

## *Curriculum dell'attività Scientifica e Didattica*

**Nunzio Isidoro**

*Professore Ordinario  
Dipartimento di Scienze Agrarie, Alimentari e Ambientali  
Università Politecnica delle Marche*

### **1. ISTRUZIONE E FORMAZIONE**

<b>1976</b>	Diploma di maturità Classica, Liceo Classico "G.D'Annunzio", Pescara
<b>1984</b>	Diploma di Laurea in Scienze Agrarie, Facoltà di Agraria, Università degli Studi di Perugia, con votazione 110/110 e lode
<b>1990</b>	Vincitore di un concorso a posti di ricercatore universitario bando G.U. 29/07/88
<b>1990-2000</b>	Ricercatore universitario G06A Entomologia Agraria, Facoltà di Agraria, Università degli Studi di Perugia
<b>1999</b>	Vincitore di un concorso a posti di professore universitario di ruolo II fascia bando A.99.01
<b>2000-2003</b>	Professore universitario II <sup>a</sup> Fascia G06A Entomologia Agraria, Facoltà di Agraria, Università Politecnica delle Marche
<b>2004-2010</b>	Professore universitario Confermato II <sup>a</sup> Fascia AGR11 Entomologia Agraria, Università Politecnica delle Marche
<b>dal 2011</b>	Professore I <sup>a</sup> Fascia AGR11 Entomologia Agraria, Università Politecnica delle Marche

### **2. COMPITI ISTITUZIONALI**

<b>2001-10</b>	Membro per la Commissione Regionale Marche sull'Agricoltura Biologica
<b>2002-15</b>	Componente della Delegazione dell'Azienda Agraria dell'Università Politecnica delle Marche (Decreto Rettoriale n. 221 del 18/12/2002)
<b>2004</b>	Componente del Comitato di Area (CAR) 07 "Scienze Agrarie e Veterinarie" per la Valutazione Triennale della Ricerca (VTR)- esercizio 2001/2003 - dell'Università Politecnica delle Marche.
<b>2006-10</b>	Componente del Nucleo di Valutazione dell'Università Politecnica delle Marche
<b>2013- 15</b>	Presidente del Nucleo di Valutazione dell'Università Politecnica delle Marche
<b>dal 1/10/2015</b>	Direttore del Dipartimento di Scienze Agrarie Alimentari e Ambientali

