

INTEGRATORI E NUTRACEUTICI: COMPETENZE AVANZATE PER IL FARMACISTA TRA NORMATIVA, EVIDENZE E SICUREZZA D'USO

PROVIDER	N.EVENTO	COSTO	VALIDITÀ	NR. CREDITI	TIPOLOGIA
Unione Tecnica Italiana Farmacisti ID 145	ED.1	Gratuito per gli associati; 50 € per i non associati.	02/02/2026 al 31/12/2026	10	FAD

ABSTRACT DEL CORSO

Premessa

Negli ultimi anni il ricorso a integratori alimentari e nutraceutici ha registrato una crescita significativa, rendendo sempre più centrale il ruolo del farmacista quale professionista sanitario di riferimento nella corretta informazione, valutazione e consulenza al cittadino. In questo contesto, è fondamentale disporre di conoscenze aggiornate e basate su evidenze scientifiche, nonché di una solida padronanza del quadro normativo che disciplina il settore. Il corso ECM si propone di fornire una visione completa del mondo degli integratori e dei nutraceutici, partendo dalle definizioni, dall'evoluzione storica e dal ruolo professionale del farmacista nella consulenza, fino all'analisi della normativa italiana ed europea di riferimento.

Il percorso formativo approfondisce inoltre i principali ambiti applicativi dei nutraceutici, quali l'asse intestino-cervello, il controllo delle lipidemie e delle dislipidemie, la gestione dell'ipercolesterolemia, dell'obesità e delle disfunzioni metaboliche, fino al supporto nutraceutico nella salute cardiovascolare. L'analisi critica delle evidenze scientifiche e degli aspetti di sicurezza d'uso consente al farmacista di operare scelte consapevoli e appropriate nella pratica professionale quotidiana.

Finalità

Il Corso ECM si propone di rafforzare e qualificare le competenze del farmacista nel settore degli integratori e dei nutraceutici, fornendo strumenti pratici e teorici per una consulenza professionale, sicura e basata sulle evidenze. L'obiettivo è supportare il farmacista nella valutazione dell'efficacia, della sicurezza e dell'appropriatezza d'uso dei prodotti, contribuendo a una corretta informazione del cittadino e a un utilizzo responsabile degli integratori nella prevenzione e nel benessere.

DESTINATARI

Professione: Farmacista

Disciplina: Farmacia territoriale e Farmacia ospedaliera

OBIETTIVO ECM DI SISTEMA

18 - Contenuti tecnico-professionali (conoscenze e competenze) specifici di ciascuna professione, di ciascuna specializzazione e di ciascuna attività ultraspecialistica, ivi incluse le malattie rare e la medicina di genere

RESPONSABILI SCIENTIFICI

- Dott. Eugenio Leopardi

DOCENTI

- Prof.ssa Elisabetta Schiano

PROGRAMMA DEL CORSO

INTEGRATORI E NUTRACEUTICI: COMPETENZE AVANZATE PER IL FARMACISTA TRA NORMATIVA, EVIDENZE E SICUREZZA D'USO

1) Modulo I: “Integratori e nutraceutici: definizione, storia e ruolo del farmacista nella consulenza “

Docenti: Prof.ssa Elisabetta Schiano

2) Modulo II: “Normativa italiana ed europea sugli integratori”

Docenti: Prof.ssa Elisabetta Schiano

3) Modulo III: “Il mercato degli integratori alimentari: trend, consumatori e opportunità per la farmacia”

Docenti: Prof.ssa Elisabetta Schiano

4) Modulo IV: “Integrazione di genere nella nutraceutica personalizzata”

Docenti: Prof.ssa Elisabetta Schiano

5) Modulo V: “Benessere intestinale e modulazione del tono dell’umore: ruolo dei nutraceutici nell’asse intestino–cervello”

Docenti: Prof.ssa Elisabetta Schiano

6) Modulo VI: “Integrazione nutrizionale nello sport”

Docenti: Prof.ssa Elisabetta Schiano

7) Modulo VII: “Supporto nutraceutico nel controllo delle disglicemie”

Docenti: Prof.ssa Elisabetta Schiano

8) Modulo VIII: “Nutraceutici per la gestione dell’iperlipidemia”

