


## Curriculum Vitae

<b>Full Name:</b>	DR. AJAY SEMALTY			
<b>Designation:</b>	Assistant Professor University SWAYAM Coordinator (SPOC: NPTEL)			
<b>Department:</b>	Pharmaceutical Sciences			
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<b>Education Qualification:</b>	M. Pharm. (Pharmaceutics), MBA (Operations Management); Ph. D., PDF Meijo University, Japan			
<b>Teaching Experience:</b>	17 Years	<b>Research Experience:</b>	15 Years	
<b>Research Interest and Fields of Specialization</b>				
<ol style="list-style-type: none"> <li>1. Cyclodextrin and lipid complexes</li> <li>2. Natural products for drug delivery for obesity, hair loss etc.</li> <li>3. Small angle neutron scattering (SANS), nanoparticles</li> <li>4. OER and MOOC development</li> <li>5. Academic Writing, Research Methodology</li> </ol>				
<b>Honours &amp; Awards</b>				
<ol style="list-style-type: none"> <li>1. Awarded Daiko Foundation Post-Doctoral Research Fellowship and invited by Meijo University, Nagoya, Japan, FY 2011-12.</li> <li>2. Prestigious national Research Award by UGC, New Delhi</li> <li>3. Young Scientist Award of the year 2007 by Uttarakhand Council of Science &amp; Technology (UCOST)</li> <li>4. Academic writing MOOC ranked number one in exam registration in India.</li> <li>5. Academic Writing MOOC listed in best 30 online courses of 2019 in the Class Central list as declared by Press Information Bureau and MHRD, Govt. of India. (<a href="http://tiny.cc/pib27april2020">http://tiny.cc/pib27april2020</a>)</li> </ol>				
<b>Member of Academic Institutions</b>				
<ol style="list-style-type: none"> <li>1. Visiting Scientist, Faculty of Pharmacy, Meijo University Nagoya, Japan.</li> <li>2. Scientific Expert, Iceland Research Foundation (IRF), Iceland</li> <li>3. Expert, Ministry of Science and Technology, Italy</li> <li>4. Expert Israel Science Foundation (ISF), Israel</li> <li>5. Reviewer, Elsevier Books</li> <li>6. Peer reviewer- various major publishers (Springer, Elsevier, Betham, Taylor&amp;Francis, Medknow, Kluwer etc.) of journals of repute</li> </ol>				
<b>Membership of Scientific Organizations</b>				
<ol style="list-style-type: none"> <li>1. Member- The Asian Council of Science Editors</li> <li>2. Life Member of APTI and IPA.</li> <li>3. Peer reviewer- Elsevier US</li> <li>4. Vice President-Association of Pharmaceutical Teachers of India (APTI) of Uttarakhand State branch for year 2008-13</li> <li>5. Editorial Board Member of Current Drug Discovery Technologies, International Journal of Pharmaceutical Science and Nanotechnology, Pharmacognosy Journal and Global Journal of Pharmaceutical Technology, Science alert journals.</li> </ol>				

**Research Supervision (No. of Ph.D. Degree Awarded/Submitted/Registered)**

25 M. Pharm. Project guided

02 registered for M. Pharm

02 registered for Ph D

**Research Projects/ MoU undertaken**

1. Major research project entitled "Synthesis of polymeric cyclodextrin nanoparticles: Effect of radiation" (CRS/19/RC15) granted to me by UGC-DAE CSR, Kolkata, Rs 13.4 Lac, Ongoing.
2. Major research project, "Studying drug CD complexes using ADXRD beamline (BL-12), Indus 2" (CRS-310), by UGC-DAE CSR, Indore, Co-Principal Investigator, Rs. 13.40 Lac
3. 2. UGC-DAE CSR, Mumbai in collaboration with Bhabha Atomic Research Centre (BARC), Major research Collaborative Research Scheme Project, Mumbai, Small angle Neutron scattering study of the interaction between drug and cyclodextrins in drug-cyclodextrin complexes, Rs 11.34 Lac, Ongoing.
4. UGC SWAYAM MOOC, Course Coordinator; "Academic writing" (15 week, 40 e- modules; 4 credit course), UGC 2018-20; Course developed and available on SWAYAM; Rs 13.5 Lac, Completed.
5. CEC SWAYAM MOOC, Course Coordinator; "Industrial Pharmacy I" (12 week, 40 e- modules; 4 credit course); CEC, 2018-20; Course developed and available on SWAYAM; launched on JULY 2019; Rs 13.5 Lac, Completed.
6. Consultancy Project on Pharmacovigilance programme, Jai Pharma Ltd. Mumbai, a unit of Mylan Pharm. Pvt. Ltd., Logistic support, Dr Ajay Semalty and Dr Mona Semalty, 2016 September Onward.
7. UGC Govt. of India, Major Research Project, Preparation and evaluation of effective herbal formulations for alopecia (baldness) and identification of chief constituent(s), July 1st 2015- June 30, 2018. (Rs. 10.95 Lac), Co-PI
8. DST-SERC Govt. of India, Project entitled Phytosome in improving hepatoprotective activity of phytoconstituents, (Co-Principal Investigator) Feb. 2008-March 2011 (Completed); (Rs. 20.15 Lac)
9. UGC Govt. of India, Project entitled Development of value added herbal drug delivery systems of some polyphenolic phytoconstituents, (Principal Investigator) March 2010- March 2012. (Completed); (Rs. 1.75 Lac)
10. AICTE Govt. of India, Project entitled Phytosphospholipid complexes in improvement of bioavailability of some herbal drugs, (Principal Investigator) July 2010- July 2012. (Completed); (Rs. 10.00 Lac)
11. Daiko Foundation Research Fellowship, Meijo University, Nagoya, Japan entitled "Exploring antidote active compounds against snake bite in traditional Indian medicinal Plants." April 2011- March 2012; (June 2011- Sept. 2011 in Japan).

