CURRICULUM VITAE

HEMANT AGRAWAL, Ph.D.

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PERSONAL DETAILS	
E-mail ID	flowsols@gmail.com
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Status	Flow Cytometry Educationalist and Consultant [Director of Flowcytometry Solutions Pvt Ltd, India (www.flowsols.com)]

EDUCATION/TRAINING

Institution and Location	Education	Year(s)	Field of Study
Northwestern University, Chicago Campus, Chicago, USA	Postdoc	2009-2011	Immunology
Oklahoma Medical Research Foundation (OMRF), Oklahoma City, USA	Postdoc	2006-2009	Rheumatology/ Immunology
University of Duisburg-Essen, Essen, Germany	Ph.D	2003-2006	Immunology
Jawaharlal Nehru University (JNU), New Delhi, India	M.Sc.	2000-2002	Life Sciences
Dr. Bhim Rao Ambedkar University (BRAU), Agra, India	B.Sc.	1997-2000	Ind. Microbiol.

POSITIONS AND HONORS

Positions

2023 – Cont. Reviewer/Co-Editor/Handling Editor in Frontiers Journal and PLOS One.

2022 – 2023 Scientific Advisor (Flow Cytometry)— Epigeneres Biotech Private Limited, Mumbai, India

2022 – Cont. Member—Board of Studies, Amity Institute of Molecular Medicine & Stem Cell Research (AIMMSCR), Amity University, Noida, India

2021 – Cont. Member--ISAC-Live Education Delivery Task Force (ISAC-LEDTF)

2021 – Cont. Member--ISAC-Instruments for Science (I4S) Task Force

2020 –2021 Scientific Manager (Spectral Flow Cytometry from Cytek), Labindia Instruments Pvt Ltd, India

2020 – Cont. Advisory member of Biotechnology Society of Nepal (BSN), Nepal

2019 – Cont. Managing Officer for Trust for Education and Training in Cytometry (TETC), India

2019 – 2020 Flow Cytometry Consultant to ThermoFisher Scientific, India

2018 – 2022 Business Development Consultant, Quantum Technology Group Inc., USA

2016 – 2018 Scientific Manager (Cell Imaging), TTP Labtech India Pvt Ltd

2016 – Cont. Member—Organizing Committee for the Indo-US Cytometry Workshops

2015 – Cont. Flow Cytometry Consultant to Venture Center, Pune

2015 – 2016 Flow Cytometry Consultant to Bio-Rad, India

2014 – 2017 Flow Cytometry Consultant to Vaccine Technology Centre, Zydus Cadila, Ahmedabad

2013 – Cont. Application support scientist (Consultant) for FCS Express software (Denovo Software, USA) for India region

2013 – Cont. Director at Flowcytometry Solutions Pvt Ltd, India (www.flowsols.com)

2011 – 2013 Application support scientist for FlowJo software (TreeStar Inc., USA) for the Indian Subcontinent and Middle East

2010 – Cont. Faculty member at the Annual Indo-US Cytometry workshops, India

2009 – 2011 Postdoctoral Fellowship with Dr. Harris Perlman, Div. of Rheumatology/Dept. of Medicine, Northwestern University, Chicago, IL, USA

2006 – 2009 Postdoctoral Fellowship with Dr. Susan Kovats, Arthritis & Immunology Program, Oklahoma Medical Research Foundation, Oklahoma City, OK, USA

2003 – 2006 Ph.D. thesis research with F. U. Schade, Department of Trauma Surgery, University Hospital Essen, University of Duisburg-Essen, Essen, Germany

Awards/Honors

- Awarded “Impactful Educationalist Award” by Radio Adda Excellence Awards-2022 Jury (Radio Channel, Mumbai, India) (November 2022)
- Awarded “Flow Cytometry Star Award” by Beckman Coulter India at the 14th INDO-US Cytometry Workshop at ILS, Bhubaneswar (October 2013)
- Awarded AAI Trainee Abstract Award at the AAI 2009 meeting, Seattle, WA, USA (May 2009)
- Awarded Junior Research Fellowship (JRF) by Indian Council of Medical Research (ICMR), New Delhi, India (July 2002)
- Secured 65th ALL INDIA Rank with 97.45 percentile in Graduate Aptitude Test for Engineering (GATE) (March 2002)
- Awarded Junior Research Fellowship/National Eligibility for Lectureship (JRF/NET) by Council of Scientific and Industrial Research (CSIR), New Delhi, India (Dec 2001)
- Nominated for the President of India Gold Medal award 2004 for best performance during Master of Science (M.Sc. 2000-2002)
- Awarded Jawahar Bhawan Trust Fellowship during Master of Science (M.Sc.) for securing 1st position at the School of Life Sciences, JNU, New Delhi, India (M.Sc. 2000-2002)
- Awarded honor at the Industrial Microbiology Department, BSA College, Mathura, India for securing 1st position in Bachelor of Science (B.Sc.) (1997-2000)