### **3. ELENCO PUBBLICAZIONI PIU' SIGNIFICATIVE**

- RUSCHIONI S., LORETO N., **ISIDORO N.**, RIOLO P. (2019). Sensory structures on maxillary and labial palps of *Tenebrio molitor* (L.) (Coleoptera: Tenebrionidae). *BULLETIN OF INSECTOLOGY*, 72 (2): 309-316.
- TRUZZI C., GIORGINI E., ANNIBALDI A., ANTONUCCI M., ILLUMINATI S., SCARPONI G., RIOLO P., **ISIDORO N.**, CONTI C., ZARANTONIELLO M., CIPRIANI R., OLIVOTTO I. (2019). Fatty acids profile of black soldier fly (*Hermetia illucens*): influence of feeding substrate based on coffee-waste silverskin enriched with microalgae. *ANIMAL FEED SCIENCE AND TECHNOLOGY (ACCEPTED)*.
- OSIMANI A., MILANOVIC V., RONCOLINI A., RIOLO P., RUSCHIONI S., **ISIDORO N.**, LORETO N., FRANCIOSI E., TUOHY K., OLIVOTTO I., ZARANTONIELLO M., CARDINALI F., GAROFALO C., AQUILANTI L., CLEMENTI F. (2019). *Hermetia illucens* in diets for zebrafish (*Danio rerio*): A study on the bacterial diversity through PCR-DGGE and metagenomic sequencing. *PLOS ONE (ACCEPTED)*.
- RANIERI E., RUSCHIONI S., RIOLO P., **ISIDORO N.**, ROMANI R. (2019). Sensory receptors associated with labial tip and precibarium of *Philaenus spumarius* L. (Homoptera: Aphrophoridae). *MICROSCOPY AND MICROANALYSIS* (waiting for editor's final decision)
- RANIERI E., ZITTI G., RIOLO P., **ISIDORO N.**, RUSCHIONI S., BROCCINI M., ALMEIDA R. (2019) Fluid dynamics in the functional foregut of xylem-sapfeeding insects: a comparative study of two *Xylella fastidiosa* vectors. *JOURNAL EXPERIMENTAL BIOLOGY* (waiting for editor's final decision)
- RUSCHIONI S., RANIERI E., RIOLO P., ROMANI R., ALMEIDA R., **ISIDORO N.** (2019) Functional anatomy of the precibarial valve in *Philaenus spumarius* (L.) *PLOSE ONE (IN PRESS)*
- OSIMANI A., MILANOVIC V., CARDINALI F., GAROFALO C., CLEMENTI F., RUSCHIONI S., RIOLO P., **ISIDORO N.**, LORETO N., GALARINI R., MORETTI S., PETRUZZELLI A., MICCI E., GABUCCI C., TONUCCI F., AQUILANTI L. (2018) Distribution of Transferable Antibiotic Resistance Genes in Laboratory-Reared Edible Mealworms (*Tenebrio molitor* L.) *FRONTIERS IN MICROBIOLOGY*
- OSIMANI A., MILANOVIC V., CARDINALI F., GAROFALO C., CLEMENTI F., PASQUINI M., RIOLO P., RUSCHIONI S., **ISIDORO N.**, LORETO N., FRANCIOSI E., TUOHY K., PETRUZZELLI A., FOGLINI M., GABUCCI C., TONUCCI F., AQUILANTI L. (2018) The bacterial biota of laboratory-reared edible mealworms (*Tenebrio molitor* L.): from feed to frass *INTERNATIONAL JOURNAL OF FOOD MICROBIOLOGY*
- ROMANI R., RUSCHIONI S., RIOLO P., **ISIDORO N.** (2018) Transmission and scanning electron microscopic observations on antennal apical pegs in the wasp species Pimplinae (Insecta: Hymenoptera) *MICRON*
- RIOLO P., MINUZ R. L., PERI E., **ISIDORO N.** (2017) Behavioral responses of *Hyalesthes obsoletus* to host-plant volatiles cues *ARTHROPOD-PLANT INTERACTIONS*
- GAROFALO C., OSIMANI A., MILANOVIĆ V., TACCARI M., CARDINALI F., AQUILANTI L., RIOLO P., RUSCHIONI S., **ISIDORO N.**, CLEMENTI F. (2017) The microbiota of marketed processed edible insects as revealed by high-throughput sequencing *FOOD MICROBIOLOGY*
- OSIMANI A., GAROFALO C., MILANOVIĆ V., TACCARI M., CARDINALI F., AQUILANTI L., PASQUINI M., MOZZON M., RAFFAELLI N., RUSCHIONI S., RIOLO P., **ISIDORO N.**, CLEMENTI F. (2017) Insight into the proximate composition and microbial diversity of edible insects marketed in the European Union *EUROPEAN FOOD RESEARCH AND TECHNOLOGY*
- RIOLO P., **ISIDORO N.**, RUSCHIONI S., MINUZ R. L., BIN F., ROMANI R. (2016) Anatomy of the antennal dorsal organ in female of *Neodryinus typhlocybae* (Hymenoptera: Dryinidae): A peculiar sensory structure possibly involved in perception of host vibration *JOURNAL OF MORPHOLOGY*
- RANIERI E., RUSCHIONI S., RIOLO P., **ISIDORO N.**, ROMANI R. (2016) Fine structure of antennal sensilla of the spittlebug *Philaenus spumarius* L. (Insecta: Hemiptera: Aphrophoridae). I. Chemoreceptors and thermo/hygroreceptors *ARTHROPOD STRUCTURE & DEVELOPMENT*
- ISIDORO N.**, RIOLO P., VERDOLINI E., PERI E., BEAUDOIN-OLLIVIER L. (2016) *Paysandisia archon*: Taxonomy, Distribution, Biology, and Life Cycle *HANDBOOK OF MAJOR PALM PESTS: BIOLOGY AND MANAGEMENT* Editore: Wiley Blackwell

