gastrointestinal and Hematopoietic Acute Radiation Syndromes by a Novel

LPA2 Receptor-specific Non-lipid Agonist"

2014: Research news highlights: UT College of Pharmacy Newsletter (February);

The Research Note Book, A publication of the Office of Research (January)

2013: University of Tennessee Research Foundation (UTRF) Innovation Award.

2010: Strathmore's Who's Who Worldwide.2009: Marquis Who's Who in America.

2001-2002: Recipient of National Research Foundation Fellowship: Witwatersrand

University, Johannesburg, South Africa.

1996- 1998: Recipient of Senior Research Fellowship: CSIR New Delhi.

1991: Received First Prize in B.Sc. part-III.
1990: Received First Prize in B.Sc. part-II.
1986: Received first prize in High School.

EDITORIAL BOARD MEMBER:

Organic Chemistry: Current Research Journal (OMICS Publishing Group)
International Journal of Bioorganic Chemistry & Molecular Biology (IJBCMB) (SCIDOC Publishers)

REVIEWER:

Journal of Medicinal Chemistry (American Chemical Society)

Bioorganic and Medicinal Chemistry (Elsevier)

Bioorganic and Medicinal Chemistry Letters (Elsevier)

ChemBioChem (Wiley)

Letters in Drug Design & Discovery (Bentham Science)

Current Organic Synthesis (Bentham Science)

Anti-Cancer Agents in Medicinal Chemistry (Bentham Science)

Current Green Chemistry (Bentham Science)

Future Medicinal Chemistry (Future Science Group)

Molecules (Open Access Organic Chemistry Journal)

Organic Chemistry: Current Research Journal (OMICS Publishing Group)

Chemotherapy: Open Access (OMICS Publishing Group)

Arabian Journal of Chemistry (Elsevier)

Organic & Biomolecular Chemistry (Royal Society of Chemistry)

Medicinal Chemistry (Bentham Science)

New Journal of Chemistry (Royal Society of Chemistry)

Bioorganic Chemistry (Elsevier)

OTHER PROFESSIONAL SERVICE ACTIVITIES:

2017: Summer Research Poster Session: Judge; Poster presentations, RFUMS.
2017: All School Research Consortium: Judge; poster presentations, RFUMS.
2016: Summer Research Poster Session: Judge; Poster Presentations, RFUMS.
2016: All School Research Consortium: Judge; poster presentations, RFUMS.
2015: Summer Research Poster Session: Judge; Poster Presentations, RFUMS.
2013: Graduate Research Day: Judge; Graduate Poster Presentations, UTHSC.

2011: Conducted Journal Club for graduate students, UTHSC.

2010-2014: Manager of Discover LabMate Microwave instrument, taught graduate

and postdocs about this instrument and its utilization, UTHSC.

1990-1991: Secretary (Sport): SSMS College, Karnatak University, India.

1990-1991: National Service Scheme (NSS) volunteered in B.Sc.

TEACHING:

2015- 2018: Taught portion of YPHS 610A & 610B, Advance Medicinal Chemistry course to Pharm D. students (2nd year).

2017: Taught in the program called "Prepare for success" for first year Pharm D students just before starting the first year classes.

2010-2014: Taught portion of PHSC 112, Medicinal Chemistry I course to PharmD first year students (topics: steroids and cholinergics).

2012: Taught portion of MEDC 812, Advanced Medicinal Chemistry course to graduate students.

2009-2010: Taught organic chemistry for the MCAT/PCAT/DAT students as Chemistry Faculty at Tennessee Institutes for the Pre-Professionals (TIP), Summer Science Institute (SSI), University of Tennessee Health Science Center, Memphis, TN.

2006- 2007: Taught organic chemistry courses **CHEM 3311** and **CHEM 3312** at University of Memphis as adjunct faculty.

RESEARCH:

Research Interests: Design and develop small molecules for cancer and viral diseases

The major emphasis of my research is to design and develop novel chemotherapeutic agents for cancer and viral diseases. New chemotherapeutic agents are needed to overcome the resistance in cancer and viral diseases. My medicinal chemistry efforts are focused on the design and synthesis of novel small molecule drug candidates based on the initial hits developed either by the screening process or developed in our laboratory. My research efforts are at the interface of chemistry and biology and various types of topics within the research area will be studied in detail. Therefore, I look forward to having effective research collaborations with the computational and biological research faculty.

GRANTS:

Ongoing Research Support:

1. Pilot Grant **Patil; Buolamwini (MPI)** 7/1/2018- 03/31/2020

"Lead Identification Studies to Targeting the Sodium Citrate Transporter." The main goal of this proposal is to design and synthesize new plasma membrane citrate transporter (PMCT) inhibitors.

Role: Principal Investigator

Completed Research Support:

1. Northwestern Collaborative grant

Patil (PI)

7/1/2018- 12/31/2018

Funds awarded \$ 5,000.00

"Synthesis of GSK J4 related small molecules as anti-glioma agents". The main goal of this proposal is to synthesize the novel GSK J4 related small molecules as anti-glioma agents.

Role: Principal Investigator

2. Collaborative RFUMS-DePaul University Grant Patil; Waris; Grice (MPI) 4/1/2017-6/30/2018 Funds awarded: \$89.942.00

"Elucidation of the mechanism of chromenopyridine and metal complex-based inhibition of hepatitis C virus propagation and liver fibrosis." The main goal of this proposal is to develop novel chemotherapies chronic liver diseases associated with viral Hep C.

Role: Principal Investigator

3. Collaborative RFUMS-DePaul University Grant **Patil; Waris; Grice (MPI)** 12/1/2015-11/30/2017 Funds awarded: \$82,340.00

"Novel Metal-Based Drugs as Anti-Cancer and Anti-Viral Therapies." The main goal of this proposal is to develop novel chemotherapies for Cancer and chronic liver diseases associated with viral Hep C.