**Administrative Experience**

1. University SWAYAM Coordinator (Since Jan. 11, 2019); [www.swayamhnbgu.in](http://www.swayamhnbgu.in)
2. SPOC-SWAYAM -NPTEL Local Chapter (LC code -2828)
3. Member Secretary, University SWAYAM Board
4. Member Secretary, University E-learning Committee
5. Member Secretary, University E studio and Community Radio Committee
6. Member, IPR Policy Committee
7. Member, DAIP
8. Co-ordinator - National Pharmacy Week, State Pharmacy Council Uttarakhand.

**Scientific Visits Abroad/ International Collaboration**

1. Three months (June 10, 2011 to Sept. 7, 2011), as visiting scientist in Faculty of Pharmacy (Natural Product and Microbiology Lab) of Meijo University, Nagoya Japan in an International project.
2. Attended the Pharmaceutical Sciences World Congress in Amsterdam, The Netherlands, 22-25 April 2007 and presented research paper selected for the presentation.

**Conference/Symposium/Workshop Attended during last five years****International**

1. "Swayam MOOCs in Pharmacy education" 21st APP Indi-African Conference, IMA auditorium, Bareilly, 30th November, 2019.
2. Sukirti Dobriyal, Lokesh Adhikari, VK Aswal, Mona Semalty, Ajay Semalty, Development and

Characterization of Acyclovir Nanoparticles for Improved Drug Delivery, International Conference on Material Science and Applications (ICMSAA), 25-27 November 2019, Department of Physics Chauras Campus, HNBSGU Srinagar Garhwal. (Invited Lecture)

3. Ajay Semalty, Mukesh Pandey, Mona Semalty, Natural macromolecules in the development of safe and effective gastroretentive floating microparticles of metformin hydrochloride, International Conference on Systems in Medicine and Biology (ICSMB 2016), Indian Institute of Technology Kharagpur, India, 4-7 January 2016.
4. Mona Semalty, Madhuri Maher, Ajay Semalty, Cyclodextrin inclusion complexes in improving solubility, dissolution and permeability of acyclovir and effect of hydrophilic excipients, International Conference on Systems in Medicine and Biology (ICSMB 2016), Indian Institute of Technology Kharagpur, India, 4-7 January 2016.
5. Ajay Semalty, Mona Semalty, Comparison of techniques to improve solubility and dissolution of poorly water soluble drugs, International Conference on Pharmaceutical Sciences, SGRITS Patelnagar Dehradun, (14-15 Feb. 2014).
6. Ajay Semalty, Mona Semalty, Mixed hydrotropy in improving aqueous solubility and dissolution of poorly water soluble drugs, International Conference on Pharmaceutical Sciences, SGRITS Patelnagar Dehradun, (14-15 Feb. 2014).

