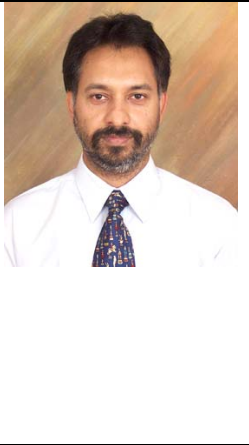


Inder Pal Singh

Education

1994-1998	Ph.D. Natural Products Chemistry, Shizuoka University, Japan Thesis Advisor - Prof. Hideo Etoh, Thesis Title - Phloroglucinol compounds in <i>Eucalyptus</i> species as attachment-inhibitors against the blue mussel, <i>Mytilus edulis galloprovincialis</i>	
1989-1992	Ph.D. Organic Chemistry, Punjab Agricultural University, Ludhiana, India Thesis Advisor - Prof. P. S. Kalsi, Thesis Title - Chemistry and Biological Activity of Sesquiterpene Lactones from <i>Saussurea lappa</i>	
1986-1988	M.Sc. Organic Chemistry, Punjabi University, Patiala, India	
1984-1986	B.Sc. Punjabi University, Patiala, India	

Academic Fellowships

Aug 2000 –March 2002	JSPS Post Doc Fellowship, ICR, Kyoto University, Japan
June 1998- May 2000	Post Doctoral Fellow, Prof. W. H. Gerwick, Oregon State University, Corvallis, OR 97331, USA
1994-1998	Monbusho Fellowship, Ministry of Education, Japan
1992-1994	Senior Research Fellowship, CSIR, New Delhi, India
1989-1992	Merit Fellowship, Punjab Agricultural University, Ludhiana, India
1981-1982	Merit Scholarship, Govt. of India

Academic & Research Activities

- Research Projects Granted: 11 (including four international projects)
- Research Papers Published: 48 (highest impact factor – **3.2**)
- Review Articles: 9 (highest impact factor – **9.2**)
- One educational CD on HPLC training
- Invited lectures: >15
- Book Chapters: 7
- Ph.D. students guided – 2 (completed); 6 (continuing)
- M.S. (Pharm.) students guided – 15 (completed); 4 (continuing)
-

Academic Contribution – Teaching

Dr Inder Pal Singh is involved in teaching postgraduate and doctoral students in various chromatographic techniques (CC, VLC, HPLC, HPTLC, LC-MS) and spectroscopic techniques (UV, IR, Mass, and NMR). He is the course coordinator for the following courses.

- Separation techniques (NP 510, M.S.)
- Advanced separation techniques for research (NP 710, Ph.D.)
- Structure elucidation (NP 640, M.S.)

Inder Pal Singh

- Advanced structure elucidation techniques for natural products (NP 810, Ph.D)
- Chemical standardization of herbal drugs (TM-610, M.S.)

Research collaborations (Past and Present)

- National Centre for Cell Science (NCCS), Pune
- Agnes Brown Duggan Chair of Oncological Research, University of Louisville, Louisville, USA
- Research School of Biology, The Australian National University, Canberra, Australia
- Molecular Immunology Laboratory, Department of Immunopathology, Postgraduate Institute of Medical Education and Research (PGIMER) Chandigarh, India
- Department of Biotechnology, Panjab University, Chandigarh
- University of Mississippi, USA

Recognitions

- Biography profiled in Marquis' WHO's WHO Asia – 2007
- Editorial Board Member – Analytical Chemistry Letters
- Referee for Journal of Natural Products, Bioorganic and Medicinal Chemistry, European Journal of Medicinal Chemistry, Natural product Communications, Natural Product Radiance, Medicinal Chemistry, Current Medicinal Chemistry, Journal of Medicinal and Aromatic Plants,
- Evaluated project proposals for DST and ICMR
- External expert for project interviews of outside university and ICMR
- Examiner for MSc and Ph.D thesis (external), for practical exams of MSc Chemistry (external)

Conferences/seminars Co-organized

- 2nd Biennial Conference on Drug Discovery in Natural Products and Traditional Medicines (DDNPTM), November 2010, NIPER, S.A.S. Nagar, India
- 1st International Conference on Drug Discovery in Natural Products and Traditional Medicines (DDNPTM), November 2008, NIPER, S.A.S. Nagar, India
- Educational Programme for Drug regulatory, Industry representatives / labs from Nigeria'
- National workshop on cultivation practices of some important medicinal plants August 8 - 9, 2003, organized at NIPER.
- National workshop on curriculum development in natural products at post graduate level, November 23 – 25, 2003.

Inder Pal Singh was born in 1967 in district Patiala, Punjab, India. He obtained his B. Sc. from Govt. Mohindra College, Patiala, M.Sc. from Punjabi University, Patiala and Ph.D. from Punjab Agricultural University, Ludhiana.

In 1994, he moved to Shizuoka University Japan on a Monbusho Fellowship and obtained Ph.D. under guidance of Prof. Hideo Etoh. During this period, he worked on isolation, characterization and biological evaluation of phloroglucinol molecules from Eucalyptus species for marine anti-fouling activity.

In 1998, he moved to Oregon State University, Corvallis, Oregon, USA for a post doctoral fellowship in Prof. William Gerwick's laboratory where he worked on bioactive molecules from marine cyanobacteria.

Inder Pal Singh

Two years later, he moved to Institute of Chemical Research, Kyoto University, Japan, on a JSPS fellowship for a two-year period to work on mechanism-based design and synthesis of inhibitors of peptide ligases.