Role: Principal Investigator

4. Seed Research Grant (College of Pharmacy, UTHSC) Patil S. (PI) 9/01/2013-08/31/2014 Funds awarded: \$15,000.00

"Discovery of novel chemotherapeutic agents to treat brain cancer". Main goal of this research is to discover novel chromene based antiglioma agents to treat brain cancer.

Role: Principal Investigator

5. Pilot data program research fund (UT Research Office) Patil S. (PI) 04/17/2013-4/16/2014 Funds awarded: \$5,000.00

"Discovery of novel chemotherapeutic agents to treat brain cancer". The main goal is to discover the novel chromene based antiglioma agents to treat brain cancer.

Role: Principal Investigator

6. CEM Corporation, Matthews, NC.

Patil S. (PI)

11/18/2013-12/31/2014

Funds awarded: \$4,000.00

"Microwave-Enhanced Chemistry Grant." (We did not use the grant due to change in the institute after relocation).

Role: Principal Investigator

7. GTx, Inc., Memphis, TN

Miller D (PI)

1/01/2013-10/31/2013

Funds awarded: \$150,000.00

"Selective androgen receptor modulators (SARMs) for anabolic therapy." The main purpose of this funding is to discover non-steroidal selective androgen receptor modulators (SARMs) for anabolic therapies that improve muscle and bone strength.

Role: Co-Investigator

8. GTx, Inc. Memphis Miller D (PI) 1/01/2012-12/31/2012

Funds awarded: \$150,000.00

"Selective androgen receptor modulators (SARMs) for anabolic therapy." The main purpose of this funding is to discover non-steroidal selective androgen receptor modulators (SARMs) for anabolic therapies such as muscle and bone strength.

Role: Co-Investigator

Submitted but not funded grant applications:

1. NIH 1R03CA219616-01 (Impact Score: 44) Patil S. (PI) 7/01/2017-6/30/2019

Title: "Discovery of novel chemotherapy for ovarian cancer".

Funds requested: \$156,000.00 PI: Patil S.; Co-I: Beaman K.

2. NIH 1R03CA223708-01

Patil S. (PI) 12/1/

12/1/2017-11/30/2019

Title: "Development of a novel combination therapy to overcome drug resistance in ovarian cancer".

Funds requested: \$156,000.00 PI: Patil S.; Co-I: Beaman K.

3. NIH 1R15CA208680-01 (Impact Score: 47)

Patil S. (PI)

8/1/2016-7/31/2019

Title: "Identifying novel chemotherapeutic agents for ovarian cancer".

Fundes requested: \$464,393

PI: Patil S.; Co-Is: Beaman K.; Buolamwini J.

4. NIH 1R21CA175192-01 (Percentile 36)

Patil S. (PI)

4/1/2013-3/31/2015

Title: "Discovery of novel chemotherapeutic agents to treat brain cancer".

Funds requested: \$412,500 PI: Patil S.; Co-I: Miller D.

5. DoD CA160656 (Score 2.4)

Patil S. (PI)

9/1/2017-8/31/2019

Title: "The immunotherapeutic relevance of TLR7/8 in pediatric brain tumors".

Funds requested: \$537,200

PI: Patil S.; Co-Is: Hashizume R. (Northwestern University); Beaman K.

6. DoD OC150495 (Score 3.0)

Patil S. (PI)

7/1/2016-6/30/2019

Title: "Design and Discovery of Novel Chemotherapeutic Agents to Treat Ovarian Cancer".

Funds requested: \$599,778

PI: Patil S.; Co-Is: Kipp J. (DePaul University); Beaman K.; Consultant: Buolamwini J.

7. **DoD OC170232** Patil S. (PI) 7/01/2018-6/30/2020

Funds requested: \$306,728.00

Title of the grant: "Novel Combination Therapy to Overcome Drug Resistance in Ovarian Cancer".

Role: Principal Investigator

8. NIH 1R15CA208680-01A1

Patil S. (PI)

5/01/2018-4/30/2021

Funds requested: \$387,540.0

Title of the grant: "Identifying novel chemotherapeutic agents for ovarian cancer".

Role: Principal Investigator

Foundation grants

7. American Brain Tumor Association Patil S. (PI) 7/1/2017-6/30/2019

Title: "The immunotherapeutic relevance of TLR7/8 in pediatric brain tumors".

Funds requested: \$199,999.00

PI: Patil S.; Co-I: Hashizume R. (Northwestern University); Consultant: Walters E.

8. Lyla Nsouli Foundation

Patil S. (PI)

1/1/2017-12/31/2019

Title: "Discovery of Novel Chemotherapeutic Agent for Diffuse Intrinsic Pontine Glioma".

Funds requested: \$180,000.00 PI: Patil S.; Co-I: Hashizume R.

9. The Childhood Brain Tumor Foundation

Patil S. (PI)

8/1/2016-7/31/2018

Title: "Discovery of novel chemotherapeutic agents for pediatric malignant glioma".

Funds requested: \$60,000.00

PIs: Patil S.; Hashizume R. (Northwestern University); Consultant: Walters E.

MENTORING:

I mentored several Pharm D, and summer students for design and synthesis of new small molecule drugs.