#### **National: Invited Lectures & paper presentation**

1. "Academic Writing: Concept & Planning" and "Academic Writing: Basic Rules & execution" in UGC sponsored One-month online Faculty Induction Programme-1 [September 21 to October 24, 2020] organized by Human Resource Development Centre, Guru Jambheshwar University of Science & Technology, Hisar, 12 October, 2020 (Two lectures).
2. "Developing adaptability in academic & research" in National Workshop "Education During COVID-19 and Beyond" organized by School of Pedagogical Sciences, Mahatma Gandhi University, Kerala, 29th September 2020, <https://youtu.be/GQajtW6tUvU>
3. "Research Proposal Writing" Summer School on Research and Publication Ethics by UGC-HRDC Kumaun University Nainital (26/08/20 to 08/09/2020); 05/09/2020.
4. "Developing Adaptability in Academic Research", Online Refresher Course, FDC HNB Garhwal University Srinagar Garhwal, on August 20, 2020.
5. 'Self Reliance in Research: Funded Research Projects', Online Refresher Course, FDC HNB Garhwal University Srinagar Garhwal, on August 21, 2020.
6. E- Workshop on "Research Article Writing" organized by PS Academy, 24/08/2020
7. "Plagiarism in Academic Writing" in the National Workshop "Publication Ethics: Academic Writing for Research Publication" organized by Department of Education, Assam University Silchar, Dr. S. Bhattacharjee; 26/08/20
8. "Academic Writing", organized by UGC HRDC RTMNU, Nagpur, Short Term Course on Research Methodology in Social Sciences", 200-330 pm (registered participants only; Refer <http://www.hrdcnagpur.org/>) ; 27/08/20
9. "Funding Agencies", organized by UGC HRDC RTMNU, Nagpur, Short Term Course on Research Methodology in Social Sciences", 200-330 pm; 29/08/20.
10. International e-seminar on Academic Writing: Things to Know (AWTK2020), Govt PG College, Maldevta, Dehradun, July 17.
11. "Academic Writing": One week online workshop on research methodology (14-20th July 2020), Doon University, Dehradun, July 19.
12. "Plagiarism in Academic Writing: Detection and avoiding" FDP on research methodology, N.A.S. P.G. College, Meerut, July 19.
13. "E Learning and MOOCs in Education", National webinar: "Innovations in Teaching, Learning and Evaluation In Nursing Education" organized by JSS College of Nursing, Mysore, July 10, 2020. (<https://youtu.be/fATbq-63TVg>)
14. "OER & MOOCs" Seven-day Faculty Development Program on "Pedagogical Paradigm Shift: Need of the Hour" conducted by ML & JNK Girls College, Saharanpur (27th June to 3rd July 2020) on July 1st, 2020.
15. "Tools for Online Teaching Learning" Capacity Building National Workshop organized by Vasanta

College of Women, BHU; 26th June 2020.

16. 'Strategies for the Leaders to Combat Research Challenges' in Online lecture-Series on 'Academic Leadership in Higher Education during and after COVID 19 Pandemic' organised by Faculty Development Center, HNBSGU, Srinagar Garhwal, during June 22-26, 2020 on June 23, 2020.
17. "The New Normal in Education" National Webinar, 24 May, 2020, organized by The Internal Quality Assurance Cell of St. Albert's College Autonomous, Ernakulum, Kerala <https://youtu.be/4TSwFC9V0SA>
18. Use of Online Resources in Teaching-Learning process: National Webinar, Organized by UKA Tarsadia University, Bardoli, Gujarat, 20 May, 2020 (<https://youtu.be/MZcdHu-yqvs>).
19. "MOOCs Planning & Designing" and "Improving Learner's engagements in MOOCs", in the one week Workshop on MOOCs, E-content Development and Open Educational Resources from 24 February to 29 February 2020, organized by UGC - Human Resource Development Centre, Jamia Milia Islamia, New Delhi, on 26 February '20,.
20. "Developing MOOCs" & "Plagiarism in Academic Writing" in the two week "RC for Life Sciences" [Dec. 09 to 21, 2019] organized by UGC-Human Resource Development Centre (Erstwhile ASC), GJ University S&T, Hisar on 20th Dec., 2019.
21. "Swayam MOOCs in Pharmacy education" 21st APP Indi-African Conference, IMA auditorium, Bareilly, 30th November, 2019.
22. Chaired Main Scientific Session, 21st APP Indi-African Conference, IMA auditorium, Bareilly, 30th November, 2019.
23. "Developing MOOCs" & "Plagiarism in Academic Writing" in the two week "RC for Life Sciences" [Dec. 09 to 21, 2019] organized by Human Resource Development Centre (Erstwhile ASC), GJ University S&T, Hisar on 20th Dec., 2019.
24. "Application of OER and MOOCs: Faculty outlook" Short Term Course on MOOCs e-content development & OER" held between 22/11/2019 to 28/11/2019 for university/college teachers. UGC-HRDC, Kumaun University, Nainital, Nov. 28, 2019.
25. "Dos and Don't s in doing and developing MOOC" Short Term Course on MOOCs e-content development & OER" held between 22/11/2019 to 28/11/2019 for university/college teachers. UGC-HRDC, Kumaun University, Nainital, Nov. 28, 2019.
26. "SWAYAM MOOCs: A Digital Learning Initiative by MHRD", in "Quality improvement and novel practices in higher education in Uttarakhand" organized by RUSA and HE Deptt. Govt. of Uttarakhand, in Doon University on 28-29th September 2019, Dehradun, Uttarakhand.
27. "Plagiarism in Academic Writing", Short Term Course in Research Methodology for university/college teachers. UGC-HRDC, Kumaun University, Nainital, Sept. 16, 2019.
28. "Using OERs for blended and flipped learning" Short Term Course in Research Methodology for university/college teachers. UGC-HRDC, Kumaun University, Nainital, Sept. 16, 2019.
29. "Things to know for Academic Writing" Workshop on Academic Writing for prospective teachers, by School of Education, PMMMNMTT, HNBSGU Srinagar Garhwal, 8-10 August, 2019, 08/08/19.
30. "English and writing styles in Academic Writing" Workshop on Academic Writing for prospective teachers, by School of Education, PMMMNMTT, HNBSGU Srinagar Garhwal, 8-10 August, 2019, 09/08/19.
31. "Literature review and management tools" Workshop on Academic Writing for prospective teachers, by School of Education, PMMMNMTT, HNBSGU Srinagar Garhwal, 8-10 August, 2019, 09/08/19.
32. "OER and MOOCs" in the One week workshop on "MOOC and Open Educational Resources" [July 22 to 27, 2019] organized by Human Resource Development Centre (Erstwhile ASC), GJ University S&T, Hisar on 26th July, 2019
33. "Plagiarism in Academic Writing" in one week workshop held by Department of Education, HNB Garhwal University, Srinagar Garhwal, 23rd May 2019.
34. "OERs and SWAYAM MOOCs in Teaching Learning Process" in Induction/Orientation Program for the teachers of Higher Education conducted by Faculty Development Centre (FDC), HNB Garhwal University, Srinagar Garhwal (15 May-30 June, 2019), 20th May 2019.
35. "Practical approach of using OERs and SWAYAM MOOCs for blended and flipped learning" and "MOOCs Planning and Development: Faculty Perspective" in the UGC sponsored One week workshop on "MOOC, e-Content Development and Open Educational Resources" [February 04 to 09, 2019] organized by Human Resource Development Centre (Erstwhile ASC), GJ University S&T, Hisar on 8th