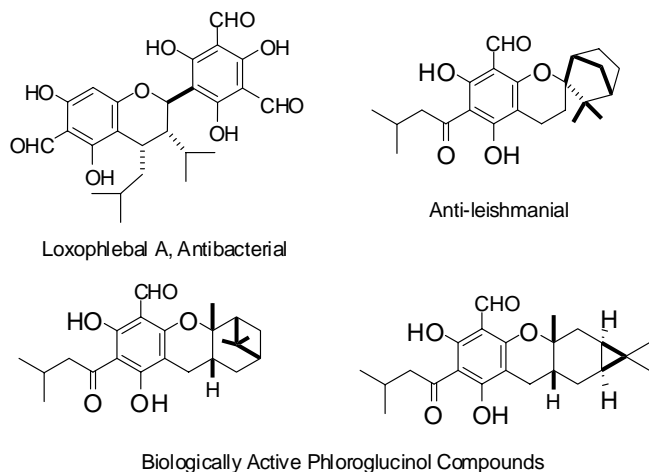
He returned to India in 2002 and joined National Institute of Pharmaceutical Education and Research (NIPER), SAS Nagar as an Assistant Professor, where at present he is an Associate Professor at the Department of Natural products.

His research interests include isolation of bioactive molecules from natural sources, biomimetic synthesis of bioactive natural products for therapeutic areas such as HIV and leishmaniasis, and standardization of herbal/Ayurvedic formulations.

He has 48 research papers and 16 review articles/book chapters and three patent applications to his credit. Two students have completed their PhD and six are currently enrolled under his guidance. His research has been funded by various national and international agencies. He has delivered a number of invited talks. He is currently reviewer for a number of research journals such as Bioorganic and Medicinal Chemistry, Journal of Natural Products, Natural Product Communications.

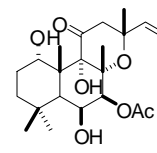
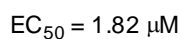
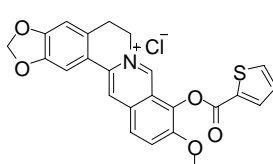
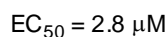
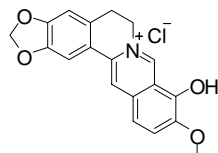
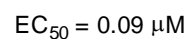
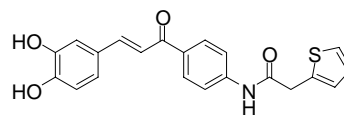
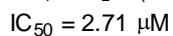
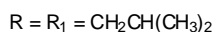
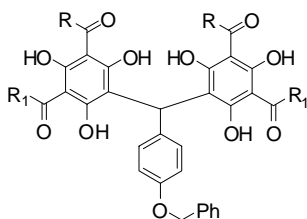
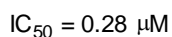
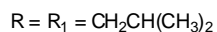
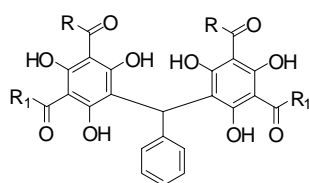
Dr Inder Pal Singh is working on challenging diseases of developing countries such as leishmaniasis and HIV. His research group is engaged in isolation of bioactive molecules from plants and microbial sources, standardization of active extracts, development of novel synthetic methodologies and synthesis of bioactive natural products and their analogs for evaluation in different therapeutic areas.

Currently he is engaged in isolation and synthesis of phloroglucinol class of compounds for their anti-infective potential. Phytochemical investigations on several Eucalyptus species resulted in isolation of several new and known compounds. Phloroglucinol terpene adducts (both natural and synthetic euglobals) have shown promising antileishmanial activity *in vitro* against the promastigotes of *L. donovani*. Some of the interesting phloroglucinol molecules:



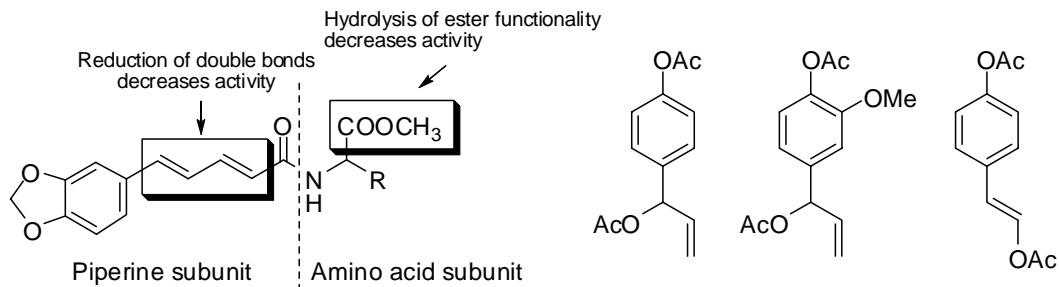
In order to find improved leads for HIV, synthesis of analogs of known active molecules was undertaken. Dimeric phloroglucinols (mallotojaponin analogs) and berberine derivatives have shown promising activity against HIV *in vitro*. The mechanistic studies showed that these compounds are potent RTase inhibitors. Newly design caffeoyl-anilide derivatives were found to have dual inhibitory activity (double shields) against HIV. These molecules show both HIV-integrase and CCR5 inhibitory activity. Forskolin, a diterpene was isolated as anti-HIV compound from the active extract of *Coleus forskohlii*. Berberine was isolated as an active constituent from the leaves of *Argemone mexicana*. Several synthetic 9-ester derivatives of berberine were prepared and evaluated for anti-HIV activity. **Some anti-HIV lead molecules:**

Inder Pal Singh

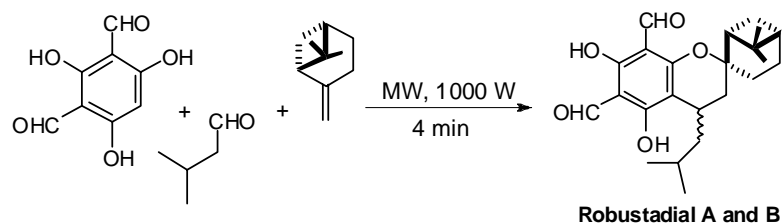


Forskolin

Various piperoyl-amino acid conjugates were synthesized and SAR established for anti-leishmanial activity. Several Indian medicinal plants were evaluated for anti-leishmanial activity. Phenyl propanoids were isolated from the active extracts of *Alpinia galanga*. Some anti-leishmanial compounds isolated or synthesized in the lab:

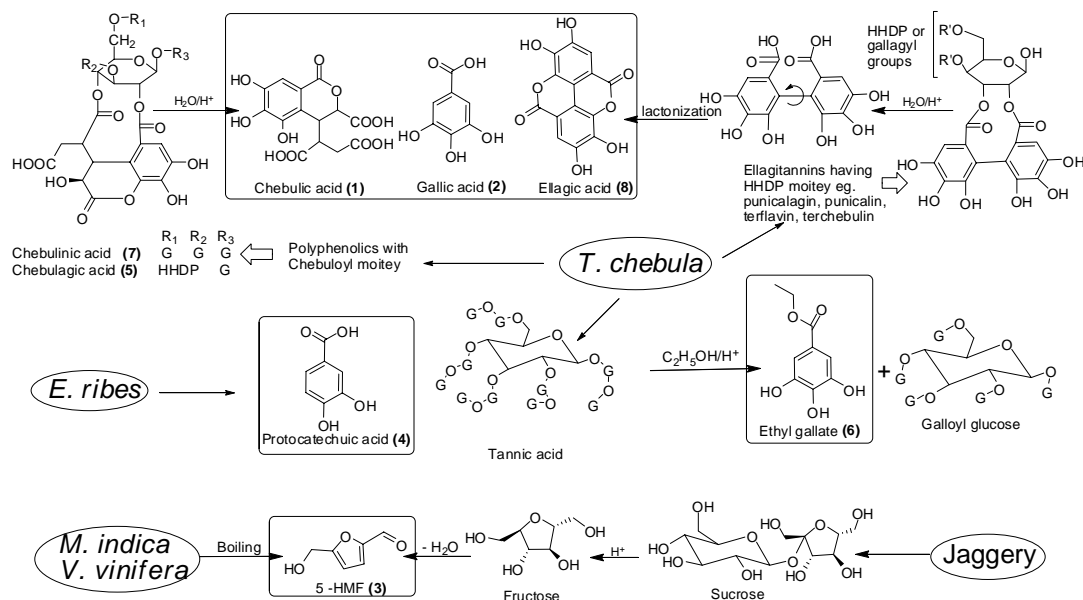


An elegant two-step synthesis of anti-malarial compounds, robustadials A and B was achieved via a three component reaction starting from phloroglucinol.



Inder Pal Singh

His research interests also include standardization of Ayurvedic formulations. Several Ashavas and Arishtas such as Abhayarishtha, Jirakadyarishtha and Arjunarishtha have been prepared in-house and standardized taking into account the detailed investigation for chemical changes occurs during fermentation. Another formulation from a traditional healer was standardized with respect to its marker constituents, which is now marketed as KAFGON.



Sources of marker constituents and their transformations during fermentation in *Abhayarishtha*

Laboratory Facilities

1. Analytical HPLC with PDA and ELSD
2. Preparative HPLC
2. HPTLC (CAMAAG)
3. Six port reactor
4. Flash chromatography
5. Rotary Evaporators, Chillers, Vacuum Pumps, Analytical Balances, Deep Freezer,

Inder Pal Singh

Research Projects (Completed and ongoing)

Title of the project	Funding agency	Amount	
A composite proposal for comprehensive research on Asavas and Aristas by studying markers of the plant materials used therein and stability and shelf-life studies and technology development of these formulations (2003)	Ministry of Health and Family welfare, Dept. of ISM&H, GOI, New Delhi	Rs. 24 Lakh	Co-I
Preparation, standardization and stability related issues of pippalyadi yoga - an Ayurvedic oral contraceptive (2003)	Dept. of Family Welfare, Ministry of Health and Family Welfare, GOI, New Delhi	Rs. 20 lakh	Co-I
To develop a method to extract and purify sideroxylonals from <i>Eucalyptus loxophleba</i> foliage (2005)	Australian National University, Canberra, Australia	AUD 9000.00 (Rs. ~ 2.89 lakhs)	PI
Synthesis of natural Piperine-amino acid derivatives as potential anti-leishmanial agents (2006)	International Foundation for Science (IFS), Sweden	Approx. USD 8000.00 (Rs. 3.54 lakhs)	PI
Phytochemical and biological evaluation of selected <i>Eucalyptus</i> species (2006)	Australian National University, Canberra, Australia	AUD 21000.00 (Rs. ~ 7.0 lakhs)	PI
Identification of anti-viral compounds with potential for development of microbicides to prevent HIV infection and transmission (2006)	DBT, New Delhi	Rs. 93.76 lakhs (NIPER - Rs. 46.31 lakhs)	Co-PI
Discovery of potential antileishmanial chemotherapeutics and ethnotherapeutics from medicinal plants (2007)	DST, New Delhi	Rs. 20 lakhs	PI
Isolation of anthocyanins from Berries (2007)	University of Louisville, USA	USD 35000.00 (~14.0 lakhs)	PI
Anti-candida metabolites of <i>Burkholderia gladioli</i> OR-1: Identification, characterization, chemical modifications and toxicity assays (2008)	DBT, New Delhi	Rs. 5.06 Lakhs	Co-PI
Standardization and quality control of selected anti-HIV formulations (2008)	ICMR, New Delhi	16.80 Lakhs	PI
Studies on anti-tumor and radioprotective potential of <i>Potentilla fulgens</i> Wall ex Hook. And characterization of its active constituents (2010)	DBT, New Delhi	82.73 Lakhs	Co-I