YEAR	STUDENT NAME	RESEARCH PROJECT TITLE
2019	Ibrahim, D.	Synthesis of plasma membrane citrate transporter inhibitors
2017	Smith, T.	Computational studies on Demethylase Inhibitors
2017	Zainab, S.	Synthesis and antifibrotic activity of chromenopyridines
2016	Henry, A.	Chromenopyridine metal complexes as antifibrotic agents
2016	LarsenVanAlstine, E.	One-pot synthesis of antifibrotic chromenopyridines
2013	Weaver, W.	Design and synthesis of new chromenes
2010	Harrish, S.	New selective androgen receptor modulators (SARMs)
2006	Nguyen, J.	Design and synthesis of β-carbolines

2005 Kimberley, K. Synthesis of novel β-carbolines
 2004 Marian, O. β-Carbolines as anticancer agents

PATENTS AND PATENT APPLICATIONS:

- Inventors: Charles Ryan Yates, Duane D. Miller, Frank Park, Jordan J. Toutounchian, Vanessa Moraies-tirado, **Shivaputra Patil**, Jayaprakash Pagadala, Bial Abou Aleiwi. Inhibitors of paxillin function and related compositions and methods. **2016**, Publication number US 2016/0347725 A1.
- 2. Inventors: Siddappa Patil, **Shivaputra Patil**, Rangappa Keri, Geetha Balakrishna. A novel process for the synthesis of boron enriched magnetic nanoparticles. **2016**, Publication number Indian Pat. Appl. (2016), IN 2014CH06012 A 20160826.
- 3. Inventors: Siddappa Patil, **Shivaputra Patil**, Rangappa Keri, Geetha Balakrishna. A novel process for the synthesis of boron enriched magnetic nanoparticles. **2016**, Publication number WO2016088137 A2 20160609.
- 4. Inventors: Duane D. Miller. **Shivaputra A. Patil**, Renukadevi Patil, Terreia Jones, Amira Ahmed, Likeselam Asres, Charles Ryan Yates, Eldon Geisert. Compounds with increased specificity for the treatment of glioma. **2015**, Patent number: US 9187449.
- 5. Inventors: John K. Buolamwini, **Shivaputra A. Patil**, Horick Sharma, James K. Addo. 1-Aryl- or 1-heteroaryl-pyrido[*b*]indoles and uses thereof in treating cancers. **2012**, Patent number: US 8,329,723.
- Inventors: Charles R. Yates, Duane D Miller, Frank Park, Jordan J. Toutounchian, Vanessa M. Morales-Tirado, Shivaputra Patil. Pagadala Jayaprakash, Bilal Abou Aleiwi. Inhibitors of paxillin function and related compositions and methods. 2015, Publication number: WO 2015120059 A1 20150813.
- 7. Inventors: Duane D. Miller, **Shivaputra A. Patil**, Renukadevi Patil, Terreia Jones, Amira Ahmed, Likeselam Asres, Charles Ryan Yates, Eldon Geisert.

 Compounds for the treatment of glioma. **2014**, Publication number: WO 2014/160723 A1
- 8. Inventors: Duane D. Miller, **Shivaputra A. Patil**, Renukadevi Patil, Terreia Jones, Amira Ahmed, Likeselam Asres, Charles Ryan Yates, Eldon Geisert.
 - Compounds with increased specificity for the treatment of glioma. **2014**, Publication number: US20140296286 A1.
- 9. Inventors: Renukadevi Patil, **Shivaputra A. Patil**, Duane D. Miller, Charles R. Yates, Eldon L. Geisert.
 - 1,2,3,4-Tetrahydroisoquinline derivatives effective as antiglioma agents, methods of making, and their use. **2012**, Publication number: US20120059032 A1.

10. Inventors: John K. Buolamwini, **Shivaputra Patil,** James K. Addo, Parker D. Suttle, Ruiwen Zhang, Zhengxiang Zhu, Horrik Sharma.

1-Aryl-or 1-heteroaryl-pyrido[b]indoles and uses thereof. **2010**, Publication number: US20100317667 A1.

PROVISIONAL PATENT APPLICATIONS and PATENT DISCLOSURES:

- 11. Inventors: Charles R. Yates, Duane D Miller, Frank Park, Jordan J Toutounchian, **Shivaputra A. Patil**. Inhibitors of paxillin function and related compositions and methods. **2014**, Provisional application number: 61/935,616.
- 12. Inventors: James. T. Dalton, Duane D. Miller, Amanda Jones, **Shivaputra A. Patil**. Cyclohexanol based androgen receptor antagonists and methods of use thereof" **2012**, Provisional application number: 61/667,741.
- 13. Inventors: James. T. Dalton, Duane D. Miller, Amanda Jones, **Shivaputra A. Patil**. Cyclohexanol based androgen receptor modulators and methods of use thereof **2012**, Provisional application number: 61/667,730.
- 14. Inventors: John K. Buolamwini, **Shivaputra Patil** and Horrick Sharma. Novel Chalcone derivative as HIV integrase inhibitors. **2010**, Patent disclosure number: 09083.
- 15. Inventors: Duane Miller, Shivaputra Patil, Wei Li, Anna N. Bukiya, and Alejandro M. Dopico. Design and synthesis of hydroxyl-alkynoic acids and their methyl esters as novel activators of BK channels. **2008**, Patent disclosure number: 078855.
- 16. John K. Buolamwini and Shivaputra Patil

Novel Phenanthrene/Anthracene and Derivative Aryl Diketoacid HIV integrase Inhibitors for AIDS Therapy. **2007**, Patent disclosure number: 013801.

PUBLICATIONS (* indicates corresponding authorship):

- Patil M, Noonikara PA, Joshi SD, Patil SA, Patil SA, Bugarin A
 New Urea Derivatives as Potential Antimicrobial Agents: Synthesis, Biological Evaluation, and Molecular Docking Studies.

 Antibiotics, 2019, 8, 178.
- 2. Patil M, Noonikara PA, Joshi SD, **Patil SA**, Patil SA, Bugarin A. Design, synthesis, and molecular docking study of new piperazine derivative as potential antimicrobial agents.
 - Bioorganic Chemistry 2019, 92, 103217.
- 3. Kempasiddhaiah M, Kandathil V, Dateer RB, Sasidhar BS, **Patil SA**, Patil SA. Magnetite tethered mesoionic carbene-palladium (II): An efficient and reusable nanomagnetic catalyst for Suzuki-Miyaura and Mizoroki-Heck cross-coupling reactions in aqueous medium. *Applied Organometallic Chemistry*, **2019**, 33(5), e4846.