TEACHING EXPERIENCE

- In 2023, introduced **world's first annual 1-month online certificate courses in flow cytometry**, which are attended by participants from all over the world.
- Pioneer in developing regular online courses in molecular biology and flow cytometry, where thousands of participants have benefitted from all over the world (2020-present). Up to now **conducted over 40 such online courses** successfully.
- Conducted and taught over **80 onsite flow cytometry workshop/courses** in India and other countries (2013-present) single handedly.
- Taught Immunology to the MSc students at the IIS University, Jaipur, India (2014)
- Taught Immunology and Biochemistry to the BSc and MSc students at CCT, University of Rajasthan, Jaipur, India between (2013 - 2014)
- Teaching Flow Cytometry to undergraduates, graduates, PhD students and faculty members all over India and outside India through regular onsite and online workshop/courses (2011 – Present)
- Invited at several national and international conferences, workshop and courses to talk about flow cytometry and its applications in biomedical sciences (2011 – Present)
- Conducted lectures and courses on "Development of Successful Scientific Career in Science" for Biology graduates (2011 – Present)

TEACHING SKILLS

- Designed and implemented engaging lesson plans aligned with curriculum standards.
- Utilized innovative teaching methods to improve student understanding and engagement.
- Managed classroom behavior effectively, ensuring a positive and inclusive learning environment.
- Assessed student progress through formative and summative evaluations, providing constructive feedback.
- Integrated technology tools such as (Zoom, Google Classroom, Webex etc.) to enhance learning experiences.
- Collaborated with colleagues and parents to support student development and academic growth.

IMPACT VIA TEACHING

- Invited speaker by the ISAC Education and CYTO2025 Organizing Committees to speak on **Mastering Online Flow Cytometry Teaching: Strategies, Tools, and Best Practices for Engaging Virtual Instruction** (90 min tutorial) at CYTO2025, in Denver Colorado, 31st May – 4th June, 2025.
- Invited member at the **Board of Studies, Amity Institute of Molecular Medicine & Stem Cell Research (AIMMSCR), Amity University**, Noida, India to work together with the faculties and university authorities to design and implement the course curriculum for undergrad and grad programs at the University as per the National Education Program (NEP) guidelines (2022 – Cont.)

- Selected member of the **ISAC-Live Education Delivery Task Force (ISAC-LEDTF)** and **ISAC-Instruments for Science (I4S) Task Force**, which promotes cytometry live education all over the world. These committees have only 15-20 selected members from the different countries of the world (2021 – Cont.). The goal of these task forces is to advance cytometry education worldwide, with a particular focus on regions where it is most needed and can have the greatest scientific impact.
- Started **flow cytometry courses at the undergraduate and graduate levels** by roping in local colleges, which helped the students to realize the value of flow cytometry in research and development (2014 – Cont.)
- With my teaching and mentorship, I have positively **impacted the lives of hundreds of students** from diverse backgrounds, ethnicities, and nationalities by guiding them in their research, mentoring them on career opportunities, and assisting with job searches (2011 – Cont.)
- Invited every year as a **faculty member to the Annual INDO-US Cytometry workshops**, India. These workshops are one of the most prestigious cytometry workshops in South East Asia to learn cytometry (2010 – Cont.)

IMPACT VIA INNOVATIVE THINKING AND LEADERSHIP

- **Setup of Plant Flow Cytometry Facility in Kenya:** In 2024, when ISAC-Instruments for Science (I4S) Task Force donated the flow cytometer to University of Eldoret, Kenya, I helped them in setting up the facility to process and run plant samples for ploidy determination and genome size estimation using flow cytometry in collaboration with ISAC-I4S.
- **Introduced Spectral Flow Cytometry to India:** In 2020, when Cytek Biosciences entered the Indian market through Labindia Instruments Pvt Ltd, I was hired as a Scientific Manager to promote Spectral Flow Cytometry technology in India. Due to the COVID-19 pandemic, in-person visits and seminars were not possible. However, leveraging my expertise and teaching skills, I conducted online seminars on spectral flow cytometry for scientists and students across the country. Within a few months, researchers at various national institutes and universities became well-acquainted with the technology, ultimately contributing to Cytek Biosciences' recognition in the spectral flow cytometry market in India.
- **Introduced Bio-Rad S3 Cell Sorter to India:** In 2015, when Bio-Rad India launched the S3 cell sorter, they hired me as a flow cytometry consultant to educate and promote cell sorting with their new technology. Within a few months, I demonstrated the S3 cell sorter at various national institutes and universities across India, contributing to Bio-Rad’s establishment in the cell sorting market.
- **Founded Flowcytometry Solutions Pvt Ltd India:** In 2013, the flow cytometry consulting company *Flowcytometry Solutions Pvt Ltd* was established with the goal of providing comprehensive education to researchers and clinicians in India and beyond. We offer tailored support to students and researchers in the field of flow cytometry, assisting them with instrument handling, experiment design, applications, sample preparation, data acquisition, analysis, and presentation. Our mission is to deliver complete

flow cytometry expertise, empowering researchers to innovate, lead, and excel. Through our organization, thousands of students from national and international institutes have benefited, finding success in their current work and securing new job opportunities.