Industrial Consultancies

Title	Clients
Quantification of Steviol glycosides in Chinese Steviol glycosides enrich extract (2010)	Stanpack Pharma Pvt. Ltd, Mumbai
Caralluma Herbal Project (2010)	Chemical Resources
HPLC analysis of polysorbate using ELSD (2008)	Panacea Biotech, Lalru
HPLC analysis of <i>Euphorbia prostata</i> using ELSD (2009)	Panacea Biotech, Lalru
Development of a herbal product KAFGON (2007)	Mrs. Raj Katyal, Jalandhar

Inder Pal Singh

HPLC analysis of five herbal samples (2008)	Mrs. Raj Katyal, Jalandhar
Fingerprinting of herbal oil sample (2006)	Venus Remedies, Panchkula
Testing of oil samples on GC-MS (2005)	Alliance Engineers

Inder Pal Singh

Research Papers

S. No.	Authors	Title	Impact Factor
1	K. K. Talwar, I. P. Singh, and P. S. Kalsi	A sesquiterpenoid with plant growth regulatory activity from <i>Saussurea lappa</i> . <i>Phytochemistry</i> , 1992 , 31, 336-338.	1.133
2	I. P. Singh, K. K. Talwar, J. K. Arora, B. R. Chhabra, and P. S. Kalsi	A biologically active guaianolide from <i>Saussurea lappa</i> . <i>Phytochemistry</i> , 1992 , 31, 2529-2531.	1.133
3	I. P. Singh and P. S. Kalsi	A novel transesterification with diazomethane. <i>Indian Journal of Chemistry</i> . 1992 , 31B, 723-724.	0.275
4	I. P. Singh, R. Goyal, Anu, and P. S. Kalsi	Reduction of terpenoid lactones with Na/MeOH. <i>Ind. J. Chem.</i> 1993 , 32B, 1234-1236.	0.275
5	J. R. Sharma, I. P. Singh, G. Kaur, Anu, and P. S. Kalsi	Terpenoids from costus root oil as potential antifungal agents. <i>Pesticide Research Journal</i> , 1993 , 5, 151-154.	--
6	P. S. Kalsi, V. Mittal, I. P. Singh, and B. R. Chhabra	Pseudoguaianolides from <i>Parthenium hysterophorus</i> . <i>Fitoterapia</i> , 1995 , LXVI, 94.	--
7	P. S. Kalsi, A. Sharma, A. Singh, I. P. Singh, and B. R. Chhabra	Biogenetically important sesquiterpenes from <i>Cyperus rotundus</i> . <i>Fitoterapia</i> , 1995 , LXVI, 191.	--
8	I. P. Singh and H. Etoh.	New macrocarpal-am-1 from <i>Eucalyptus amplifolia</i> . <i>Bioscience Biotechnology Biochemistry</i> . 1995 , 59, 2330-2332.	0.889
9	I. P. Singh, K. Takahashi, and H. Etoh	Potent attachment-inhibiting and -promoting substances for the blue mussel, <i>Mytilus edulis galloprovincialis</i> , from two species of <i>Eucalyptus</i> . <i>Bioscience Biotechnology Biochemistry</i> . 1996 , 60, 1522-1523.	0.913
10	I. P. Singh, R. Hayakawa, H. Etoh, M. Takasaki, and T. Konoshima	Grandinal, a new phloroglucinol dimer from <i>Eucalyptus grandis</i> . <i>Bioscience Biotechnology Biochemistry</i> . 1997 , 61, 921-923.	0.919
11	I. P. Singh, H. Etoh, E. Asai, K. Kikuchi, K. Ina, K. Koyasu, and Y. Terada	Flavonoids and stilbenes as repellents against the blue mussel, <i>Mytilus edulis galloprovincialis</i> . <i>Natural Product Sciences</i> , 1997 , 3, 49-54.	--
12	I. P. Singh, K. Umehara, H. Etoh, M. Takasaki, and T. Konoshima	Euglobals-G6 and -G7, two new phloroglucinol-monoterpene adducts from <i>Eucalyptus grandis</i> . <i>Phytochemistry</i> , 1998 , 47, 1157-1159.	1.179
13	K. Umehara, I. P. Singh, H. Etoh, M. Takasaki, and T. Konoshima	Five euglobals, phloroglucinol-monoterpene adducts, from <i>Eucalyptus grandis</i> . <i>Phytochemistry</i> , 1998 , 49, 1699-1704.	1.179
14	Y. Terada, J. Saito, T. Kawai, I. P. Singh, and H. Etoh	Structure-activity relationship of phloroglucinol compounds from <i>Eucalyptus</i> as marine antifoulants. <i>Bioscience Biotechnology Biochemistry</i> . 1999 , 63, 276-280.	0.973
15	I. P. Singh, K. E. Milligan, and W. H. Gerwick	Tanikolide, a toxic and antifungal lactone from the marine cyanobacterium <i>Lyngbya majuscula</i> . <i>Journal of Natural Products</i> . 1999 , 62, 1333-1335.	1.652
16	I. P. Singh, K. Umehara, and H. Etoh	Macrocarpals in <i>Eucalyptus</i> spp. As Attachment-inhibitors against the blue mussel. <i>Natural Product Letters</i> , 2000 , 14, 11-15.	0.732 (1999)
17	M. Takasaki, T. Konoshima, H. Etoh, I. P. Singh, H. Tokuda, and H. Nishino	Cancer chemopreventive activity of euglobal-G1 from leaves of <i>Eucalyptus grandis</i> . <i>Cancer Letters</i> , 2000 , 155, 61-65.	1.741
18	T. Ban, I. P. Singh, and H. Etoh	Polygodial, a potent attachment-inhibiting substance for the blue mussel, <i>Mytilus edulis galloprovincialis</i> from <i>Tasmania lanceolata</i> . <i>Bioscience Biotechnology Biochemistry</i> . 2000 , 64, 2669-2701.	0.968 (2002)
19	T. Matsumoto, I. P. Singh, H. Etoh, and H. Tanaka	The first total synthesis of grandinal, a new phloroglucinol derivative isolated from <i>Eucalyptus grandis</i> . <i>Chemistry Letters</i> , 2001 , 210-211.	1.557 (2002)