4. Patil M, Noonikara PA, Joshi SD, **Patil SA**, Patil SA, Bugarin A. Synthesis, Molecular Docking Studies, and Antimicrobial Evaluation of New Structurally Diverse Ureas.

Bioorganic Chemistry (**2019**), 87, 302.

- 5. Patil V, Patil SA, Patil R, Bugarin A, Beaman K, **Patil SA***. Exploration of (hetero)aryl derived thienylchalcones for antiviral and anticancer activities. *Med Chem.* **2019**, 15(2), 150.
- 6. Kandathil V, Dateer RB, Sasidhar BS, **Patil SA**, Patil SA. Green Synthesis of Palladium Nanoparticles: Applications in Aryl Halide Cyanation and Hiyama Cross-Coupling Reaction Under Ligand Free Conditions. *Catalysis Letters*, **2018**, 148(6), 1562.
- 7. Manjunatha K, Koley TS, Kandathil V, Dateer RB, Balakrishna G, Sasidhar BS, **Patil SA**, Patil SA.

Magnetic nanoparticle tethered Schiff base-palladium(II): Highly active and reusable heterogeneous catalyst for Suzuki-Miyaura cross-coupling and reduction of nitroarenes in aqueous medium at room temperature.

Applied Organometallic Chemistry, 2018, 32, e4266.

- 8. Kandathil V, Koley T, Manjunatha K, Dateer R, Keri RS, Sasidhar BS, **Patil SA**. A new magnetically recyclable heterogeneous palladium(II) as a green catalyst for Suzuki-Miyaura cross-coupling and reduction of nitroarenes in aqueous medium at room temperature *Inorganica Chimica Acta*, **2018**, 478, 195.
- 9. Gricea KA, Patil R, Ghosh A, Panera JD, Guerrero MA, Camacho EJM, Sun Cao P, Niyazi AH, Zainab S, Sommer RD, Waris G, **Patil S***.

Understanding the structure and reactivity of the C-S linkage in biologically active 5-arylthio-5*H*-chromenopyridines

New Journal Chemistry, 2018, 42, 1151.

Patil SA, Patil V, Patil R, Beaman K, Patil SA*.
 Identification of novel 5,6-dimethoxy indan-1-one derivatives as antiviral agents.
 Medicinal Chemistry, 2017, 13(8), 787.

11. Kulshrestha A, Ibrahim SA, Katara GK, Patil R, **Patil S***, Beaman KD.

Microtubule inhibitor SP-6-27, exhibits anti-proliferative activity and inhibits angiogenesis in ovarian cancer.

Oncotarget, 2017, 8(40), 67017.

12. Patil R, Kulshrestha A, Tikoo A, Fleetwood S, Katara G, Kolli B, Seibel W, Gilman-Sachs A, **Patil SA***, Beaman KD.

Identification of Novel Bisbenzimidazole Derivatives as Anticancer Vacuolar (H+)-ATPase Inhibitors.

Molecules, 2017, 22(9), 1559.

"This is an invited article and it belongs to the Collection Novel Drug Candidates for Anticancer Therapy: Design, Preliminary Evaluations, and Further Developments."

13. Patil SA, Patil R, Patil SA*.

Recent developments in biological activities of indanones.

Eur J Med Chem. 2017, 138, 182

14. Kandathil V, Fahlman BD, Sasidhar BS, Patil SA, Patil SA.

A convenient, efficient and reusable N-heterocyclic carbene-palladium(II) based catalyst supported on magnetite for Suzuki-Miyaura and Mizoroki-Heck corss-coupling reactions. *New J. Chem*, **2017**, 41, 9531.

15. Patil V, Barragan E, Patil SA, Patil SA, Bugarin A.

A practical method, NaOCl- mediated, to prepare thiabendazoles via intramolecular amination reaction.

Tet Lett, 2017, 58, 3474.

16. Patil SA, Addo JK, Deokar H, Sun S, Wang J, Li W, Suttle DP, Wang W, Zang R, Buolamwini JK.

Synthesis, Bio-logical Evaluation and Modeling Studies of New Pyrido[3,4-b]indole Derivatives as Broad-Spectrum Potent Anticancer Agents.

Drug Des, 2017, 6, 143.

17. Patil SA, **Patil SA***, Patil R.

Medicinal Applications of (Benz)imidazole and Indole-Based Macrocycles.

Chemical Biology & Drug Design, 2017, 89(4), 639.

"This is an invited review article"

18. Vishal K, Fahlman BD, Sasidhar BS, **Patil SA**, Patil SA.

Magnetic Nanoparticle-Supported N-Heterocyclic Carbene-Palladium(II): A Convenient, Efficient and Recyclable Catalyst for Suzuki-Miyaura Cross-Coupling Reactions. *Catalysis Letters*, **2017**, 147(4), 900.

19. Patil R, Ghosh A, Sun Cao P, Sommer RD, Grice K, Waris G, **Patil S***.

Novel 5-Arylthio-5H-chromenopyridines as New Class of Anti-fibrotic Agents.

Bioorganic Medicinal Chemistry Letters, 2017, 27 (5), 1129.

20. Prasad S, Shahini CR, Patil SA, Huang X, Bugarin A, Patil SA.

Non-symmetrically p-nitrobenzyl- and p-cyanobenzyl-substituted N-heterocyclic carbene-silver(I) complexes: Synthesis, characterization and antibacterial studies.