- **Introduced FCS Express Software to India:** In 2013, when I founded *Flowcytometry Solutions Pvt Ltd*, I sought a partner company specializing in flow cytometry data analysis software. During this search, I connected with Dr. David Novo, then President of De Novo Software, the developer of FCS Express. He appreciated my idea of integrating software education with flow cytometry training. Since then, I have trained hundreds of students on FCS Express from various institutions, including Central Universities, IITs, IISc, IISERs, and NIPERs in India, through both online and onsite seminars.
- **Introduced FlowJo Software to India:** In 2010, while pursuing my postdoctoral research at Northwestern University in Chicago, I reached out to FlowJo, a leading flow cytometry data analysis software company, and encouraged them to expand their market in India. They embraced my idea and appointed me as their application and marketing representative in India in 2011. Through my leadership skills and innovative approach, I grew their market from USD 2,500 to USD 25,000 per quarter by the time I left in 2013. As part of FlowJo, I conducted seminars and demonstrations, educating hundreds of students on accurate flow cytometry data analysis and presentation.

SKILLS & QUALIFICATIONS

- **Strong communication & leadership abilities**
    - Ability to convey complex ideas clearly to diverse audiences, including students, faculty, and administrators.
    - Strong public speaking, writing, and active listening skills.
    - Proven leadership in academic or professional settings, guiding teams and projects to success. Started an organization named Flowcytometry Solutions Pvt Ltd, India in 2013 and made it one of the most sought out organization to learn and implement flow cytometry in South East Asia.

- **Effective interpersonal skills**
    - Adept at building and maintaining professional relationships.
    - Capable of working collaboratively with colleagues and partners across various disciplines.
    - Skilled in conflict resolution and fostering a positive work environment.

- **Experience collaborating with faculty, students & administrators**
    - Ability to coordinate with multiple stakeholders to enhance educational programs.
    - Experienced in mentoring students and supporting faculty development.
    - Understanding of academic policies and institutional operations.

- **Passion for education**
  - Deep commitment for advancing undergraduate and graduate-level education. In this regard started flow cytometry courses for college students in 2014
  - Interest in curriculum development and innovative teaching strategies.
  - Active engagement in promoting holistic education.

- **Proven track record in scholarly research & publications**
  - Published research in peer-reviewed journals, presentations at academic conferences.
  - Experience in grant writing, data analysis, and research collaboration.
  - Commitment to continuous learning and contributing to the academic community.

- **Proficiency in instructional & distance education technology**
  - Skills and experience with virtual learning tools (Zoom, Microsoft Teams, Google Classroom).
  - Knowledgeable in e-learning content development, assessment tools, and interactive technologies.

CONDUCTED OVER 80 ONSITE FLOW CYTOMETRY WORKSHOPS/COURSES (15 MOST RECENT ONES)

- 2-Days Pre-conference Flow Cytometry Workshop at Immuncon2025 at MNNIT, Prayagraj, India, 17th -18th November 2025 in collaboration with TETC and IIS.
- 3-Days Flow Cytometry Data Analysis and Presentation Workshop, Oklahoma State University-Health Sciences Center (OSU-CHS), Tulsa, OK, USA, 2nd – 4th September, 2025
- 2-Days Flow Cytometry Data Analysis and Presentation Workshop, Kenya Medical Research Institute (KEMRI), Nairobi, Kenya, 6th – 7th November, 2025
- 3-Days On-Site Flow Cytometry Workshop, GGDSD College, Chandigarh, India, March 3-5, 2025
- 2-days Flow Cytometry Workshop, UIET, Panjab University, Chandigarh, India, March 6-7, 2025
- 1-Day Flow Cytometry Data Analysis and Presentation Workshop, School of Biotechnology, JNU, New Delhi, 30th January, 2025
- 1-Day Flow Cytometry Data Analysis and Presentation Workshop, Kenya Institute of Primate Research (KIPRE), Nairobi, Kenya, 29th October, 2024
- 3-Days Plant Flow Cytometry Workshop, Eldoret University, Eldoret, Kenya, 24th – 26th October 2024
- 1-Day Pre-conference Flow Cytometry Workshop at Immuncon2024 at IISC Bangalore, India, 16th October 2024 in collaboration with TETC and IIS.
- 2-days Hands-on Workshop on Flow cytometry, SBT, JNU, New Delhi, India, July 20 -21, 2024
- 4-Days Hands-on Workshop on “Flow cytometry: Principles, Experimental designing & Data Analysis”, GBRC, Gandhinagar, India, March 5–8, 2024
- 3-days On-Site Flow Cytometry Workshop, GGDSD College, Chandigarh, India, Jan 10-12, 2024