- February, 2019. [2 lectures]
36. "Writing an Effective Research Project Proposal" and "Basic rules of academic writing" on 11 December, 2018, in one week long workshop on Research Methodology; during December 10-16, 2018 conducted by Faculty Development Centre (FDC), HNB Garhwal University, Srinagar Garhwal. [2 lectures]
  37. "Use of OER in research" and "Creating a MOOC: Faculty perspective" 17th October, 2018, Workshop on "Using and Developing Open Educational Resources and MOOCs" for the teachers of Higher Education during 12-18 October, 2018 conducted by Faculty Development Centre (FDC), HNB Garhwal University, Srinagar Garhwal. [2 lectures]
  38. "Open Educational Resources for Teaching and Learning", in Orientation Program for the teachers of Higher Education conducted by Faculty Development Centre (FDC), HNB Garhwal University, Srinagar Garhwal (03-30 September, 2018), 6th September 2018.
  39. "Using OERs for Teaching and Learning", in Orientation Program for the teachers of Higher Education conducted by Faculty Development Centre (FDC), HNB Garhwal University, Srinagar Garhwal (03-30 September, 2018), 6th September 2018.
  40. "Academic Writing", in Orientation Program for the teachers of Higher Education conducted by FDC, HNB Garhwal University, Srinagar Garhwal (03-30 September, 2018), 7th September 2018.
  41. "Basic of rules of paper writing", in Orientation Program for the teachers of Higher Education conducted by FDC, HNB Garhwal University, Srinagar Garhwal (03-30 September, 2018), 7th September 2018.
  42. "Open Education Resources in quality improvement of higher education", in Quality Improvement and NAAC Accreditation in Higher Education, Workshop conducted by RUSA (National higher education mission) in Doon University, Dehradun, Uttarakhand, 28th August, 2018.
  43. Research: planning an execution, in National workshop on Research Methodology in Management and Social Sciences, conducted by Department of Business Management, HNB Garhwal University, Srinagar Garhwal, 27-31st May, 2018.
  44. Adhikari L, Semalty M, Naruka PS, Aswal VK, Semalty A. Binary complexes of glimepiride with cyclodextrin for improved solubility and drug delivery. 1st Annual conference of society for Himalayan Action Research and Development (SHARAD) on Recent Advances in Chemical & Nano Sciences. Department of Chemistry, Pauri Campus, HNB Garhwal University, Srinagar Garhwal. Dated 29-30 October, 2018. (Oral Presentation)
  45. Adhikari L, Semalty M, Naruka PS, Aswal VK, Semalty A. Effect of different cyclodextrin in Amphotericin B-cyclodextrin binary complexes: solubility, spectral and small angle neutron scattering study. 1st Annual conference of society for Himalayan Action Research and Development (SHARAD) on Recent Advances in Chemical & Nano Sciences. Department of Chemistry, Pauri Campus, HNB Garhwal University, Srinagar Garhwal. Dated 29-30 October, 2018. (Oral Presentation)
  46. Adhikari L, Pandey M, Kotiyal R., Semalty A, Semalty M. Preparation and evaluation of hair growth formulations of Indian ginseng (*Withania somnifera*) for alopecia 1st Annual conference of society for Himalayan Action Research and Development (SHARAD) on Recent Advances in Chemical & Nano Sciences. Department of Chemistry, Pauri Campus, HNB Garhwal University, Srinagar Garhwal. Dated 29-30 October, 2018. (Oral Presentation)
  47. Mona Semalty, Mukesh Pandey, Ajay Semalty, Preparation and evaluation of hair growth formulation of *Withania somnifera* fruits for alopecia, National conference on Recent frontiers in Chemistry (NRFC 2018), Department of Chemistry, HNB Garhwal University, 27-28 April 2018.
  48. Mukesh Pandey, Mona Semalty, Ajay Semalty, Effect of geographical location on total phenol and flavonoid content and antioxidant activity, National conference on Recent frontiers in Chemistry (NRFC 2018), Department of chemistry, HNB Garhwal University, 27-28 April 2018. (Presented).
  49. Mona Semalty, Ajay Semalty, Current trends and challenges in pharmaceutical sciences, National seminar, IPGA, BN College of Pharmacy, Udaipur, Rajasthan, 24-25 Sept. 2017. (Presented).
  50. Mona Semalty, Ajay Semalty, Study of Naringenin-phosphatidylcholine and naringenin-beta cyclodextrin interaction in the complexes, National Conference on Study of Matter Using Intense Radiation Sources and Under Extreme Conditions, UGC-DAE Consortium for Scientific Research (UGC-DAE CSR) University Campus, Khandwa Road, Indore 03-06 November 2016 (Presented).
  51. Advanced MOOC development workshop, 15-16 October, IIM Bangalore