Journal of Coordination Chemistry, 2017, 70 (4), 600.

21. Patil V, Barragan E, **Patil SA**, Patil SA, Bugarin A.

Direct Synthesis and Antimicrobial Evaluation of Structurally Complex Chalcones.

Chemistry select, 2016, 1(13), 3647.

22. Patil R, Patil SA, Beaman KD, Patil SA*.

Indole molecules as inhibitors of tubulin polymerization: potential new anticancer agents, an update (2013-2015).

Future Med. Chem. 2016, 8(11), 1291.

"This is an invited review article"

23. Patil SA. Patil SA. Patil R.

Magnetic Nanoparticles Supported Carbene and Amine Based Metal Complexes in Catalysis. *Journal of Nano Research*, **2016**, 42, 112.

24. Patil SA*, Patil SA, Patil R, Hashizume R.

Imidazoquinolines: Recent developments in anticancer activity.

Mini-Reviews in Medicinal Chemistry, 2016, 16(4), 309.

25. Banerjee S, Wang J, Pfeffer S, Ma D, Pfeffer LM, Patil1 SA, Li W, Miller DD.

Design, Synthesis, and Biological Evaluation of Novel 5H- Chromenopyridines as Potential Anti-Cancer Agents.

Molecules, **2015**, 20, 17152.

26. Patil SA, Patil SA, Patil R, Keri RS, Budagumpi S, Balakrishna GR, Tacke M. N-heterocyclic carbene metal complexes as bioorganometallic antimicrobial and anticancer drugs.

Future Med. Chem. 2015, 7(10), 1305.

27. Patil SA*, Patil SA, Patil R.

Microwave-assisted synthesis of chromenes: Biological and chemical importance. *Future Med. Chem.* **2015**, 7(7), 893.

- 28. **Patil SA***, Pfeffer SR, Seibel WL, Pfeffer LM, Miller DD. Identification of potent imidazoquinoline derivatives as antiglioma agents from screening. *Medicinal Chemistry*, **2015**, 11(4), 400.
- 29. Nag S, Qin JJ, Voruganti S, Wang MH, Sharma H, **Patil S**, Buolamwini JK, Wang W, Zhang R. Development and validation of a rapid HPLC method for quantitation of SP-141, a novel pyrido[*b*]indole anticancer agent, and an initial pharmacokinetic study in mice. *Biomed. Chromatogr.*, **2015**, 29, 654.
- 30. Patil R, Szabó E, Fells JI, Balogh A, Lim KG, Fujiwara Y, Norman DD, Lee SC, Balazs L, Thomas F, **Patil S**, Emmons-Thompson K, Boler A, Strobos J, McCool SW, Yates CR, Stabenow J, Byrne GI, Miller DD, Tigyi GJ.

 Combined Mitigation of the Gastrointestinal and Hematopoietic Acute Radiation Syndromes by an LPA2 Receptor-Specific Nonlipid Agonist. *Chem Biol.* **2015**, 22, 206.
- 31. Wang W, Qin J-J, Voruganti S, Srivenugopal KS, Nag S, **Patil S,** Sharma H, Buolamwini JK, Zhang R.

A novel pyrido[b]indole MDM2 inhibitor, SP-141, exerts potent therapeutic effects in breast cancer models.

Nature Communications, 2014, 5, 5086.

- 32. McMillan JE, Bukiya AN, **Patil SA**, Miller DD, Dopico AM, Parrill AL. Multi-generational pharmacophore modeling for ligands to the cholane steroid-recognition site in the β1 modulatory subunit of the BKCa channel *Journal of Molecular Graphics and Modeling*, **2014**, 54, 174.
- 33. Wang W, Qin J-J, Voruganti S, Wang M-H, Sharma H, **Patil S,** Zhou J, Wang H, Mukhopadhyay D, Buolamwini JK, Zhang R. Identification of a new class of MDM2 inhibitor that inhibits growth of orthotopic pancreatic tumors in mice. *Gastroenterology*, **2014**, 147(4), 893.
- 34. Patil R, Fells JI, Szabó E, Lim KG, Norman DB, Balogh A, **Patil SA**, Strobos J, Miller DD, Tigyi GJ.

Design and synthesis of sulfamoyl benzoic acid analogs with subnanomolar agonist activity specific to the LPA2 receptor.

Journal of Medicinal Chemistry, **2014**, 57(16), 7136.

35. Patil R, Hosni-Ahmed A, Jones TS, **Patil SA**, Asres LB, Wang X, Yates RC, Geisert EE, Miller DD.

Synthesis and *in vitro* evaluation of novel 1,2,3,4-tetrahydroisoquinoline derivatives as potent antiglioma agents.

Anti-Cancer Agents in Medicinal Chemistry, 2014, 14, 473.