- 1-Day Pre-conference Flow Cytometry Workshop at Immuncon2023 at AIIMS New Delhi, 4th October 2023
- 3-days International Flow Cytometry Workshop, Shoolini University, Solan, India, Sept 26-28, 2023
- 3-days Hands on Clinical Flow Cytometry Workshop, Jaipur, India, July 28–30, 2023

CONDUCTED OVER 40 ONLINE FLOW CYTOMETRY WORKSHOPS/COURSES (12 MOST RECENT ONES)

- 2nd Online International Winter School on Flow Cytometry Data Analysis and Presentation, 22nd Nov – 18th Dec, 2025
- 3rd Annual Online Certificate Course in Flow Cytometry, 25th April – 25th May 2025
- 1st Online International Winter School on Flow Cytometry Data Analysis and Presentation,13th Nov – 15th Dec, 2024
- 2nd Annual Online Certificate Course in Flow Cytometry, 1st – 31st May 2024
- Online Flow Cytometry Course, 15th – 20th December 2023
- Online Plant Flow Cytometry Workshop, 5th – 7th August 2023
- 1st Annual Online Certificate Course in Flow Cytometry, 2nd May – 3rd June 2023
- Online Clinical Flow Cytometry Course, 20th – 23rd December 2022
- Online Course on Flow Cytometry Basics, Applications, Experimental Designing and Data Analysis, 27th – 30th November 2022
- Online Flow Cytometry Workshop on Data Analysis and Presentation, 24th – 27th August 2022
- Online Course on Flow Cytometry Basics, Applications, Experimental Designing and Data Analysis, 20th – 24th July 2022
- Online Workshop on Plant Flow Cytometry: Basics, Applications and Analysis of Ploidy & Genome Size, 15th -18th December 2021

INVITED FACULTY FOR FLOW CYTOMETRY WORKSHOPS/CONFERENCES (15 MOST RECENT ONES)

- Invited faculty member at the Flow Cytometry workshop conducted by AIBBC, Kenya, 27th – 29th October 2025, MKU, Thika, Kenya.
- Invited faculty member at the Flow Cytometry workshop conducted by Sri Lanka Institute of Biotechnology (SLIBTC), 20th – 24th October 2025, Colombo, Sri Lanka.
- Invited to deliver a talk on "Basics of Flow Cytometry and its applications in Cell Health" by Venture Centre, Pune, India in their monthly Talk Series on “Only One Analytical Technique”, 23rd May 2025 (Online)
- Invited Faculty member at 4th Mammalian Cell Culture Workshop 2025, Department of Biochemistry, AIIMS, Jodhpur, India, 24th – 28th March 2025 (Online)

- Invited Faculty member at the Hands-on Workshop on Flow Cytometry, titled "Navigating Flow Cytometry: From Principles to Practice," organized by the Bone Marrow Transplantation and Stem Cell Research Centre, IMS, BHU, India, 15th – 16th February, 2025.
- Invited Faculty member at the 26th INDO-US Flow Cytometry Workshops, 11th – 13th Feb 2025, SCTIMST, Trivandrum, India
- Invited to deliver a lecture on "Flow Cytometry and Its applications on Biological Research" by Dr. Rashmi Kaul and Dr. Crystal N. Johnson, Department of Biochemistry and Microbiology, Oklahoma State University Center for Health Sciences, Tulsa, OK, USA, 13th December 2024 (Online)
- Invited Faculty member at 3rd Mammalian Cell Culture Workshop 2024, Department of Biochemistry, AIIMS, Jodhpur, India, 11th – 16th March 2024 (Online)
- Invited Faculty member at the 25th INDO-US Flow Cytometry Workshops, 2nd – 8th Feb 2024, SGPIMS, BBAU, CSIR-CDRI & KGMU, Lucknow, India
- Invited Faculty member at the 2nd International Workshop on Flow Cytometry in Biotechnology, Department of Biotechnology, Tribhuvan University, Kathmandu, Nepal, 11th – 13th Oct 2023
- Invited Faculty member at the 2nd International Flow Cytometry workshop of Pakistan, Aga Khan University Hospital, 7th - 9th September 2023 (Online)
- Invited Faculty member at the 5-day Virtual FDP on Faculty Development Program (FDP) on the theme "Advancements and innovations in Cellular Communication and Signal Transduction" (AICCST) from 17th – 21st July 2023 (Online)
- Invited Faculty member at the 24th INDO-US Flow Cytometry Workshops, 1st – 7th Feb 2023, GBRC, IIT-Gn, NIPER-A & Anand University, Gujarat, India
- Invited Faculty member at the 23rd INDO-US Flow Cytometry Workshops, 7th – 10th March 2022, Rajasthan University, Rajasthan, India
- Invited Faculty member at the Flow cytometry Workshop at National Conference AMBICON-2021, AIIMS-Raipur, (2nd Dec-5th Dec, 2021) (Online)