Inder Pal Singh

20	H. Etoh, T. Kondoh, R. Noda, I. P. Singh, Y. Sekiwa, K. Morimitsu, K. Kubota	Shogaols from <i>Zingiber officinale</i> as promising anti-fouling agents, <i>Bioscience Biotechnology Biochemistry</i> . 2002, 66, 1748-1750.	0.968 (2002)
21	Williamson RT, Singh IP and Gerwick WH	Taveuniamides: new chlorinated toxins from a mixed assemblage of marine cyanobacteria. <i>Tetrahedron</i> . 2004, 60, 7025-7033.	2.276
22	Singh DD, Chitra G, Singh IP and Bhutani KK.	Immunostimulatory compounds from <i>Vitex negundo</i> . <i>Indian Journal of Chemistry</i> . 2005, 44B, 1288-1290.	0.446
23	Bharate SB, Chauthe SK, Bhutani KK and Singh IP*	An efficient two step synthesis of Jensenone isolated from <i>Eucalyptus jensenii</i> . Synthesis of analogues and evaluation as antioxidants. <i>Australian Journal of Chemistry</i> . 2005, 58, 551-555.	1.456
24	Bharate SB, Bhutani KK, Khan SI, Tekwani BL, Jacob MR, Khan IA and Singh IP*	Biomimetic synthesis, antimicrobial, antileishmanial and antimalarial activities of euglobals and their analogues. <i>Bioorganic & Medicinal Chemistry</i> . 2006, 14, 1750-1760.	2.662
25	Bharate SB and Singh IP*	A two-step biomimetic synthesis of antimalarial robustadiols A and B. <i>Tetrahedron Letters</i> . 2006, 47, 7021 – 7024.	2.615
26	Bharate SB, Khan SI, Yunus NAM, Chauthe SK, Jacob MR, Tekwani BL, Khan IA and Singh IP*	Antiprotozoal and antimicrobial activities of O-alkylated and formylated acylphloroglucinols. <i>Bioorganic & Medicinal Chemistry</i> . 2007, 16, 87-96.	2.662
27	Singh IP, Bharate SB, Singh A and Bhutani KK	Fate of embelin in Pippalyadi Yoga, an oral Ayurvedic contraceptive: Structure of Embelin-borax complex and evaluation of anti-fertility activity. <i>Ind. J. Chem</i> . 2007, 46B, 320-325.	0.368
28	Bodiwala HS, Singh G, Singh R, Dey CS, Sharma SS, Bhutani KK, Singh IP*	Antileishmanial amides and lignans from <i>Piper cubeba</i> and <i>Piper retrofractum</i> . <i>Journal of Natural Medicines</i> . 2007, 61, 418-421.	0.424
29	Bharate SB, Khan SI, Tekwani BL, Jacob MR, Khan IA, Singh IP*	S-Euglobals: biomimetic synthesis, antileishmanial, antimalarial and antimicrobial activities. <i>Bioorganic & Medicinal Chemistry</i> . 2008, 1328-1336.	2.822
30	Bhrahmbhatt KG, Ahmed N, Singh IP, Bhutani KK	Aromatization and chemoselective alkylation of 1-methyl-3,4-dihydro- -carboline-3-carboxylic acid and its derivatives. <i>Tetrahedron Letters</i> 2009, 50, 5501-5504.	2.538
31	Lal UR, Tripathi SM, Jachak SM, Bhutani KK, Singh IP*	HPLC analysis and standardization of Arjunarishta – An Ayurvedic cardioprotective formulation. <i>Scientia Pharmaceutica</i> . 2009, 77, 605-616.	--
32	Bodiwala HS, Sabde S, Mitra D*, Bhutani KK*, Singh IP*	Anti-HIV diterpenes from <i>Coleus forskhlii</i> . <i>Natural Product Communications</i> . 2009, 4, 1173-1175.	0.746
33	Kaur A, Singh R, Dey CS, Sharma SS, Bhutani KK, Singh IP*	Antileishmanial phenylpropanoids from <i>Alpinia galangal</i> (Linn.) Willd. <i>Indian Journal of Experimental Biology</i> . 2010, 48, 314-317.	0.599
34	Nafees A, Brahmbhatt K, Singh IP, Bhutani KK	Efficient chemoselective alkylation of Quinolin-2,4-diol derivatives in water. <i>Journal of Heterocyclic Chemistry</i> . 2010,	0.899
35	Chauthe SK, Bharate, SB, Sabde S, Mitra D*, Bhutani KK, Singh IP*	Biomimetic Synthesis and Anti-HIV Activity of Dimeric Phloroglucinols. <i>Bioorganic & Medicinal Chemistry</i> . 2010, 18, 2029-2036.	2.822
36	Lal UR, Tripathi SM, Jachak SM, Bhutani KK, Singh IP*	Chemical changes during fermentation of <i>Abhayarishta</i> and its standardization by HPLC-DAD. <i>Natural Product Communications</i> . 2010, 5, 575-579.	0.745
37	Nafees A, Brahmbhatt KG, Sabde S, Mitra D, Singh IP, Bhutani KK	Synthesis and anti-hiv activity of alkylated quinoline 2,4-diols. <i>Bioorganic & Medicinal Chemistry</i> . 2010, 18, 2872 – 2879.	2.822