Docenti: Prof.ssa Elisabetta Schiano

9) Modulo IX: “Obesità e disfunzioni metaboliche: il ruolo dei nutraceutici”

Docenti: Prof.ssa Elisabetta Schiano

10) Modulo X: “Integratori per la salute cardiovascolare: focus sul metabolita TMAO”

Docenti: Prof.ssa Elisabetta Schiano



CURRICULUM VITAE

Name and surname: Elisabetta Schiano

Place and Date of Birth: Naples, Italy, - December 22, 1995

Phone Number: 081 8767208

Residence Address: Via Giacomo Matteotti 1, Quarto (NA), 80010, Italy

Mobile Phone: +39 3405387058

Email Address: elisabettaschiano@gmail.com

Qualifications and work experience

- **June 2024 – ongoing:** Apprentice Chemical Laboratory Technician (Professional Apprenticeship Contract, Full-time) at NGN Healthcare-New Generation Nutraceuticals S.r.l.
- **June 2023 – May 2024:** Quality Control Specialist at Inventia Biotech S.r.l.
- **November 2019 – May 2023:** Ph.D. in Nutraceuticals, Functional Foods and Human Health at the Department of Pharmacy of the University of Naples Federico II (XXXV Cycle).
- **January 2022 - July 2022:** Visiting Fellow, in the Prof. Mohammed Gulrez Zariwala laboratory, at the University of Westminster, Centre for Nutraceuticals.
- **September 2020:** Professional qualification Biologist – Section A.
- **October 2019:** Degree in Human Nutrition "cum Lode" at the Department of Clinical Medicine and Surgery of the University of Naples Federico II.

Research skills

- Extraction of functional compounds from various food matrices and chemical characterization of food components.
- Preparation and validation of *in vitro* enzymatic assays aimed at evaluating different biological properties: anti-inflammatory, hypoglycemic, hypotensive, and antioxidant activity.
- Preparation and formulation of nutraceuticals, including evaluation of quality, safety and stability.
- Evaluation of nutraceutical efficacy tested through clinical trials.
- Use of fluorimetric and UV/Vis spectrophotometric techniques for the determination of serum metabolites (e.g. ELISA assay).
- Knowledge and experience in essential techniques and *in vitro* assays on cell culture.

Congress

Oral presentations

- **March 2021.** Schiano E., Annunziata G., Ciampaglia R., Iannuzzo F., Piccolo V., Maisto M., Tenore G. C. and Novellino E. "Antidiabetic potential of an immature fruit-based nutraceutical formulation rich in abscisic acid: preclinical and clinical results". 2nd Online International Conference on "Nutrition and Nutraceuticals". March 29-30, 2021.

- **November 2021.** Iannuzzo F., Maisto M., Schiano E., Piccolo V., Guerra F., Maione F., Saviano A., Tenore G.C., and Novellino E. "Scarti dell'industria agro-alimentare ricchi in ellagitannini come fonte di urolitine per il trattamento dell'ipertrofia prostatica benigna (IBP)". XI Congresso Nazionale SINut – Società Italiana di Nutraceutica, Bologna.

- **November 2021.** Schiano E., Annunziata G., Ciampaglia R., Maisto M., Iannuzzo F., Piccolo V., Guerra F., Tenore G.C., and Novellino E. "Potenziale benefico di una formulazione nutraceutica a base di pesche immature ricche in acido abscissico sul controllo dell'omeostasi glicemica: risultati preclinici e clinici". XI Congresso Nazionale SINut – Società Italiana di Nutraceutica, Bologna.

- **October 2022.** Piccolo V., Schiano E., Iannuzzo T., Maisto M., Novellino E., Tenore G.C., and Summa V. "Phytochemical investigation of seven unripe tomato cultivars (*Solanum Lycopersicum*)". 7th MS Food DAY, October 5-7, 2022, Florence (Italy).

- **May 2023.** Maisto M., Cuomo P., Piccolo V., Schiano E., Iannuzzo I., Capparelli R., and Tenore. "Optimization of ursolic acid extraction in oil from annurca apple to obtain oleolytes with potential neuroprotective application". XIII CONGRESSO NAZIONALE DI CHIMICA DEGLI ALIMENTI CHIMALI. Marsala (TP).