PEER-REVIEWED PUBLICATIONS
(https://scholar.google.com/citations?user=hoR1DP4AAAAJ&hl=en&oi=ao)

Publications

- FuNien Tsai, Philip Homan, **Hemant Agrawal**, Alexander Misharin, Hiam Abdala-Valencia, G. Kenneth Haines III, Salina Dominguez, Christina Bloomfield, Rana Saber, Anthony Chang, Chandra Mohan, Jack Hutcheson, Anne Davidson, GR Budinger, Phillipe Bouillet, Andrea Dorfleutner, Christian Stehlik, Deborah Winter, Carla Cuda, and Harris Perlman (2017). "Bim Suppresses the Development of SLE by Limiting Myeloid Inflammatory Responses" Journal of Exp Med, Dec 4; 214(12): 3753–3773.
- Carla M. Cuda*, **Hemant Agrawal***, Alexander Misharin, G. Kenneth Haines III, Jack Hutcheson, Evan Weber, JA Schoenfeldt, Chandra Mohan, Richard M. Pope, and Harris Perlman (2012). "Myeloid cell–

specific Fas expression is required to prevent systemic autoimmunity”. Arthritis Rheum. Mar; 64(3): 808-20. *Noted authors contributed equally.

- Melissa Mavers, Carla M Cuda, Alexander V. Misharin, Angelica K Gierut, **Hemant Agrawal**, Evan Weber, G. Kenneth Haines III, Dimitrios Balomenos, Harris Perlman. (2012). **“**The Cyclin Dependent Kinase Inhibitor p21 Is Central for Resolution of Inflammatory Arthritis via its C-Terminal Domain”. Arthritis Rheum. Jan; 64(1):141-52.
- Susmita Sahoo, Ekaterina Klyachko, Tina Thorne, Sol Misener, Katherine Shinnick, Meredith Millay, Aiko Ito, Ting Liu, Christine Kamide, **Hemant Agrawal**, Harris Perlman, Gangjian Qin, Raj Kishore, Douglas W. Losordo. (2011) “Exosomes from Human CD34+ Stem Cells Mediate their Pro-angiogenic Paracrine Activity”. Circulation Research, 109 (7), 724-728.
- Sarah R. Pickens, Nathan D. Chamberlain, Michael V. Volin, Arthur M. Mandelin II, **Hemant Agrawal**, Masanori Matsui, Takayuki Yoshimoto, Harris Perlman, Shiva Shahrara. (2011) “Local expression of IL-27 ameliorates collagen induced arthritis.” Arthritis and Rheumatism, August 63 (8), 2289-2298.
- Budinger GR, Mutlu GM, Urich D, Soberanes S, Buccellato LJ, Hawkins K, Chiarella SE, Radigan KA, Eisenbart J, **Agrawal H**, Berkelhamer S, Hekimi S, Zhang J, Perlman H, Schumacker PT, Jain M, Chandel NS. (2011) “Epithelial Cell Death is an Important Contributor to Oxidant-Mediated Acute Lung Injury.” Am J Respir Crit Care Med, April 15, 183(8), 1043-54.
- Eva Pastille, Sonja Didovic, Daniela Brauckmann, Meenakshi Rani, **Hemant Agrawal**, F. Ulrich Schade, Yang Zhang, and Stefanie B. Flohé. (2011). “Modulation of Dendritic Cell Differentiation in the Bone Marrow Mediates Sustained Immunosuppression after Polymicrobial Sepsis.” J Immunol, Jan 15, 186(2), 977-86.
- Qi-Quan Huang, Harris Perlman, Zan Huang, Robert Birkett, Lixin Kan, **Hemant Agrawal**, Alexander Misharin, Sandeep Gurbuxani, John D.Crispino, Richard M. Pope. (2010) “FLIP: a novel regulator of macrophage differentiation and granulocyte homeostasis.” Blood, Dec 2, 116 (23), 4968-77.
- John C. Scatizzi*, Jack Hutcheson*, Richard M. Pope, Gary S. Firestein, Alisa E. Koch, Melissa Mavers, Avraham Smason, **Hemant Agrawal,** G. Kenneth Haines III, Navdeep S. Chandel, Richard S. Hotchkiss, Harris Perlman. (2010). “Bim-Bcl-2 homology 3 mimetic therapy is effective at suppressing inflammatory arthritis through the activation myeloid cell apoptosis.” Arthritis and Rheumatism, Feb 62(2): 441-51. *Noted authors contributed equally.
- **Agrawal, H.*,** Jacob, N.*, Carreras, E.*, Bajana, S.*, Putterman, C., Turner, S., Neas, B., Mathian, A., Koss, M.N., Stohl, W., Kovats, S.*, Jacob, C. O*. (2009). “Deficiency of type I IFN receptor in lupus-prone NZM 2328 mice decreases dendritic cell numbers and activation and protects from disease.” J. Immunol, Nov 1, 183(9), 6021-9. *Noted authors contributed equally.
- Flohe’, S. B.*, **Agrawal, H.***, Flohe’, S., Rani, M., Bangen, J. M, Schade, F. U. (2008). “Diverse efficiency of interferon-γ and granulocyte macrophage colony-stimulating factor in restoring immune dysfunction of