36. Nag S, Qin JJ, Patil S, Deokar H, Buolamwini JK, Wang W, Zhang R.

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- 1. Ibrahim D, Mayor JA, **Patil SA**, Kaplan RS. Phenylsulfonylpiperazines as Plasma Membrane Citrate Transporter (PMCT) Inhibitors. DePaul University's, 17th annual STEM Research Showcase. November 8, **2019**; DePaul University, McGowan south 1110 W Belden Ave, Chicago, IL 60614, poster number 64.
- 2. Bibi R, Klein R, Mayor J, Marr R, **Patil S**, Kaplan R. Role of plasma membrane citrate transporter (PMCT) in metabolic diseases: Which methodology effectively inhibits PMCT activity? 7th Annual Robert B. Glassman memorial brain, mind and behavior symposium. November 7, **2019**; Lake Forest College, Lake Forest, IL.
- 3. Patil R, Powrozek O, Sharma-Walia N, **Patil S**. Identification of new inflammatory breast cancer (IBC) agents. Midwestern University, 555 31st Street, Downers Grove, IL, United States, 32nd Annual Scientific Meeting, Great Lakes Chapter American Society for Pharmacology and Experimental Therapeutics. June 21st, **2019**, Poster number F11.
- 4. Patil M, Noonikara Poyil A, Bugarin A, Joshi SD, **Patil SA**, Patil SA. Design, synthesis and antimicrobial evaluation of substituted urea derivatives containing alkyl/aryl moieties. 257th, American Chemical Society National Meeting & Exposition, Orlando, FL, United States, March 31st- April 4th, **2019**, MEDI 132.
- 5. Patil V, Kandathil V, Noonikara Poyil A, Bugarin A, Joshi SD, **Patil SA**, Patil SA. New triazene compounds as a novel and effective class of antimicrobial agents. International conference on frontiers in materials from basic science to real time applications, Jain University, Bangalore, India, March 13-16, **2019**, PP-49.
- 6. Patil R, Kulshrestha A, Beaman K, **Patil SA**. Identification of chromene based small molecular anticancer agents. Organic Chemistry Symposium, Northwestern University. October 20th, **2018**, Poster 14.
- 7. Patil V, Patil SA, Patil R, Bugarin A, Beaman K, **Patil SA**. Exploration of (hetero)aryl derived thienylchalcones for antiviral and anticancer activities. 256th, American Chemical Society National Meeting & Exposition, Boston, MA, United States, August 19-23, **2018**, MEDI 158.
- 8. Patil R, Kumar B, Beaman B, Waris G, **Patil S**. Novel Bisbenzimidazoles as Anticancer Vacuolar (H+)-ATPase Inhibitors. Great Lakes Chapter American Society for Pharmacology and Experimental Therapeutics. Loyola University Stritch School of Medicine, 2160 South First Avenue, Maywood, IL, United States, 31st Annual Scientific Meeting, Great Lakes Chapter

- American Society for Pharmacology and Experimental Therapeutics. June 22nd, **2018**, Poster number F08.
- 9. **Patil S**. The Agilent Sci-Dev Seminar. Developing and accelerating your HPLC expertise. June 21st 2018, Chicago Marriott Schaumburg, 50 N Martingale Rd, Schaumburg, IL, United States.
- 10. Gricea KA, Patil R, Ghosh A, Panera JD, Guerrero MA, Camacho EJM, Sun Cao P, Niyazi AH, Zainab S, Sommer RD, Waris G, Patil S. Understanding the structure and reactivity of the C-S linkage in biologically active 5-arylthio-5*H*-chromenopyridines. 255th, American Chemical Society National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018, MEDI-110.
- 11. Kandathil V, Patil S. **Patil S.** Biosynthesized palladium nanoparticles mediated by black pepper extract as highly efficient and reusable nanocatalyst in aryl halide cyanation and Hiyama cross-coupling reactions under ligand free conditions. 255th, American Chemical Society National Meeting & Exposition, New Orleans, LA, United States, March 18-22, **2018**, CATL-323323.
- 12. Smith T, Deokar H, **Patil SA**, Walters E. Application of Computational Chemistry Methods in Identifying Potential Jumonji Demethylase Inhibitors. All School Research Consortium (ASRC) March 21, **2018**, RFUMS, North Chicago, IL
 - This poster won the Best Scientific Poster award Presenter Todd Smith
- 13. Zainab S, Ghosh A, Patil R, Grice K, Waris G, **Patil S**. Synthesis and anti-fibrotic activity of new chromenopyridines. Summer Research Poster Session October 18th, **2017**, Poster 33, RFUMS, North Chicago, IL.
- 14. Smith T, Deokar H, **Patil SA**, Walters E. Application of Computational Chemistry Methods in Identifying Potential Jumonji Demethylase Inhibitors. Summer Research Poster Session October 18th, **2017**, Poster 32, RFUMS, North Chicago, IL.
- 15. Patil SA, Patil V, Patil R, Beaman K, **Patil SA**. Identification of novel 5,6-dimethoxy indan-1-one derivatives as antiviral agents. American Chemical Society National Meeting, Fall **2017**, Washington, DC, USA, August 20-24, MEDI 115.
- 16. Patil V, Patil SA, **Patil SA.** Design, synthesis and characterization of novel thiazole based molecules. American Chemical Society National Meeting, Spring **2017**, San Francisco, CA, USA, April 2-6, ORGN 777.
- 17. Patil R, Kulshrestha A, Tikoo A, Fleetwood S, Katara G, Seibel W, Gilman-Sachs A. **Patil S,** Beaman K. Identification of vacuolar (H+)-ATPase modulators by virtual screening process. American Chemical Society National Meeting, Spring **2017**, San Francisco, CA, USA, April 2-6, MEDI 155.
- 18. Ghosh A, Patil R, Sun Cao P, Grice K, **Patil S**, Waris G. Molecular design and synthesis of chromenopyridines as anti-fibrotic agents. All School Research Consortium (ASRC) March 15, **2017**, Poster 41, RFUMS, North Chicago, IL
- 19. LarsenVanAlstine E, Patil R, Ghosh A, Sun Cao P, Grice K, Waris G, **Patil S.** Multicomponent one-pot synthesis of chromenopyridines as anti-fibrotic agents. All School Research Consortium (ASRC) March 15, **2017**, Poster 66, RFUMS, North Chicago, IL
- 20. **Patil S**, Beaman D, Kipp J. Design and Discovery of Novel Chemotherapeutic Agents to Treat Ovarian Cancer. Oral presentation at the 3rd Annual DePaul-Rosalind Franklin University of Medicine and Science Research Retreat. September 16th, **2016**, DePaul University, Chicago, IL
- 21. Grice KA, Patil S, Waris G. Progress Towards Novel Metal-Based Drugs as Anti-Cancer and