- LANDI L., RIOLO P., MUROLO S., ROMANAZZI G., NARDI S., **ISIDORO N.** (2016) Genetic Variability of Stolbur Phytoplasma in *Hyalesthes obsoletus* (Hemiptera: Cixiidae) and its Main Host Plants in Vineyard Agroecosystems *JOURNAL OF ECONOMIC ENTOMOLOGY*
- RUSCHIONI S., RIOLO P., **ISIDORO N.**, ROMANI R., PETRUCCO-TOFFOLO E., ZIVI D., BATTISTI A. (2015) Contrasting patterns of host adaptation in two egg parasitoids of the pine processionary moth (Lepidoptera:Thaumetopoeidae) *ENVIRONMENTAL ENTOMOLOGY*
- RUSCHIONI S., RIOLO P., VERDOLINI E., PERI E., GUARINO S., COLAZZA S., ROMANI R., **ISIDORO N.** (2015) Fine structure of antennal sensilla of *Paysandisia archon* and electrophysiological responses to volatile compounds associated with host palms *PLOS ONE*
- RIOLO P., MINUZ R.L.; PERI E.; **ISIDORO N.** Behavioral responses of *Hyalesthes obsoletus* to host-plant volatiles cues *ARTHROPOD-PLANT INTERACTIONS*
- RIOLO P., MINUZ R.L., LANDI L., NARDI S., RICCI E., RIGHI M., **ISIDORO N.** (2014). Population dynamics and dispersal of *Scaphoideus titanus* from recently recorded infested areas in central-eastern Italy. *BULLETTIN OF INSECTOLOGY*, vol. 67, p. 99-107.
- RIOLO P., VERDOLINI E., ANFORA G., MINUZ R. L., RUSCHIONI S., CARLIN S., **ISIDORO N.** (2014). Perching Mate-Locating Strategy in *Paysandisia archon* (Lepidoptera: Castniidae): Behavioral and Morpho-Physiological Investigations. *JOURNAL OF ECONOMIC ENTOMOLOGY* vol. 107, p. 1009-1021.
- RIOLO P., RUSCHIONI S., MINUZ R.L., ROMANI R., **ISIDORO N.** (2014). Female sex pheromone gland of the boxwood leafminer, *Monarthropalpus buxi* (Diptera: Cecidomyiidae): Morphological and behavioural evidence. *EUROPEAN JOURNAL OF ENTOMOLOGY*, vol. 111, p. 75-81, ISSN: 1210-5759, doi: 10.14411/eje.2014.009
- RUSCHIONI S., RIOLO P., MINUZ R.L., STEFANO M., CANNELLA M., PORRINI C., **ISIDORO N.** (2013). Biomonitoring with Honeybees of Heavy Metals and Pesticides in Nature Reserves of the Marche Region (Italy). *BIOLOGICAL TRACE ELEMENT RESEARCH*, vol. 154, p. 226-233, ISSN: 0163-4984, doi: 10.1007/s12011-013-9732-6
- LANDI L., **ISIDORO N.**, RIOLO P. (2013). Natural Phytoplasma Infection of Four Phloem-Feeding Auchenorrhyncha Across Vineyard Agroecosystems in Central–Eastern Italy. *JOURNAL OF ECONOMIC ENTOMOLOGY*, vol. 106, p. 604-613, ISSN: 0022-0493, doi: 10.1603/EC12400
- MINUZ R.L., **ISIDORO N.**, CASAVECCHIA S., BURGIO G. , RIOLO P. (2013). Sex-Dispersal Differences of Four Phloem-Feeding Vectors and Their Relationship to Wild-Plant Abundance in Vineyard Agroecosystems. *JOURNAL OF ECONOMIC ENTOMOLOGY*, vol. 106, p. 2296-2309, ISSN: 0022-0493, doi: 10.1603/EC13244
- JAMES TANYI TAMBE J., RIOLO P., NAMBANGI OKOLLE J., **ISIDORO N.**, FANCIULLI P.P., DALLAI R. (2013). Sexual size differences and colour polymorphism of *Rhynchophorus phoenicis* in the Southwest region of Cameroon. *BULLETIN OF INSECTOLOGY*, vol. 66, p. 153-159, ISSN: 1721-8861
- RUSCHIONI S., ROMANI R., RIOLO P., **ISIDORO N.** (2012). Morphology and distribution of antennal multiporous gustatory sensilla related to host recognition in some *Trichogramma* spp.. *BULLETIN OF INSECTOLOGY*, vol. 65 , p. 171-176, ISSN: 1721-8861
- RIOLO P., MINUZ R. L., ANFORA G., ROSSI STACCONI M. V., CARLIN S., **ISIDORO N.**, ROMANI R. (2012). Perception of Host Plant Volatiles in *Hyalesthes obsoletus*: Behavior, Morphology, and Electrophysiology. *JOURNAL OF CHEMICAL ECOLOGY*, vol. 38, p. 1017-1030, ISSN: 0098-0331, doi: 10.1007/s10886-012-0154-2
- ROMANI R., **ISIDORO N.**, BIN F., (2010) Antennal Structures Used in Communication by Egg Parasitoids, in "EGG PARASITIDS IN AGROECOSYSTEMS WITH EMPHASIS ON TRICHOGRAMMA" Consoli F.L., Parra J. R. P., Zucchi R. A. (Eds.), pp. 57-96. SPRINGER, ISBN: 978-1-4020-9109-4