dendrite cells and macrophages during polymicrobial sepsis." Mol. Med., May-June 14(5-6), 247-256. *Noted authors contributed equally.

- Stefanie B. Flohé, **Hemant Agrawal,** Daniel Schmitz, Michaela Gertz, Sascha Flohé, and F. Ulrich Schade. (2006). "Dendritic cells during polymicrobial sepsis rapidly mature but fail to initiate a protective Th1-type immune response." J. Lec. Bio., March 79(3), 473-481.
- Stefanie B. Flohé, Jörg M. Bangen, Sascha Flohé, MD, **Hemant Agrawal**, Katja Bergmann, and F. Ulrich Schade. (2007). "Origin of immunomodulation after blunt trauma: Involvement of extracellular Heat-Shock Proteins." Shock, May 27(5), 494-502.

<u>Book Chapters</u>

- Guruprasad, K.P., Vasudev, V., **Agrawal, H.,** Thakur, M., Krishan, A., Sobti, R.C. (2024). Flow Cytometry: Historical Perspectives, Fundamentals, Past and Present Instrumentations, and Applications (Chapter 1) In: Sobti, R.C., Krishan, A., Agrawal, D.K. (eds) Flow Cytometry. Springer, Singapore. (https://doi.org/10.1007/978-981-97-4553-1_1)
- Himanshu Tillu, Rekha Gour and **Hemant Agrawal** (2022) "Flow Cytometry and its Applications" Chapter 7, pages Book: Genomic, Proteomics, and Biotechnology, CRC Press, Taylor and Francis Group (https://doi.org/10.1201/9781003220831)
- Kovats S, Carreras E, **Agrawal H**. (2010) "Sex Steroid Receptors on Immune Cells" Chapter 3, Klein/Roberts (Eds.): Sex hormones and Immunity to Infection, Springer-Verlag Berlin Heidelberg Publication. (p 53-91) (DOI: 10.1007/978-3-642-02155-8_3).

<u>Abstracts</u>

- **Hemant Agrawal**, Emmy Chepkoech, Stephen Kimno, Dennis Obonyo, Leah Boit, Pamela Mwikali, Richard Nyagwachi, Julius Koech, Richard Kiptisia, Isaboke Job, David Samoei, William Telford (2025), "Setting Up a Flow Cytometry Facility for Plant Ploidy Analysis: Insights from a Laboratory in Kenya" **CYTO 2025 in Denver, USA, May 31- June 4, 2025**
- **Hemant Agrawal**, Rekha Gour, Aruna Goenka Agrawal, P. N. Razdan, Arvinder M Singh, William G Telford, Awtar Krishan (2025) "Recent Developments and New Approaches in Flow Cytometry Education in India", **CYTO 2025 in Denver, USA, May 31- June 4, 2025**
- **Hemant Agrawal**, Rekha Gour, Himanshu Tillu, Aruna Goenka Agrawal, P. N. Razdan, Arvinder M Singh, William G Telford, Awtar Krishan (2023) "Recent Advances and Approaches in Flow cytometry Education in India", **CYTO 2023 in Montréal, Québec, Canada, May 20-24, 2023**
- **Hemant Agrawal**, Evan Weber, Alexander Misharin, Carla M. Cuda, G. Kenneth Haines, Rosalind Ramsey-Goldman and Harris Perlman. (2010) "Myeloid but Not Lymphoid Bim Expression Is Required Suppress SLE-Like Disease". Arthritis & Rheumatism, 62 (10) Supp, Abstract No. 859. **(ACR Notable Poster in the category "Innate Immunity and Rheumatic Disease).**