- **October 2023.** Schiano E., and Stornaiuolo M. "Scientific Consultancy and Market Strategies on Nutraceuticals". Prima conferenza internazionale sullo studio di piante medicinali da Matese e Valle Telesina. "Telese Terme (BN).

Publications

30 scientific papers on impacted journals; h-index: 10

27 original articles, 3 reviews.

First author publications: 9

- 1) Tenore, G. C., Caruso, D., D'Avino, M., Buonomo, G., Caruso, G., Ciampaglia, R., **Schiano E.**, Maisto M., Annunziata G. and Novellino, E. (2020). A Pilot Screening of Agro-Food Waste Products as Sources of Nutraceutical Formulations to Improve Simulated Postprandial Glycaemia and Insulinaemia in Healthy Subjects. *Nutrients*, 12(5), 1292.
- 2) **Schiano, E.**, Annunziata, G., Ciampaglia, R., Iannuzzo, F., Maisto, M., Tenore, G. C., and Novellino, E. (2020). Bioactive compounds for the management of hypertriglyceridemia: evidence from clinical trials and putative action targets. *Frontiers in Nutrition*, 7.
- 3) Maisto, M., Annunziata, G., **Schiano, E.**, Piccolo, V., Iannuzzo, F., Santangelo, R., ... and Grieco, P. (2021). Potential Functional Snacks: Date Fruit Bars Supplemented by Different Species of *Lactobacillus* spp. *Foods*, 10(8), 1760.
- 4) **Schiano, E.**, Piccolo, V., Novellino, E., Maisto, M., Iannuzzo, F., Summa, V., and Tenore, G. C.

- (2022). Thinned Nectarines, an Agro-Food Waste with Antidiabetic Potential: HPLC-HESI-MS/MS Phenolic Characterization and In Vitro Evaluation of Their Beneficial Activities. *Foods* (Basel, Switzerland), 11(7), 1010.
- 5) Maisto, M., **Schiano, E.**, Novellino, E., Piccolo, V., Iannuzzo, F., Salviati, E., Summa, V., Annunziata, G., & Tenore, G. C. (2022). Application of a Rapid and Simple Technological Process to Increase Levels and Bioaccessibility of Free Phenolic Compounds in Annurca Apple Nutraceutical Product. *Foods* (Basel, Switzerland), 11(10), 1453.
 - 6) **Schiano, E.**; Maisto, M.; Piccolo, V.; Novellino, E.; Annunziata, G.; Ciampaglia, R.; Montesano, C.; Croce, M.; Caruso, G.; Iannuzzo, F. et al (2022). Beneficial Contribution to Glucose Homeostasis by an Agro-Food Waste Product Rich in Abscisic Acid: Results from a Randomized Controlled Trial. *Foods*, 11, 263.
 - 7) Maisto, M., Piccolo, V., Novellino, E., **Schiano, E.**, Iannuzzo, F., Ciampaglia, R., Summa, V., & Tenore, G. C. (2022). Optimization of Phlorizin Extraction from Annurca Apple Tree Leaves Using Response Surface Methodology. *Antioxidants* (Basel, Switzerland), 11(10), 1933.
 - 8) Maisto, M., Iannuzzo, F., **Schiano, E.**, Ciampaglia, R., Labanca, A., Montesano, D., Piccolo, V., Rossi, P., & Tenore, G. C. (2022). Effects of Fortified Laying Hen Diet with Moringa oleifera Leaves and Goji Berries on Cholesterol and Carotenoid Egg Content. *Foods* (Basel, Switzerland), 11(20), 3156.
 - 9) Iannuzzo, F., Piccolo, V., Novellino, E., **Schiano, E.**, Salviati, E., Summa, V., Campiglia, P., Tenore, G. C., & Maisto, M. (2022). A Food-Grade Method for Enhancing the Levels of Low Molecular Weight Proanthocyanidins with Potentially High Intestinal Bioavailability. *International journal of molecular sciences*, 23(21), 13557.
 - 10) Maisto, M., Iannuzzo, F., Novellino, E., **Schiano, E.**, Piccolo, V., & Tenore, G. C. (2023). Natural Polyphenols for Prevention and Treatment of Urinary Tract Infections. *International journal of molecular sciences*, 24(4), 3277.
 - 11) Maisto, M., Piccolo, V., Novellino, E., **Schiano, E.**, Iannuzzo, F., Ciampaglia, R., Summa, V., & Tenore, G. C. (2023). Optimization of Ursolic Acid Extraction in Oil from Annurca Apple to Obtain Oleolytes with Potential Cosmeceutical Application. *Antioxidants* (Basel, Switzerland), 12(2), 224.
 - 12) **Schiano, E.**, Cappello, E., Cecere, D., Pompeo, F., Novellino, E., Stornaiuolo, M., & Izzo, M. (2023). Increased Levels of Circulating Iron-Albumin Complexes in Peripheral Arterial Disease Patients. *Antioxidants* (Basel, Switzerland), 12(2), 503.
 - 13) **Schiano, E.**, Neri, I., Maisto, M., Novellino, E., Iannuzzo, F., Piccolo, V., Summa, V., Grumetto, L., & Tenore, G. C. (2023). Validation of an LC-MS/MS Method for the Determination of Abscisic Acid Concentration in a Real-World Setting. *Foods* (Basel, Switzerland), 12(5), 1077.
 - 14) Musto, G., **Schiano, E.**, Iannuzzo, F., Tenore, G. C., Novellino, E., & Stornaiuolo, M. (2023). Genotoxicity Assessment of Nutraceuticals Extracted from Thinned Nectarine (*Prunus persica* L.) and Grape Seed (*Vitis vinifera* L.) Waste Biomass. *Foods* (Basel, Switzerland), 12(6), 1171.
 - 15) Maisto, M., **Schiano, E.**, Luccheo, G., Luccheo, L., Alfieri, E., Piccolo, V., Iannuzzo, F., Di Lorenzo, R., & Tenore, G. C. (2023). Efficacy of a Multicomponent Nutraceutical Formulation for the Prevention and Treatment of Urinary Tract Stones. *International journal of molecular sciences*, 24(9), 8316.
 - 16) Piccolo, V., Maisto, M., **Schiano, E.**, Iannuzzo, F., Keivani, N., Manuela Rigano, M., Santini, A., Novellino, E., Carlo Tenore, G., & Summa, V. (2024). Phytochemical investigation and antioxidant properties of unripe tomato cultivars (*Solanum lycopersicum* L.). *Food chemistry*, 438, 137863.
 - 17) Chiurazzi, M., De Conno, B., Di Lauro, M., Guida, B., Nasti, G., **Schiano, E.**, Stornaiuolo, M., Tenore, G. C., Colantuoni, A., & Novellino, E. (2023). The Effects of a Cinchona Supplementation on Satiety,