Inder Pal Singh

38	Singh IP*, Jain SK, Kaur A, Singh S, Kumar R, Garg P, Sharma SS, Arora SK	Synthesis and antileishmanial activity of piperoyl-amino acid conjugates. <i>European Journal of Medicinal Chemistry</i> . 2010, 45, 3439-3445.	3.269
39	Sidana J, Rohilla RK, Roy N, Barrow RA, Foley WJ*, Singh IP*	Antibacterial sideroxylonals and loxophleba a from <i>eucalyptus loxophleba</i> foliage. <i>Fitoterapia</i> . 2010, 81, 878-883.	1.363
40	Kumar R, Gupta P, Garg P, Singh IP	Active site binding modes of dimeric phloroglucinols for HIV-1 reverse transcriptase, protease and integrase. <i>Bioorganic & Medicinal Chemistry Letters</i> . 2010, 20, 4427-4431.	2.65
41	Bhrahmbhatt KG, Ahmed N, Sabde S, Mitra D, Singh IP, Bhutani KK	Synthesis and evaluation of -carboline derivatives as inhibitors of human immunodeficiency virus. <i>Bioorganic & Medicinal Chemistry Letters</i> . 2010, 20, 4416-4419.	2.65
42	Lal UR, Tripathi SM, Jachak SM, Bhutani KK, Singh IP*	HPLC analysis of Jirakadyarishta and chemical changes during fermentation. <i>Natural Product Communications</i> . 2010, 5, 1767-1770.	0.745
43	Bedi N, Bedi PMS, Bodiwala HS, Singh IP, Bansal P	Scientific evaluation of an innovative herbal medicine for relief in respiratory disorders. <i>Canadian Journal of Pure and Applied Sciences</i> . 2010, 4, 1249-1255.	--
44	Bodiwala HS, Sabde S, Gupta P, Mukherjee R, Kumar R, Garg P, Mitra D*, Bhutani KK, Singh IP*	Design and synthesis of Caffeoyle-Anilides as portmanteau Inhibitors of HIV-1 integrase and CCR5. <i>Bioorganic & Medicinal Chemistry</i> . 19 2011, 1256–1263.	2.822
45	Ghagargunde KG, Sidana J, Singh IP*	HPTLC fingerprinting and quantification of phenolics in Brahmarasayana – An Ayurvedic rejuvenator. <i>Analytical Chemistry Letters</i> . 2011, 1, 123 – 129.	--
46	Kaur A, Singh IP*	Densitometric determination of antileishmanial phenylpropanoids of <i>Alpinia galanga</i> (Linn.) Willd. <i>Journal of Planar Chromatography – Modern TLC</i> . (Accepted)	0.662
47	Sabde S, Bodiwala HS, Karmase A, Deshpande PJ, Kaur A, Ahmed N, Chauthe SK, Brahmbhatt KG, Phadke RU, Mitra D*, Bhutani KK*, Singh IP*	Anti HIV activity of Indian medicinal plants. <i>Journal of Natural Medicines</i> . (Accepted)	1.027
48	Bodiwala HS, Sabde S, Mitra D*, Bhutani KK, Singh IP*	Synthesis of 9-Substituted Derivatives of Berberine as Anti-HIV Agents. <i>European Journal of Medicinal Chemistry</i> . In press	3.269

Review Articles

S. No.	Authors	Title	Impact Factor
1	Singh IP and Etoh H	Biological activities of phloroglucinol derivatives from <i>Eucalyptus</i> spp. <i>Natural Product Sciences</i> , 1997, 3, 1-7.	--
2	Singh IP*, Bharate SB, Bhutani KK	Anti-HIV natural products. <i>Current Science</i> . 2005, 89 (2), 269-290.	0.728
3	Singh IP*, Bharate SB, Bhutani KK	Interactions of herbs and food products with drugs: grape fruit juice as an example. <i>Natural Product Radiance</i> . 2005, 4, 107-112.	--
4	Singh IP* and Bharate SB	Phloroglucinol compounds of natural origin. <i>Natural Product Reports</i> , 2006, 23, 558 - 591.	7.890
5	Singh IP*, Sidana J, Bansal P, Foley WJ	Phloroglucinol compounds of therapeutic interest: global patent and technology status. <i>Expert Opin. Ther. Patents</i> 2009, 19 (6), 847-866.	1.335
6	Singh IP*, Sidana J, Bharate SB, Foley WJ	Phloroglucinol compounds of natural origin: Synthetic aspects. <i>Natural Product Reports</i> . 2010, 27, 393-416.	9.202

Inder Pal Singh

7	Singh IP*, Bodiwala HS	Recent advances in anti-HIV natural products. <i>Natural Product Reports</i> . 2010, 27, 1781-1800.	9.202
8	Singh IP*, Chauthe S	Small molecule HIV entry inhibitors - Part I: Chemokine receptor antagonists: 2004-2010. <i>Expert Opin. Ther. Patents</i> 2011 (In press)	1.280
9	Singh IP*, Chauthe S	Small molecule HIV entry inhibitors - Part II: Attachment and fusion inhibitors: 2004-2010. <i>Expert Opin. Ther. Patents</i> 2011, (Accepted)	1.280