52. Attended "CEC orientation workshop on "Development and delivery of MOOCs for SWAYAM" conducted by CEC at Jamia Milia Mass Communication Research Centre New Delhi for approved MOOC course coordinators, 23-24 July 2018.
53. Attended "UGC orientation workshop for Course Coordinators on the development of MOOCs" conducted by UGC at UGC office New Delhi for approved MOOC course coordinators, 10th May 2018.
54. Attended: "Shodh, shiksha, sameeksha" interaction meeting; Selected among the researchers at all India level to attend an interaction meeting with Hon'ble MHRD Minister in IUCAA Pune on 1st October 2017.
55. National Workshop on "Role of Open Education Resources in Higher Education" conducted by FDC, HNB Garhwal University, Srinagar Garhwal, from 15/12/17 to 17/12/17.
56. Completed online course on OER development from Commonwealth of Learning.
57. Short Term course on "Open Education Resources in Higher Education" conducted by FDC, HNB Garhwal University Srinagar Garhwal, from 04/09/17 to 09/09/17.
58. Selected for attending the workshop and presenting research proposal for utilizing neutron scattering facilities at the national facility of Neutron Beam research (NFNBR), Dhruva Reactor, Bhabha Atomic Research Centre, Mumbai, October 17-18, 2016.
59. Attended Awareness workshop on "The facilities of UGC-DAE consortium for scientific research", April 5-7, 2016, Kumaun University, Nainital.

#### **Conference/Symposium/Workshop Organized during last five years (2014-2019)**

1. Detection and avoiding Plagiarism in Research & Publication, organized by SWAYAM Cell, 12/09/2020, [https://drive.google.com/file/d/1JcpnclmMjksYeO9\\_lwDAGkpW311Q8J1h/view?usp=sharing](https://drive.google.com/file/d/1JcpnclmMjksYeO9_lwDAGkpW311Q8J1h/view?usp=sharing) (Organized)
2. Academic Writing Workshop: Ethiopia Chapter (SWAYAM Outreach Program), 20/08/2020. (Organized)
3. International webinar: Academic Writing: from Basic to advanced (Leaving Impact: The Uganda Chapter), 06/07/2020.
4. "Demo on Virtual Classrooms for faculty members", organized by SWAYAM Cell in association with Microsoft Team, 29 June 2020. (Organized)
5. International webinar: Academic Writing: from Basic to advanced (Leaving Impact: The Brasil Chapter), 29/06/2020. (Organized)
6. Academic Writing: From Basic to advanced (The Philippines Chapter), 21/06/2020.
7. Course coordinator, Summer School on Research and Publication Ethics by UGC-HRDC Kumaun University Nainital (26/08/20 to 08/09/2020). (Organized)
8. Using SWAYAM & SWAYAMPBABA and other e learning resource of UGC and MHRD, Online webinar organized by Teaching Learning facilitation committee in association with SWAYAM cell, May 12, 2020 ([https://youtu.be/8XP0\\_Oo5qAg](https://youtu.be/8XP0_Oo5qAg)) (Organized)
9. Detection and avoiding Plagiarism in Research & Publication, organized by SWAYAM Cell, 12/09/2020, (Organized)
10. Chaired Main Scientific Session, 21st APP Indi-African Conference, IMA auditorium, Bareilly, 30th November, 2019.
11. Special Assistance, Workshop on "Using and Developing Open Educational Resources and MOOCs" for the teachers of Higher Education during 12-18 October, 2018 conducted by Faculty Development Centre (FDC), HNB Garhwal University, Srinagar Garhwal.