- RUCHTY M., ROMANI R., KUEBLER L.S., RUSCHIONI S., ROCES F., **ISIDORO N.**, KLEINEIDAM C.J., (2009) The thermo-sensitive sensilla coeloconica of leaf-cutting ants (*Atta vollenweideri*). *ARTHROPOD STRUCTURE AND DEVELOPMENT*, , pp.38: 195-205
- ROMANI R., ROSSI STACCONI M.V., RIOLO P., **ISIDORO N.** (2009). The sensory structures of the antennal flagellum in *Hyalesthes obsoletus* (Hemiptera: Fulgoromorpha: Cixiidae): A functional reduction?, in *ARTHROPOD STRUCTURE AND DEVELOPMENT*, pp.38: 473-483.
- ROMANI R., ROSI M.C., BIN F., **ISIDORO N.** (2008). The role of the antennae during courtship behaviour in the parasitic wasp *Trichopria drosophilae*. *JOURNAL EXPERIMENTAL BIOLOGY*, pp. 211: 2486-91
- VAN LENTEREN J.C., RUSCHIONI S., ROMANI R., VAN LOON J.J.A., QIU Y.T., SMID H., **ISIDORO N.**, BIN F. (2007) Structure and electrophysiological responses of gustatory organs on the ovipositor of the parasitoid *Leptopilina heterotoma*. *ARTHROPOD STRUCTURE AND DEVELOPMENT*, , 36: 271-276
- LAROCCA A., FANTI P., ROMANO A., MARSICOVETERE E., **ISIDORO N.**, RUSCHIONI S., ROMANI R., PENNACCHIO F., BATTAGLIA D. (2007). Functional bases of host acceptance behaviour in the aphid parasitoid *Aphidius ervi* (Hymenoptera: Braconidae), *PHYSIOLOGICAL ENTOMOLOGY*, 32: 305-312
- ROMANI R., GRASSO D.A., MORI A., **ISIDORO N.**, LE MOLI F. (2006). Antennal gland of slave-making ant *Polyergus rufescens* and its slave species, *Formica cunicularia* (Hymenoptera, Formicidae). *CANADIAN JOURNAL OF ZOOLOGY*, 84: 490-94.
- ROMANI R., SALERNO G., FRATI F., CONTI E., **ISIDORO N.**, BIN F. (2005). Oviposition behaviour in *Lygus rugulipennis*: a morpho-functional study. *ENTOMOLOGIA EXPERIMENTALIS ET APPLICATA*, 115: 17-25. ISSN: 0013-8703
- ROMANI R., **ISIDORO N.**, BIN F., FORTUNATO A., TURILLAZZI S., BEANI L. (2005). A new role for antennation in paper wasps (Hymenoptera, Vespidae). *INSECTS SOCIAUX*, 52: 96-102. ISSN: 0020-1812.
- GRASSO D. A., ROMANI R., CASTRACANI C., VISICCHIO R., MORI A., **ISIDORO N.**, LE MOLI F., (2004). Mandible associated glands in queens of the slave-making ant *Polyergus rufescens* (Hymenoptera, Formicidae). *INSECTS SOCIAUX*, 51: 74-80. ISSN: 0020-1812 .
