




**Name & Surname:** Seyed Ali Hemmati

**Date of Birth:** Sep 12<sup>th</sup>, 1986

 **Address, Suburb, State, Postcode:** Department of Plant Protection, Faculty of Agriculture, Shahid Chamran University of Ahvaz, Ahvaz, Iran, Postcode: 61357-43311.

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### **PROFESSIONAL PROFILE:**

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Assistant Professor of Agricultural Entomology at Shahid Chamran University (SCU) of Ahvaz.

- ResearchGate: <https://www.researchgate.net/profile/Seyed-Ali-Hemmati>
- Google scholar: <https://scholar.google.com/citations?hl=en&user=xHnLfw4AAAAJ>
- ORCID ID: 0000-0003-3653-0428
- Researcher ID: AAG-2206-2021
- Scopus ID: 55341247800

### **EDUCATION BACKGROUND:**

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- Ph.D: Agricultural Entomology (2017), Tarbiat Modares University, Tehran, Iran

### **Thesis title:**

Rational Design and Synthesis of the Peptides as Enzyme Inhibitor and Study of their Inhibitory and Insecticidal Activities on The Indianmeal Moth, *Plodia interpunctella* (Lepidoptera: Pyralidae)

- MSc: Agricultural Entomology (2011), University of Mohaghegh Ardabili, Ardabil, Iran

**Dissertation title:**

Effect of different host plants on nutritional indices and some digestive enzymes activity of the cotton bollworm, *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae)

- BS: Plant Protection (2009), Gorgan University of Agriculture and Natural Resources, Gorgan, Iran

**TEACHING AND TRAINING EXPERIENCE:**

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Entomology and Biochemistry for BSc students, Physiology for MSc students, Physiology of glands and immunity in insects for PhD students.

**HONOURS AND AWARDS:**

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- Distinguished presenter student (Ph.D) of 2<sup>nd</sup> International Peptide Conference & Humboldt-Kolleg, 2017.
- Distinguished researcher student (Ph.D) by the National Elite Foundation, 2016.

**INTERESTS AND RESEACH FIELDS:**

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- Biochemistry and Molecular Biology of Insect Digestion (particularly Digestive Enzyme Inhibition)
- Rational Design of the peptide as enzyme inhibitor
- Bioinformatics
- Insect Physiology
- Protein-peptide interaction

**RESARCH ACTIVITIES:**

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- Reviewer of Process Biochemistry
- Reviewer of Journal of Crop Protection
- Reviewer of Journal of Entomological Society of Iran
- Editor of Advances in Agricultural Science Journal
- Reviewer of Plant Protection
- Reviewer of Journal Archives of Phytopathology and Plant Protection

## PUBLICATIONS:

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- Ebrahimifard, J. Shishehbor, P. Rasekh, A. **Hemmati, S. A.** and Riddick, E. W. 2021. Evaluation of *Artemia franciscana* Cysts to Improve Diets for Mass Rearing *Stethorus gilvifrons*, a Predator of *Tetranychus turkestanii*. *Insects*, 12(7), 632.
- Atashi, N. Shishehbor, P. Seraj, A. A. Rasekh, A. **Hemmati, S. A.** and Riddick, E. W. 2021. Effects of *Helicoverpa armigera* egg age on development, reproduction, and life table parameters of *Trichogramma euproctidis*. *Insects*, 12(7), 569.
- **Hemmati, S. A.**, Karam Kiani, N. and Serrão, J. E., Jitrayut Jitonnorn. 2021. Inhibitory potential of a designed peptide inhibitor based on zymogen structure of trypsin from *Spodoptera frugiperda*: in silico insights. *Int. J. Pept. Res. Ther.* DOI: 10.1007/s10989-021-10200-4.
- **Hemmati, S. A.** 2021. Structural, functional, and phylogenetic studies of chymotrypsin enzyme genes in insects: a bioinformatics approach. *Plant Prot.* DOI: 10.22055/PPR.2020.16417.
- **Hemmati, S. A.**, Takaloo, Z., Taghdir, M., Mehrabadi, M., Balalaie, S. Moharramipour, S., Sajedi, R. H. 2021. The trypsin inhibitor pro-peptide induces toxic effects in Indianmeal moth, *Plodia interpunctella*. *Pestic. Biochem. Phys.* DOI: 10.1016/j.pestbp.2020.104730.
- **Hemmati, S. A.** and Karam Kiani, N. 2020. Evaluation of the inhibitory potential of pro-peptide region as the inhibitor of the digestive chymotrypsin of cotton bollworm, *Helicoverpa armigera* (Lepidoptera: Noctuidae), based on in silico studies. *JESI*. DOI: 10.22117/jesi.2020.342422.1371.
- Ebrahimifard, J. Shishehbor, P. Rasekh, A. **Hemmati, S. A.** and Riddick, E. W. 2020. Effects of Three Artificial Diets on Life History Parameters of the Ladybird Beetle *Stethorus gilvifrons*, a Predator of Tetranychid Mites. *Insects*, 11(9), 579.
- **Hemmati, S. A.** and Mehrabadi, M. 2020. Structural ensemble-based computational analysis of trypsin enzyme genes discovered highly conserved peptide motifs in insects. *Arch. Phytopathol. Pflanzenschutz*. DOI: 10.1080/03235408.2020.1744978.
- **Hemmati, S. A.**, Sajedi, R. H., Moharramipour, S., Taghdir, M., Rahmani, H., Etehad, S. M. and Mehrabadi, M. 2017. Purification and structural analysis of trypsin from midgut of the Indian meal moth, *Plodia interpunctella*. *Physiol. Entomol.* DOI: 10.1111/phen.12196.
- Razmjou, J., Naseri, B., **Hemati, S. A.** 2014. Comparative performance of the cotton bollworm, *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae) on various host plants. *J. Pest Sci.* DOI 10.1007/s10340-013-0515-9.
- **Hemati, S. A.**, Naseri, B., Razmjou, J. 2013. Reproductive performance and growth indices of the cotton bollworm, *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae) on various host plants. *J. Crop Protec.* 2 (2): 193-208.