#### **Publications during last five years (2014-2019)**

##### **Journals**

##### **International**

##### **2018-19**

1. Mukesh Pandey, Lokesh Adhikari, Rupali Kotiyal, Ajay Semalty, Mona Semalty, Preparation and evaluation of hair growth formulations of Indian ginseng (*Withania somnifera*) for alopecia, Asian Journal of Biological Sciences, 2019, 12, 524-532.

##### **2017-18**

2. Lokesh Adhikari, Rupali Kotiyal, Mukesh Pandey, Meenakshi Bharkatiya, Ajay Sematy, Mona Semalty, Effect of geographical location and type of extract on Total phenol/flavon contents and antioxidant activity of different fruits extracts of *Withania somnifera*, **Curr Drug Discov Technol.** 2018,15: In Press. ISSN: 1570-1638; PMID: 24188445. **Impact factor. 2.367; DOI: [10.2174/1570163815666180807100456](https://doi.org/10.2174/1570163815666180807100456).**
3. Mona Semalty, Lokesh Adhikari, Divya Semwal, Anita Chauhan, Akash Mishra, Rupali Kotiyal and Ajay Semalty, A comprehensive review on phytochemistry and pharmacological effects of Stinging Nettle (*Urtica dioica*), **Current Traditional Medicine**, 2017, 3(3), 156-67. ISSN 2215-0846. DOI: [10.2174/2215083803666170502120028](https://doi.org/10.2174/2215083803666170502120028)
4. Mona Semalty, Lokesh Adhikari, Anita Chauhan, Akash Mishra, Divya Semwal, Rupali Kotiyal, Ajay Semalty, Obesity and herbal drug research: Exploring the safer alternative and lead molecule, **Current Traditional Medicine**, 2017, 3(2), 74-92. ISSN 2215-0846. DOI: [10.2174/2215083803666170309124540](https://doi.org/10.2174/2215083803666170309124540)

#### 2015-16

5. Akash Mishra, Rupali Kotiyal, Lokesh Adhikari, Ajay Semalty, Polymeric implants of diclofenac for site specific and prolonged drug delivery for use in orthopedic or arthritic patients. **Advances in Biomedicine and Pharmacy.** 2016; 3(6): 380-386. ISSN: 2313-7479 <http://dx.doi.org/10.19046/abp.v03i06.04>
6. Madhuri Maher, Mukesh Pandey, Lokesh Adhikari, Ajay Semalty, Mona Semalty, Effect of hydrophilic excipients on cyclodextrin complexes of acyclovir in improving solubility, dissolution and permeability, **Letters in Drug Design & Discovery**, 2016,13(8), 771-780. ISSN: 1570-1808. DOI: [10.2174/1570180813666160517161058](https://doi.org/10.2174/1570180813666160517161058), **Impact Factor: 1.17**
7. Mukesh Pandey, Madhuri Maher, Mona Semalty, **Ajay Semalty**. Natural macromolecules in the development of safe and effective gastroretentive floating microparticles of metformin hydrochloride. **The Natural Products Journal**, 2016, 6 (1), 62-72. <http://dx.doi.org/10.2174/2210315506999151209101058> ISSN: 2210-3155.
8. Divya Semwal, Rupali Kotiyal, Anita Chauhan, Akash Mishra, Lokesh Adhikari, **Ajay Semalty**, Mona Semalty, Alopecia and the herbal drugs, An overview of the current status, **Advances in Biomedicine and Pharmacy.** 2015; 2(6): 246-254. ISSN: 2313-7479. DOI: [10.19046/abp.v02i06.01](https://doi.org/10.19046/abp.v02i06.01)
9. **Ajay Semalty**, Rahul Kumar , Mona Semalty. Anti-hyperlipidemic and anti-obesity activities of ethanolic extract of *Trigonella foenum graecum* (seeds) of Himalayan region in diet induced obese mice, **Advances in Biomedicine and Pharmacy.** 2015; 2(5): 229-34. ISSN: 2313-7479. <http://dx.doi.org/10.19046/abp.v02i05.05>

#### 2014-15

10. **Ajay Semalty**, Cyclodextrin and phospholipid complexation in solubility and dissolution enhancement: A critical and meta-analysis, **Expert Opinion on Drug Delivery**, 2014, 11(8):1255-72. doi: 10.1517/17425247.2014.916271 ISSN: 1742-5247, **Impact Factor: 5.657**
11. **Ajay Semalty**, Yuveraj Singh Tanwar, Devendra Singh, M. S. M. Rawat, Phosphatidylcholine complex in improving oral drug delivery of epicatechin: preparation and characterization, **Journal of Drug Discovery and Development**, 2014, 1, 46-55. ISSN: 2349-7777.