- ROMANI R., **ISIDORO N.**, RIOLO P. , BIN F. (2003) - Antennal glands in male bees: structures for sexual communication by pheromones? *APIDOLOGIE*, 34: 603-610. ISSN: 0044-8435.
- PEDATA P.A., GARONNA A.P. , ZABATTA A. , ROMANI R., **ISIDORO N.** (2003). Development and morphology of teratocytes in *Encarsia berleseii* and *Encarsia citrina*: first record for Chalcidoidea. *JOURNAL OF INSECT PHYSIOLOGY*., 49: 1063-1071. ISSN: 0022-1910.
- ROMANI R., **ISIDORO N.**, BIN F., VINSON S.B. (2002). Host recognition in the pupal parasitoid *Trichopria drosophilae*: a morpho-functional approach. *ENTOMOLOGIA EXPERIMENTALIS ET APPLICATA*, 105: 119-128. ISSN: 0013-8703.
- VAN LENTEREN J.C., SCETTINO M., **ISIDORO N.**, ROMANI R., VAN SCHELT J., 2002 –Morphology of putative female sex pheromone glands and mating behaviour in *Aphidoletes aphidimyza* Rond. (Diptera: Cecidomyiidae). *ENTOMOLOGIA EXPERIMENTALIS ET APPLICATA*, 102: 199-209. ISSN: 0013-8703.
- ISIDORO N.**, ROMANI R., BIN F. (2001) Antennal multiporous sensilla: their gustatory features for host recognition in female parasitic wasps (Insecta, Hymenoptera: Platygastroidea). *MICROSCOPY RESEARCH AND TECHNIQUE*, 55: 350-358. ISSN: 1059-910X
- VILHELMSSEN L., **ISIDORO N.**, ROMANI R., BASIBUYUK H.H., QUICKE D.L.J. (2001) Host location and oviposition in a basal group of parasitic wasps: the subgenual organ, ovipositor apparatus and associated structures in the Orussidae (Hymenoptera, Insecta). *ZOOMORPHOLOGY*, 121: 63-84 .ISSN: 0720-213X.
- KLEINEIDAM C., ROMANI R., TAUTZ J., **ISIDORO N.** (2000). Ultrastructure of the CO<sub>2</sub> sensitive sensillum ampullaceum in the leaf-cutting ant *Atta sexdens*. *ARTHROPOD STRUCTURE & DEVELOPMENT*, 29: 43-55. ISSN: 1467-8039.
- ISIDORO N.**, ROMANI R., VELASQUEZ D., RENTHAL R., BIN F., VINSON S.B. (2000) Antennal glands in queen and worker of the fire ant, *Solenopsis invicta* Buren: first report in female social aculeta (Hymenoptera, Formicidae). *INSECTES SOCIAUX*, 47: 236-240. ISSN: 0020-1812