- **Hemati, S. A.**, Naseri, B., Ganbalani, G. N., Dastjerdi, H. R., Golizadeh, A. 2012. Digestive proteolytic and amylolytic activities and feeding responses of *Helicoverpa armigera* (Noctuidae: Lepidoptera) on different host plants. *J. Econ. Entomol.* 105 (4): 1439-1446.
- **Hemati, S. A.**, Naseri, B., Ganbalani, G. N., Dastjerdi, H. R., Golizadeh, A. 2012. Effect of different host plants on nutritional indices of the pod borer, *Helicoverpa armigera*. *J. Insect Sci.* 12:55 available online: [insectscience.org/12.55](http://insectscience.org/12.55)

#### **CONFERENCE PRESENTATIONS:**

- Tabein, S. and **Hemmati, S. A.** 2021. Study on interactions between iteron like sequence of betasatellite with replication associated proteins encoded by helper viruses. 12<sup>th</sup> National and 4<sup>th</sup> International Biotechnology Congress of Islamic Republic of Iran.
- **Hemmati, S. A.** 2019. Comparative bioinformatics analysis of acyl-CoA dehydrogenase from *Galleria mellonella* (Lepidoptera: Pyralidae). Third Iranian international congress of entomology. Tabriz, Iran.
- **Hemmati, S. A. and Toosi, M.** 2019. Molecular docking simulation studies suggest a new peptide inhibitor based on zymogen structure of trypsin from *Periplaneta americana*. Third Iranian international congress of entomology. Tabriz, Iran.
- Tabein, S. and **Hemmati, S. A.** 2019. Homology modeling and docking analysis of Rep encoded by beet curly top viruses with their nonanucleotide motifs. 3<sup>rd</sup> International & 11th National Biotechnology Congress of Islamic Republic of Iran.
- **Hemmati, S. A.**, Sajedi, R. H., Moharramipour, S., Balalaie, S., Taghdir, M., Mehrabadi, M., Rahmani, H. A. 2017. Directed design of peptide inhibitor based on zymogen structure of trypsin to assess of inhibitory and insecticidal effects on *Plodia interpunctella*. P. 127 in Proceeding of International Iranian Peptide Conference & Humboldt-Kolleg, 9–12 January 2017, Tehran, Iran.
- **Hemati, S. A.**, Naseri, B., Ganbalani, G. N., Dastjerdi, H. R., Golizadeh, A. 2011. Effect of different host plants on feeding performance of *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae). P. 42 in Proceeding of Global Conference on Entomology, 5–9 March 2011, Chiang Mai, Thailand.

#### **RESEARCH PROJECTS:**

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- Directed design of inhibitor peptides of Coronavirus Main Protease (Mpro) by using several insect inhibitors (2020-2021)

- Effect of different host plants on nutritional indices and some digestive enzymes activity of the cotton leafworm, *Spodoptera littoralis* (Boisduval) (Lepidoptera: Noctuidae) (2020)
- Biological parameters of *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae) on different host plants (2011-2012)

#### **PROFESSIONAL MEMBERSHIPS:**

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- Member of Entomological Society of Iran

#### **LANGUAGES:**

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- Persian & Azari (Native)
- English (Good)