#### 2013-14

12. **A. Semalty**, YS Tanwar, M Semalty, Preparation and characterization of cyclodextrin inclusion complex of naringenin and critical comparison with phospholipid complexation for improving solubility and dissolution, **Journal of Thermal Analysis and Calorimetry** 2014, 115, 3:2471-2478. ISSN: 1388-6150; DOI 10.1007/s10973-013-3463-y. **Impact Factor: 2.209.**
13. **Ajay Semalty**, Yuveraj Singh Tanwar. Preparation and characterization of cyclodextrin inclusion complexes for improving solubility and dissolution of nimesulide. **World J Pharm Sci** 2014; **2(1)**: 72-78.
14. **Ajay Semalty**, Yuveraj Singh Tanwar. Nimesulide-phosphatidylcholine complex for improvement of solubility and dissolution. **American Journal of Drug Discovery and Development** 2014. 3: 225-234. ISSN: 2150-427x; doi 10.3923/ajdd.2013. SNIP: 0.655
15. Semalty M, Panchpuri M, Singh D, **Semalty A**, Cyclodextrin inclusion complex of racecadotril: effect of drug- $\beta$ -cyclodextrin ratio and the method of complexation, **Curr Drug Discov Technol.** 2014,11(2):154-61. ISSN: 1570-1638; PMID: 24188445. **Impact factor. 2.367; DOI: [10.2174/15701638113106660043](https://doi.org/10.2174/15701638113106660043)**

#### National

#### 2018-19

16. Adhikari L, Semalty M, Naruka PS, Aswal VK, **Semalty A**. Binary complexes of glimepiride with  $\beta$ -cyclodextrin for improved solubility and drug delivery, *Indian Drugs*, 2019, 56, 3, 54-60. ISSN: 0019-

462X.

#### 2015-16

17. Mona Semalty, Rahul Kumar, **Ajay Semalty**, Formulation and characterization of herbal formulation for antihyperlipidemic activity in diet induced obese mice, **Indian Drugs**, 2016;53(7):30-34. ISSN: 0019-462X

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20. **Semalty A**, Preparation and evaluation of chitosan microspheres of metformin hydrochloride and to study the effect of drug to polymer ratio, **International Journal of Pharmaceutical and Chemical Sciences**, 2014, 3(2): 316-20. (ISSN: 2277-5005).
21. **Ajay Semalty**, Ravindra Aswal, Chitosan microspheres of metformin hydrochloride and the effect of using different concentrations of crosslinking agent, **International Research Journal for Inventions in Pharmaceutical Sciences (IRJIPS)**, 2014, 2(1):22-27. (ISSN: 2321-7855).
22. **Ajay Semalty**, Interplay of solubility and dissolution in dosage form development, **International Journal of Pharmaceutics and Drug Analysis (IJPDA)**, 2014, 2(1), 13-24. ISSN : 2348 – 8948.
23. Mona Semalty, Mitali Panchpuri, Devendra Singh, Ajay Semalty, Effect of drug  $\beta$ -CD ratio and method of complexation in the development of cyclodextrin inclusion complex of ofloxacin, **Indian Drugs**, 2013, 50(12), 34-40. ISSN: 0019-462X.

#### Other General Publications

24. Semalty A, Increasing the reach of Digital Learning in India, (Guest Column) The daily Pioneer, 25 April 2020 (<http://tiny.cc/pioneerswayam>).
25. Semalty A, Digital learning: The Uttarakhand Plan, <https://pharmastate.blog/digital-learning-the-uttarakhand-plan/>
26. Semalty A., Digital learning through SWAYAM MOOCs: SWOT Analysis, CEC News, Sept 2019, 5-6.
27. Semalty M, Adhikari L, Semalty A., Benchmarking SWAYAM MOOCs, Taking learners from enrollment to exams, CEC News, March 2020: 3-6.