Book Chapters

S. No.	Authors	Title
1	Singh IP and Etoh H	Biofouling: Screening of attachment-inhibitors and -promoters by using the blue mussel, <i>Mytilus edulis galloprovincialis</i> . In: S. G. Pandalai (Ed), Recent Research Developments in Agricultural and Biological Chemistry, Vol. 1. Research Signpost, Trivandrum, 1997, pp. 1-14.
2	Watanabe N and Singh IP	Analysis of aroma release from scented teas. In: H. F. Linskens and J. F. Jackson (Eds), Modern Methods of Plant Analysis, Vol. 19. Plant Volatile Analysis, Springer-Verlag, Berlin, Heidelberg, 1997 pp. 231-258.
3	Etoh H and Singh IP	Chemistry of lycopene - A Review. In: S. G. Pandalai (Ed), Recent Research Developments in Agricultural and Biological Chemistry, Vol. 2. Research Signpost, Trivandrum, 1998, pp. 97-113.
4	Gerwick WH and Singh IP	Structural diversity of marine oxylipins. In: T. M. Kuo and H. W. Gardner (Eds), Lipid Biotechnology, Marcel and Dekker, New York, 2002, pp 249-275.
5	Singh IP, Etoh H, Takasaki M, and Konoshima T	Euglobins-anti tumor promoters from <i>Eucalyptus</i> species. Recent Advances in Phytochemistry. Global Research Network, Trivandrum, 2000, 1, 51-64.
6	Singh IP	Nuclear magnetic resonance methods in structure elucidation. In: Rakesh K. Sharma and Rajesh Arora (Eds), Herbal Drugs A twenty first century perspective, Jaypee Brothers, New Delhi, 2006, pp 163-174.
7	Singh IP*, Lal UR, Bodiwala HS, Mahajan RC, Bhutani KK	Anti-leishmanial natural products, In: Recent Progress in Medicinal Plants, Studium Press LLC, P.O. Box-722200, Houston, Texas 77072, U.S.A. 2006, 13, 116-149.

Patent Applications Filed

1. Singh IP, Bhutani KK, Mitra D, Chauthe SK, Bharate S, Sabde S. Novel dimeric phloroglucinol compounds as anti-HIV and microbicidal agents. Patent application number – 1055/DEL/2009
2. Bhutani KK, Mitra D, Singh IP, Nafees, Sabde S. Novel alkylated derivatives of quinoline 2,4-diol with anti-HIV activity. Patent application number – 1557/DEL/2009
3. Singh IP, Bhutani KK, Mitra D, Bodiwala HS, Sabde S. Novel caffeoyl-anilides as Portmanteau inhibitors of HIV. Patent application number – 2852/DEL/2010

Inder Pal Singh

Lectures/Presentations (National & International)

1. Afsana, Mittal N., Tewari R., Singh I.P. Chemical investigation of *Burkholderia gladioli* OR-1. Presented at 14th Punjab Science Conference, Sangrur, Punjab, February 2011.
2. Joshi N., Ghagargunde K.G., Sidana J. and Singh I.P. HPTLC Fingerprinting and quantification of phenolics in Brahma Rasayana – An Ayurvedic Rejuvenator. Presented at 14th Punjab Science Conference, Sangrur, Punjab, February 2011.
3. Singh I.P., Lal U.R., Nisha, Tripathi S.M., Jachak S.M., Bhutani K.K. Standardization of Ayurvedic formulations: *Asava* and *Arishtas*. Presentation at Chitkara college, Punjab, India, October 2010.
4. Sharma R.J., Gupta R.C. and Singh I.P. Densitometric determination of anthocyanins in *Eugenia jambolana*. DDNPTM, NIPER, S.A.S. Nagar, India, November 2010.
5. Aqil F., Jeyaprakash J, Ravoori S., Gupta A., Sharma R.J., Sidana J., Singh I.P. and Gupta R.C. Breast cancer chemopreventive potential of 'jamun', the indian blackberry. DDNPTM, NIPER, S.A.S. Nagar, India, November 2010.
6. Kaur A., Singh R., Dey C.S., Sharma S.S., Bhutani K.K. and Singh I.P. Antileishmanial Phenylpropanoids from *Alpinia galanga* (Linn.) Willd. DDNPTM, NIPER, S.A.S. Nagar, India, November 2010.
7. Chauthe S.K., Mitra D., Bhutani K.K. and Singh I.P. Simple, rapid, economical and environment friendly synthesis of Antibiotic 2,4-Diacetylphloroglucinol and anti-HIV dimeric phloroglucinols. Presented at DDNPTM at NIPER, S.A.S. Nagar, India in November 2010.
8. Bodiwala H.S., Sabde S., Mitra D., Bhutani K.K. and Singh I.P. Synthesis of 9-substituted derivatives of berberine as anti-HIV agents. DDNPTM, NIPER, S.A.S. Nagar, India, November 2010.
9. Bodiwala H.S., Sabde S., Mitra D., Bhutani K.K. and Singh I.P. Design and synthesis of caffeoyl-anilides as *Portmanteau* inhibitors of HIV-1 integrase and CCR5. ISACS-1, San Francisco, USA, July 2010.
10. Sidana J., Rohilla R.K., Roy N., Barrow R., Foley W.J. and Singh I.P. Antibacterial sideroxylonals and loxophlebal from *Eucalyptus loxophleba* foliage. DDNPTM, NIPER, S.A.S. Nagar, India, November 2010.
11. Singh I.P., Jain S.K., Kaur A., Sharma S.S., Singh S., Arora S.K. Synthesis and antileishmanial activity of Piperine-amino acid conjugates. Presented at workshop on 'Chemistry in Nature – Natural resources: chemical, biological and environmental aspects' in Thailand, December 2009.
12. Jain S.K., Kaur A.K. and Singh I.P. Synthesis of Piperoyl-amino acid conjugates as potential antileishmanial agents. Presented at DDNPTM at NIPER, S.A.S. Nagar, India in November 2008.
13. Chauthe S.K., Bharate S.B, Sabde S., Mitra D., Bhutani K.K. and Singh I.P. Synthesis and biological evaluation of Mallotojaponin analogues as potential anti-HIV agents. Presented at DDNPTM at NIPER, S.A.S. Nagar, India in November 2008.
14. Bodiwala H.S., Sabde S., Mitra D., Bhutani K.K. and Singh I.P. Anti-HIV diterpenes from *Coleus forskohlii*. DDNPTM, NIPER, S.A.S. Nagar, India, November 2008.