- Carla M. Cuda, **Hemant Agrawal**, Evan Weber, G. Kenneth Haines and Harris R. Perlman. (2010). "Fas Expression in Myeloid Cells Is Required to Prevent Systemic Autoimmunity". Arthritis & Rheumatism, 62 (10) Supp, Abstract No. 853.
- Mavers M., **Agrawal H.,** Balomenos D., Perlman H. R. (2009). "The C-Terminus of the Cyclin Dependent Kinase Inhibitor p21$^{(WAF1/CIP1)}$ Suppresses Cytokine Production and Inflammatory Arthritis". Arthritis & Rheumatism, 60, S10, Abstract No. 151.
- Sandra Bajana, **Hemant Agrawal**, Esther Carreras, Susan Kovats (2009). "Estrogen receptors promote langerin+ dendritic cell differentiation and migration from skin during inflammation in vivo". JI, 182, 91.3.
- **Hemant Agrawal**, Esther Carreras, Sandra Bajana, Susan Kovats (2009). "Estrogen receptor expression promotes the differentiation and activation of splenic dendritic cells and macrophages during inflammation in vivo." Journal of Immunology, 182, 87.6. Oral presentation at the AAI 2009, Seattle, WA. **(AAI Trainee Abstract Award).**
- Kovats, S., **Agrawal, H.**, Bajana, S., Carreras-Margalef, E. "Estrogen receptors differentially regulate dendritic cell differentiation and activation in males and females in vivo" DC2008, Kobe, Japan, P-2-05.
- Kovats, S., Jacob, N., **Agrawal, H.**, Carreras-Margalef, E., Bajana-Miranda, S, Jacob, C. O. (2007). "Altered dendritic cell differentiation and activation in lupus prone NZM 2328 mice lacking the type 1 interferon receptor." Abstract in Arthritis & Rheumatism, 56, S9, Abstract 201.
- Flohé,S.B., Rani,M., **Agrawal,H.**, Gertz,M., & Schade, F.U.(2006)."Reprogramming of dendritic cell progenitors in the bone marrow during murine polymicrobial sepsis." Shock, 26(4) S1.
- **Agrawal, H.**, Rani, M., Gertz, M., Schmitz, D., Schade F.U., and Flohé, S.B. "Dendritic Cells develop an aberrant cytokine response during polymicrobial sepsis." Immunobiology, 210, 6-8, 2005, 428.
- Rani, M., **Agrawal, H.**, Gertz, M., Schmitz, D., Schade F.U., and Flohé, S.B. "Reprogramming of Dendritic cell progenitors in the bone marrow during polymicrobial sepsis."Immunobiol, 210, 6-8, 2005, 435-436.
- Flohé, S.B., **Agrawal, H.**, Gertz, M., Schmitz, D., and Schade F.U. "Modulation of Dendritic Cells during Polymicrobial Sepsis." Shock, 23, Sup 2, 2005, pp 22-23.
- **Agrawal, H.**, Gertz, M., Schmitz, D., Schade, F.U., and Flohé, S.B. "Alteration in Dendritic Cell Functions during Sepsis." Immunobiology, 209, 4-6, 2004, pp 330.

SOCITIEY MEMBERSHIPS

- Managing officer at **Trust for Education and Training in Cytometry (TETC),** India. My role at TETC is to conduct and manage flow cytometry educational activities by TETC independently and in collaboration with national and international organizations through onsite and online programs. The aim of TETC is to provide a platform for biomedical students, technologists, scientists etc. to gain the basics and advanced knowledge about flow cytometry directly from national and international experts, who are involved in education and training in flow cytometry all over the world.

- Member of the **International Society for Advancement in Cytometry (ISAC),** USA and actively contributing for their task forces ISAC-Live Education Delivery Task Force (ISAC-LEDTF) and ISAC-Instruments for Science (I4S) Task Force. The goal of these task forces is to advance flow cytometry education worldwide, with a particular focus on regions where it is most needed and can have the greatest scientific impact.
- Member of the **Indian Immunology Society (IIS),** India. Being a part of this society, I am actively contributing in conducting and teaching flow cytometry courses/workshops.
- Member of **The Cytometry Society of India (TCS),** India. Being a part of this society, I am actively contributing in conducting and teaching flow cytometry courses/workshops.