#### Books

1. Semalty A, Semalty M, Semalty's Industrial Pharmacy I, Pharma Med Press, Hyderabad, India, 2020, In Press.
2. Semalty A, Semalty M, Semalty's Review: Industrial Pharmacy I, Pharma Med Press, Hyderabad, India, 2020, In Press.
3. Ajay Semalty, Mona Semalty, M.S.M. Rawat, Essentials of Pharmaceutical Technology (Second Edition), 2018, reprint 2019, ISBN 9789386819994, Pharma Med Press, Hyderabad, India.
4. Mona Semalty, Ajay Semalty, Essentials of Research: A Mini Guide, 2012, ISBN 978-3-659-30545-0, LAP Lambert Academic Publishing, Saarbrucken, Deutschland, Germany.
5. Ujjwal Nautiyal, Ajay Semalty, Buccal Film (Enalapril): A most promising route for drug delivery, 2012, ISBN 978-3-8484-9422-4, LAP Lambert Academic Publishing, Saarbrucken, Deutschland, Germany.
6. Ajay Semalty, Mona Semalty, M.S.M. Rawat, Essentials of Pharmaceutical Technology, 2011, ISBN 978-93-81075-34-0, Pharma Med Press, Hyderabad, India.
7. Ajay Semalty, Mona Semalty. Art of Writing and Publishing in Pharmaceutical Journals, 2007, ISBN 81-88449-21-0, Pharma Book Syndicate, Hyderabad, India.
8. Ajay Semalty, Do's and Don'ts for disaster preparedness, under a project "dissemination of Do's and Don'ts for disaster preparedness" supported by Building and technology Promotion Council, New Delhi. 2008

#### Patents:

1. **Ajay Semalty**, Rahul Kumar, Mona Semalty, A novel synergistic herbal formulation for antihyperlipidemic and antiobesity activity, Patent no. 309685, appl no. **2965/DEL/2012; Granted**.
2. Mona Semalty, Tejprakash Sevak, **Ajay Semalty**, Y. S. Tanwar, M.S.M. Rawat, Synergistic Herbal Hair Growth Formulation For Alopecia, Published on 18/04/2014. (**2896/DEL/2012**); FER defended, amended stage.



## Massive Open Online Courses (MOOCs) with record enrolments (more than 35000 learners across 95 countries)

- Course Coordinator; “**Academic writing**” (13 week, 40 e- modules; 4 credit course), is approved by UGC on April 2018; Course developed; [https://swayam.gov.in/nd2\\_ugc19\\_ge03/preview](https://swayam.gov.in/nd2_ugc19_ge03/preview) (July Oct. 2019 cycle) & [https://swayam.gov.in/nd2\\_cec20\\_ma04/preview](https://swayam.gov.in/nd2_cec20_ma04/preview) (January- July 2020 Semester); ([https://swayam.gov.in/nd2\\_cec20\\_ge29/preview](https://swayam.gov.in/nd2_cec20_ge29/preview), July Oct. 2020 cycle).
- Course Coordinator; “**Industrial Pharmacy I**” (12 week, 40 e- modules; 4 credit course); approved by CEC on April 2018; Course developed; [https://swayam.gov.in/nd2\\_cec19\\_ge01/preview](https://swayam.gov.in/nd2_cec19_ge01/preview); (July Oct. 2019 cycle); [https://swayam.gov.in/nd2\\_cec20\\_lb05/preview](https://swayam.gov.in/nd2_cec20_lb05/preview), (July Oct. 2020 cycle).
- Developed 4 modules (Module no. 37-40) for ARPIT course: Pedagogical Innovations and Research Methodology by UGC HRDC GJ University of Science and Technology Hisar. ([https://swayam.gov.in/nd2\\_arp19\\_ap72/preview](https://swayam.gov.in/nd2_arp19_ap72/preview))
- Contributed more than 25 hrs video lectures for SWAYAMPBHA channel- 15 on Novel Drug Delivery systems and Production Technologies (May-September 2020).

### Total Number of Research Publications:

## Publications

Papers	-	74 (39 International, 35 National)
Scientific Abstracts	-	73 (13 International, 60 National)
Chapter in Book	-	02 (01 International, 01 National)
Books	-	08 (with 02 In press)
Patents	-	02 (Indian Patent; 1 granted, 1 in final stage)
E content development	-	more than 100 hrs
MOOCs (SWAYAM online courses)-		02 (by UGC and CEC) > 50 hrs of video lectures
E -Modules for ARPIT Course	-	04
SwayamPrabha emodules	-	25 hrs
Total citations	-	>1800
H index	-	24
<a href="https://scholar.google.co.in/citations?user=rsy5X4UAAAAJ&amp;hl=en">https://scholar.google.co.in/citations?user=rsy5X4UAAAAJ&amp;hl=en</a>		
I10 Index	-	32
Total Impact	-	> 90

MOOCs (SWAYAM online course)- 02 (Academic Writing; Industrial Pharmacy)

(developed and run; by UGC and CEC; PIONEER IN UNIVERSITY & PHARMACY; run in July session with more than 35000 learners from 95 countries. RANKED NUMBER #1 MOOC OF COUNTRY and ranked in TOP 30 MOOCs WORLDWIDE; available at [www.swayam.gov.in](http://www.swayam.gov.in) )

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SWAYAM promotion/Lectures: <http://tiny.cc/SWAYAM>; <http://tiny.cc/SWAYAMNEWS>

Academic Writing Lectures: <http://tiny.cc/AWSemalty>