Inder Pal Singh

15. Singh I.P. and Bharate S.B. Biomimetic synthesis of naturally occurring phloroglucinol compounds. Presented at SLIET meeting on Green Chemistry, March 2007.
16. Lal U.R., Nisha, Tripathi S.M., Jachak S.M., Bhutani K.K. and Singh I.P. Separation and determination of flavonoids and other phenolic compounds in fermented Ayurvedic formulations by RP HPLC. Presented at National Symposium on New Challenges in Chemistry, GNDU, Amritsar, Punjab, March 2006.
17. Singh I.P., Bharate S.B., Khan S.I., Tekwani B.L., Jacob M.R., Khan I.A. and Bhutani K.K. Biogenetic thinking for designing novel molecules: Biomimetic synthesis and biological evaluation of euglobins and their analogues. Presented at National Symposium on New Challenges in Chemistry, GNDU, Amritsar, Punjab, March 2006.
18. Singh I.P., Bharate S.B., Khan S.I., Tekwani B.L., Jacob M.R., Khan I.A. and Bhutani K.K. Biomimetic synthesis and biological evaluation of euglobins and their analogues. Presented at OCCB held at Pune in 2006.
19. Singh I.P., Bharate S.B., Chauthi S.K., Bhutani K.K. Application of Duff's reagent in natural product synthesis: An efficient two-step synthesis of Jensenone and its biological evaluation. Presented at National Conference on New Trends in Chemistry at Jalandhar, Punjab, India in November 2005.
20. Bharate S.B., Chauthi S.K., Bhutani K.K., Singh I.P. Biomimetic synthesis and LC-MS assisted separation of euglobins G1-G4. Oral Presentation at ISMAS-WS 2004 on Mass Spectrometry, Shimla, India in October 2004.
21. Bharate S.B., Bhutani K.K., Singh I.P. Biomimetic synthesis of anti-malarial robustadiols. Presented at International Conference on Chemistry-Biology Interface: Synergistic New Frontiers (CBISNF) held at New Delhi, India in November 2004.

Inder Pal Singh

The Group Members



Students currently enrolled for PhD

1. Siddheshwar Kisan Chauthe
2. Jasmeen Sidana
3. Hardik S. Bodiwala
4. Amandeep Kaur
5. Ram Jee Sharma
6. Shivani Mahajan

Students currently enrolled for M.S. Pharm.)

1. Afsana
2. Neeta Joshi
3. Aruna Meena
4. Rajesh Ghanta

Staff

1. Mr. Rakesh Kumar Yadav

Inder Pal Singh

Past students and their current affiliations

Ph.D Students	Thesis title	Current affiliation
Dr Sandip B. Bharate	Design and biomimetic synthesis of phloroglucinol compounds for anti-infective agents (2007)	Associate Professor (Pharmaceutical Chemistry), Postgraduate Research Center, STES's Sinhgad College of Pharmacy, Pune, Maharashtra, India
Dr Uma Ranjan Lal	Development of analytical profiles of selected Arishtas (2010)	Assistant Professor, Department of Pharmaceutical Sciences, Lovely Faculty of Applied Medical Science, LPU, Jalandhar, India
M.S.(Pharm.) Students	Thesis title	Current affiliation
Siddheshwar Kisan Chauthe	Synthesis of phloroglucinol derivatives as potential anti-malarial compounds	Ph.D student, NIPER, Mohali
Hardik S. Bodiwala	Chemistry and biology of chemical constituents of <i>Piper cubeba</i> and <i>Piper retrofractum</i>	Ph.D student, NIPER, Mohali
Nafees Ahmad	Synthesis of <i>O</i> -alkylated phloroglucinol derivatives as potential anti-malarial agents	Ph.D student, NIPER, Mohali
Jasmeen Sidana	Phytochemical investigations on <i>Eucalyptus loxophleba</i>	Ph.D student, NIPER, Mohali
Nisha	Isolation and characterization of marker constituents from Ayurvedic formulations <i>Arjunarishta</i> , <i>Rohitakrishta</i> and <i>Babbularishta</i>	Research Associate at Aurbindo Pharma, Hyderabad
Amandeep Kaur	Phytochemical investigations on <i>Alstonia scholaris</i>	Ph.D student, NIPER, Mohali
Shreyans Jain	Synthesis and antileishmanial activity of Piperine-Amino acid conjugates	Ph.D student, IIM, Jammu
Aniket Karmase	Phytochemical investigations of <i>Aegle marmelos</i>	Ph.D student, NIPER, Mohali
Vinod Mandowara	Synthesis of natural phloroglucinol compounds as potential antimicrobials and antileishmanials	Research Associate at Piramal Life Sciences, Ahmadabad
Amit Kumar Gautam	Synthesis of Piperoyl-Amino acids conjugates	Lecturer, College of Pharmacy, Ludhiana
Ram Jee Sharma	Large-scale isolation of Anthocyanins from <i>Eugenia jambolana</i>	Ph.D student, NIPER, Mohali
Maulik G. Patel	Phytochemical investigations of <i>Eucalyptus paniculata</i>	Research Associate at Piramal Life Sciences, Ahmadabad
Kiran Ghagargunde	Standardization of Ayurvedic formulation <i>Brahma Rasayana</i>	Trainee in Quality Assurance, Himalaya Healthcare Ltd., Bangalore
Neha Jain	Chemical aspects of Ayurvedic Detoxification of <i>Plumbago zeylanica</i>	Lecturer, Sagar University, Sagar
Dharmendra Yadav	Synthesis of Naturally occurring Phloroglucinol glycosides	Lecturer, BBDNITM, Lucknow