DIGILIO M.C., **ISIDORO N.**, TREMBLAY E., PENNACCHIO F. (2000) Host castration by *Aphidius ervi* venom proteins. *JOURNAL OF INSECT PHYSIOLOGY*, 46: 1041-1050. ISSN: 0022-1910.

FERGUSON A. W., SOLINAS M., ZIESMANN J., **ISIDORO N.**, WILLIAMS I.H., SCUBLA P., MUDD A., CLARK S.J., WADHAMS L.J. (1999). Identification of the gland secreting oviposition-detering pheromone in the cabbage seed weevil, *Ceutorhynchus assimilis*, and the mechanism of pheromone deposition. *JOURNAL OF INSECT PHYSIOLOGY*, 45: 687-699. ISSN: 0022-1910.

BIN F., WAECKERS F., ROMANI R., **ISIDORO N.** (1999). Tyloids in *Pimpla turionellae* (L.) are release structures of male antennal glands involved in courtship behaviour (Hymenoptera: Ichneumonidae). *INTERNATIONAL JOURNAL OF INSECT MORPHOLOGY & EMBRYOLOGY*, 28: 61-68. ISSN: 00207322.

ROMANI R., **ISIDORO N.**, BIN F., 1999 - Further evidence of male antennal glands in Aphelinidae: the case of *Aphytis melinus* DeBach (Hymenoptera: Parasitica). *JOURNAL HYMENOPTERA RESEARCH*, 8: 109-115. ISSN: 1070-9428.

BARTLET E., ROMANI R., WILLIAMS I.H., **ISIDORO N.** (1999). Functional anatomy of sensory structures on the antennae of *Psylliodes chrysocephala* L. (Coleoptera: Chrysomelidae).. *INTERNATIONAL JOURNAL OF INSECT MORPHOLOGY & EMBRYOLOGY*, 28: 291-300. ISSN: 0020-7322.

**ISIDORO N.**, BARTLET E., ZIESMANN J. WILLIAMS I.H., 1998 – Antennal contact chemosensilla in *Psylliodes chrysocephala* responding to cruciferous allelochemicals. *PHYSIOLOGICAL ENTOMOLOGY*, 23: 131-138. ISSN: 0307-6962.

VAN LENTEREN J.C., **ISIDORO N.**, BIN F., 1998 – Functional anatomy of the ovipositor clip in the parasitoid *Leptopilina heterotoma* (Thompson) (Hymenoptera: Eucoilidae), a structure to grip escaping host larvae. *INTERNATIONAL JOURNAL OF INSECT MORPHOLOGY & EMBRYOLOGY*, 27: 263-268. ISSN: 0020-7322.

**ISIDORO N.**, BIN F. (1995). Male antennal gland of *Amitus spiniferus* (Brethes) (Hymenoptera: Platygasteridae), likely involved in courtship behavior. *INTERNATIONAL JOURNAL OF INSECT MORPHOLOGY & EMBRYOLOGY*, 24: 365-373. ISSN: 0020-7322.

**ISIDORO N.**, BIN F., (1994). Fine structure of precellar pit in *Trissolcus basalis* (Woll.) (Hymenoptera: Scelionidae). *INTERNATIONAL JOURNAL OF INSECT MORPHOLOGY & EMBRYOLOGY*. 3: 189-196. ISSN: 0020-7322.

**ISIDORO N.**, SOLINAS M., BAUR R., ROESSINGH P., STADLER E. (1994). Ultrastructure of a tarsal sensillum of *Delia radicum* L. (Diptera : Anthomyiidae) sensitive to important host plant compounds. *INTERNATIONAL JOURNAL OF INSECT MORPHOLOGY & EMBRYOLOGY*., 2: 115-125. ISSN: 0020-7322.

BARTLET E., **ISIDORO N.**, WILLIAMS I.H. (1994). Antennal glands in *Psylliodes chrysocephala*, and their possible role in reproductive behaviour. *PHYSIOLOGICAL ENTOMOLOGY*. 19: 241-250. ISSN: 0307-6962

Ancona, 16/10/2019

Prof. Nunzio Isidoro