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- 22. Henry A, Patil R, Ghosh A, Sun Cao P, Grice K, Waris G, **Patil S.** Design and synthesis of chromenopyridine-metal complexes as anti-fibrotic agents. Summer Research Poster Session October 19th, 2016, Poster 6, RFUMS, North Chicago, IL.
- 23. LarsenVanAlstine E, Patil R, Ghosh A, Sun Cao P, Grice K, Waris G, **Patil S.** Multicomponent one-pot synthesis of chromenopyridines as anti-fibrotic agents. Summer Research Poster Session October 19th, **2016**, Poster 2, RFUMS, North Chicago, IL.
- 24. Patil R, Ghosh A, Sun Cao P, Grice K, Waris G, **Patil S**. Molecular design and synthesis of chromenopyridines as anti-fibrotic agents. Fourth Annual DePaul/RFUMS Research Retreat. September 16th, **2016**.
- 25. Patil R, Kulshrestha A, Katara GK, Beaman K, **Patil S**. Discovery of dihydrobenzofuran substituted chromene analog as a potent anticancer agent for ovarian cancer. American Chemical Society National Meeting, Fall **2016**, Philadelphia, MEDI 332.
- 26. Kandathil V, Patil SA, **Patil SA**. Magnetic Nanoparticle Supported Palladium-Based Nanocatalysts. American Chemical Society National Meeting, Fall **2016**, Philadelphia, CATL 242.
- 27. Patil R, Ghosh A, Sun Cao P, Grice K, Waris G, **Patil S**. Molecular design and synthesis of chromenopyridines as anti-fibrotic agents. American chemical Society National Medicinal Chemistry Symposium. June 26-29, **2016** Chicago, IL, USA.
- 28. Kulshrestha A, Beaman K, **Patil S**. Identification of chromene based anticancer agents for ovarian cancer. American Chemical Society National Meeting, Spring **2016**, San Diego, MEDI 290.
- 29. Patil V, Patil SA, **Patil SA.** Design, synthesis and characterization of novel 5, 6-dimethoxy indanone molecules. American Chemical Society National Meeting, Spring **2016**, San Diego, ORGN 451.
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- 31. Banerjee S, Wang J, Pfeffer S, Ma D, Pfeffer LM, Patil1 SA, Li W, Miller DD. Design, synthesis and biological evaluation of novel 5H-Chromenopyridines as potential anticancer agents.

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- 32. Tigyi GJ, Patil R, Szabó E, Fells JI, Balogh A, Lim KG, Fujiwara Y, Norman DB, Lee S-C, Balazs L, Thomas F, **Patil S**, Emmons-Thompson K, Boler A, Strobos J, McCool SW, Yates CR, Stabenow J, Byrne GI, Miller DD.

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 - ICRR international conference, Kyoto, Japan, May 25-29, 2015.
- 33. Patil SA, Pfeffer S, Siebel WL, Pfeffer L, Miller DD.

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35. Banerjee S, Wang J, Pfeffer S, Pfeffer L, Li W, Miller DD, Patil SA.

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41st Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, **2014**, May 18-20, University of Tennessee, Memphis, Tennessee, USA.

36. Patil SA, Hosni-Ahmed A, Jones TS, Patil R, Miller DD.

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37. Patil R, Patil SA, Hosni-Ahmed A, Jones TS, Miller DD.

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246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, **2013**, MEDI-132.

38. Bukiya AN, **Patil SA**, Li W, Miller DD, Dopico AM.

Structural requirements in the steroid lateral chain for the activation of $\beta 1$ subunit-containing BK channels by 5 β -cholanic acid-3 α -Ol analogues.

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39. Patil SA, Jones TS, Hosni-Ahmed A, Wang J, Patil R, Li W, Miller DD.

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244th ACS National Meeting & Exposition, Philadelphia, PA, United States, August 19-23, **2012**, MEDI-53.

40. Patil SA, Li XS, Siebel WL, Li W, Miller DD.

Design and synthesis of chromenes as novel anti-melanoma agents.

242nd ACS National Meeting & Exposition, Denver, CO, United States, **2011**, Aug. 28th-Sep. 1st, MEDI-016.

41. Sharma H, Patil SA, Neamati N, Schinazi RF, Buolamwini JK.

Synthesis, biological evaluation, molecular modeling and 3D-QSAR studies of 3-keto salicylic acid chalcones as novel HIV-1 integrase inhibitors.

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42. Sharma H, Cheng X, Patil SA, Buolamwini JK.

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241st ACS National Meeting & Exposition, Anaheim, CA, United States, 2011, March 27-

- 31. MEDI-78.
- 43. Patil SA, Bukiya AN, Li W, Dopico AM, Miller DD.

Lithocholic acid-nitriles and tetrazoles as activators of large-conductance, Ca2+-activated K+ (BK) channels.

239th ACS National Meeting, San Francisco, CA, United States, 2010, March 21-25, MEDI-214.

- 44. Sharma H, Patil S, Buolamwini JK.
 - Docking and 3D-QSAR studies of novel acrylates as GST-p inhibitors. Southeast Medicinal Chemistry, MALTO Meeting; May 23-25, 2010, Oxford, MS. (Podium).
- 45. Luo W, Liu J, Li J, Zhang D, Liu M, Addo JA, **Patil S**, Zhang L, Yu J, Buolamwini JK, Chen J, Huang C. Anti-cancer effects of JKA97 are associated with its induction of cell apoptosis via a Bax-dependent and p53-independent pathway. Proc Am Assoc Cancer Res; 2009 Apr 18-22; Denver, CO. Philadelphia (PA): AACR; 2009. Abstract nr 5490.
- 46. Sharma H, Patil SA, Buolamwini JK.

CoMFA and CoMSIA 3D-QSAR studies of novel GST-pi inhibitors.

Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting, **2009**, May 17-19, University of Tennessee, Memphis, Tennessee, USA.

47. Patil SA, Bukiya AN, Li W, Dopico AM, Miller DD.

Design and synthesis of hydroxyl-alkynoic acid methyl esters as novel activators of BK channels.

235th ACS National Meeting, New Orleans, USA, **2008**, April 6-10, MEDI 317.

48. Patil S, Lakshman MK.

Synthesis of the sterically hindered 2'-deoxyadenosine adducts of benzo[c]phenanthrene diol epoxides via Pd catalysis.

226th ACS National Meeting, New York, NY, United States, **2003**, September 7-11, ORGN-467.

49. Gadaginamth GS, Patil SA.

Triheterocycles: Synthesis and antimicrobial activity of 1,3,4-oxadiazolyl/2,5dimethylpyrrolyl/1,2,4triazolylmethoxybisbenzyl)piperzine-2,5-diones. 32nd Annual Convention of Chemists, Jaipur, India, **1995**, OS-40.

50. Patil SA, Gadaginamth GS.

Synthesis and antimicrobial activity of novel 2-phenoxy/2-phenylthio/2-aminomethy-5-(4-phenyl-5-mercapto-1,2,4-triazol-3-yl)methoxyindole derivatives.

34th Annual Convention of Chemists, New Delhi, India, **1997**, ORG(O)-13.

51. Gadaginamth GS, Kavali RR, Patil SA.

One pot synthesis of novel 5,11-dioxo-6-methyl-5,9,10,11-tetrahydro-8*H*-napth[2,3:1,2]pyrrolizine.

Indian Council of Chemists, 16th Conference, Mangalore, India, **1997**. OP-41.

INVITED TALKS:

- Medical College of Wisconsin School of Pharmacy, 8701 Watertown Plank Road, Milwaukee, WI 53226: Part I- Discovery of novel anticancer and antiviral agent; Part II- Cardiovascular drugs: Diuretics for Hypertension. October 2nd, 2019.
- 2. American Chemical Society Great Lakes Regional Meeting. Pre-clinical screening of bisbenzimidazoles using the NCI 60 cell lines and selected triple negative breast cancer (TNBC) cell lines. GLRM P3; May 1st, 2019.
- 3. Roosevelt University, Schaumburg, Illinois: Discovery of new small molecules as anticancer and antiviral agents. September 24th, 2018.
- 4. DePaul University, Chicago, Illinois: Medicinal chemistry approach to identify new anticancer and antiviral agents. April 20, 2018.
- 5. DePaul University, Chicago, Illinois: Design and Discovery of Novel Chemotherapeutic Agents to Treat Ovarian Cancer. Oral presentation at the 3rd Annual DePaul-Rosalind Franklin University of Medicine and Science Research Retreat. September 16th, 2016.
- 6. DePaul University, Chicago, Illinois: Progress Towards Novel Metal-Based Drugs as Anti-Cancer and Anti-Viral Therapies. Oral presentation at the 3rd Annual DePaul-Rosalind Franklin University of Medicine and Science Research Retreat. September 16th, 2016.
- 7. DePaul University, Chicago, Illinois: Fourth Annual DePaul/RFUMS Research Retreat talk, DePaul University: Design and Discovery of Novel Chemotherapeutic Agents to Treat Ovarian Cancer. September 16, 2016.
- 8. Rosalind Franklin University, North Chicago, Illinois: Haim G. And Jane Graumann Nagirner Weinstein Symposium Series talk, Identification of Initial Hits as Anticancer Agetns: A Medicinal Chemistry Approach. Monday, September 14th, 2015. Presented by the College of Pharmacy.
- 9. Pharmacy College, UNTHSC, 3500 Camp Bowie Blvd. Fort Worth, Texas: Design and discovery of antiglioma agents and selective androgen receptor modulators. May, 2014.
- 10. Pharmacy College, University of Texas atTyler, Texas: Medicinal chemistry approach to design and discovery of antiglioma agents and androgen receptor modulators. January, 2014.
- 11. NALCO Naperville, Illinois: I. Large conductance calcium activated potassium (BK) channel openers; II. HIV 1 intregase inhibitors and their biological evaluation. November, 2008.
- 12. Southern Research Institute- Birmingham, Alabama: I. Large conductance calcium activated potassium (BK) channel activators; II. Identification of small molecules as HIV 1 intregase inhibitors. April, 2008.
- 13. Indian Institute of Science, Bangalore, India: I. Design and synthesis of large conductance calcium activated potassium (BK) channel activators; II. Synthesis and biological evaluation of small molecules as HIV 1 intregase inhibitors. August, 2008.

BOOKS/BOOK CHAPTERS:

- 1. Patil R, Powrozek O, Kumar B, Seibel W, Beaman K, Waris G, Sharma-Walia N, **Patil S***. Chapter title: "*Bisbenzimidazoles: Anticancer Vacuolar (H+)-ATPase Inhibitors*". IntechOpen publishers; Book entitled "*Chemistry and Applications of Benzimidazole and its Derivatives*" Edited by Dr. Maria Marinescu; **2019**. https://www.intechopen.com/books/chemistry-and-applications-of-benzimidazole-and-its-derivatives/bisbenzimidazoles-anticancer-vacuolar-h-sup-sup-atpase-inhibitors
- 2. **S. A. Patil*,** L. M. Pfeffer , D.D. Miller.

 "Gliomas: Classification, symptoms, treatment and prognosis" Edited by David Adamson, contributed chapter titled *Identification of a potent antiglioma agent from pre-clinical screening* (Chapter 10; pp. 211-220), **Nova Publishers, 2014.**https://novapublishers.com/shop/gliomas-classification-symptoms-treatment-and-prognosis/

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