LABORATORY- HANDS ON EXPERTISE

- **Flow cytometry Skills**
  - Flow Cytometers--BD FACSCalibur, BD LSR II/Fortessa, BD FACS Canto, BD FACS Aria, BD FACSVerse, BD Lyric, BD Accuri, Life Tech Attune, Merck-Millipore guava easycyte 8HT/12HT, Bio-Rad S3e Cell Sorter, BC Cytoflex, Orflo etc.
  - Flow Cytometery Data Analysis Softwares--FCS Express, FLOWJO, BD FACSDiva, BD Cell Quest, BD FACSSuite, BC CytExpert etc.
  - Experience in designing multicolor flow cytometry experiments for analyzing surface expression of immune cell related biomarkers, intracellular protein levels estimation, phospo flow, cell cycle, apoptosis, cell proliferation, BrdU/EdU staining, CFSE Staining, Bead based assays etc. Phenotypic and functional analysis of Dendritic Cells, Macrophages and Lymphocytes
  - Flow cytometry data analysis, interpretation and presentation
- **Immunological Techniques**
  - ELISA, CBA, Luminex, magnetic cell sorting
- **Human Sample Handling**
  - Preparation of PBMCs, serum and plasma
  - Preparation of Single Cells from Bone Marrow
  - Preparation of Single Cells from Tissues
- **Animal Handling**
  - Handling of normal and transgenic strains
  - i.p., s.c., i.v., i.m., and retro orbital injections
  - Small operations like cecal ligation and puncture (CLP) for inducing sepsis, pellet implantation etc.
  - Isolation of peritoneal cells, generation of bone marrow chimeras, isolation of lymphoid organs like spleen, lymph nodes and bone marrow
  - Collection of blood

- **Cell Culture**
    - Isolation and culturing of murine primary cells from spleen, lymph nodes and bone marrow
    - Preparation of mouse bone marrow and generation of bone marrow-derived dendritic cells
    - Handling and culturing of adherent and non-adherent cell lines
    - Mixed lymphocyte reaction (MLR), T cell proliferation assay etc.
- **Molecular Biology Techniques**
    - DNA, RNA and protein gel, PCR, DNA, RNA and protein isolation

TESTIMONIALS FROM MY STUDENTS

- *"I have attended many online flow cytometry courses during the last couple of years conducted by different providers, but I have no doubt in saying that the courses conducted by Dr. Hemant Agrawal was par excellence and unmatchable. The online courses were perfectly designed to incorporate up to date scientific, technical and clinical component; and address the relevant needs of the participants. These courses were delivered by some of the renowned local and international subject experts. There was plenty of support and guidance available during the course and afterwards. The session recordings were available on request and the study materials shared with each course provided an additional wealth of knowledge to explore and learn. I also had a chance to interact personally with Dr. Agrawal and his team, and I'm grateful for their guidance and support. Dr. Agrawal is gem of a person and he has an unmatchable dedication and passion to share the knowledge of flow cytometry. I have no doubt in strongly recommending Dr. Agrawal for training programs, courses and workshops to anyone interested in the field flow cytometry"- **Dr. M. Adnan Qureshi, Consultant Hematopathologist, Riyadh, Saudi Arabia***
- *"I very much enjoyed the course; it was very well organized and you are a very patient and considerate teacher. I will definitely recommend this course to my colleagues and anyone else interested in flow cytometry"- **Jaclyn E. Mahoney, Cornell University, USA***
- *"Thank you very much, Sir. This was my first formal course on flow learning, and I must admit, I started from scratch. However, your ability to explain this complex topic in such a simple and beautiful manner has truly made a significant impact on my understanding. I can confidently say that I am no longer at ground zero, thanks to your guidance."- **Abdullah Al Mosabbir, Dhaka Medical College, Bangladesh***
- *"Thank you very much. I wanted to express my sincere gratitude for the beautiful lectures and informative workshop on flow cytometry. Your expertise & passion for the subject matter were evident in every aspect of the presentation, and I left feeling inspired and empowered."- **Ahmed Al Farouk, NCI Cairo University, Egypt***
- *"There are very few course instructors like you who put in their sweat to ensure we maximize our learnings from the course. I really appreciate how you executed the course and always kept engaging the students and answering all the queries. Thank you for the course and it was such a great experience!"- **PhD Student, IISc, Bangalore, India***
- *"Dear Sir, you have put a lot of efforts in teaching us the intricacies of flow cytometry in a much simpler way...This foundation course about the basics to advances in flow, should definitely help me to setup flowcytometry in my institution"- **Dr. Prithal G, A J Institute of Medical Sciences and Research Centre, India***
- "Sir....Thank you for organizing such a wonderful and comprehensive class. Although I have been running a flow cytometry lab, I was able to revisit and clearly understand many fundamental concepts through your teaching. I'm deeply grateful for the time and effort you put into helping us learn—patiently explaining things, often multiple times, until we fully grasped them. You are truly a dedicated and passionate teacher, and it was a privilege to learn from you. Thank you"- ***Dr. Sanooja Pinki, Consultant, KIMSHEALTH, India***