Weight Loss and Body Composition in a Population of Overweight/Obese Adults: A Controlled Randomized Study. *Nutrients*, 15(24), 5033.

- 18) **Schiano, E.**, Novellino, E., Gámez Fernández, M. M., Tiekou Lorinczova, H., Tenore, G. C., Iannuzzo, F., Patel, V. B., Somavarapu, S., & Zariwala, M. G. (2023). Antioxidant and Antidiabetic Properties of a Thinned-Nectarine-Based Nanoformulation in a Pancreatic β -Cell Line. *Antioxidants (Basel, Switzerland)*, 13(1), 63.
- 19) Iannuzzo, F., Cicatiello, A. G., Sagliocchi, S., **Schiano, E.**, Nappi, A., Miro, C., Stornaiuolo, M., Mollica, A., Tenore, G. C., Dentice, M., & Novellino, E. (2024). Therapeutic Effect of an Ursolic Acid-Based Nutraceutical on Neuronal Regeneration after Sciatic Nerve Injury. *International journal of molecular sciences*, 25(2), 902.
- 20) **Schiano, E.**, Iannuzzo, F., Stornaiuolo, M., Guerra, F., Tenore, G. C., & Novellino, E. (2024). Gengricin[®]: A Nutraceutical Formulation for Appetite Control and Therapeutic Weight Management in Adults Who Are Overweight/Obese. *International journal of molecular sciences*, 25(5), 2596.
- 21) Marino Cerrato, L., **Schiano, E.**, Iannuzzo, F., Tenore, G. C., Summa, V., Daglia, M., Novellino, E., & Stornaiuolo, M. (2024). A Rapid and Reliable Spectrofluorimetric Method to Measure the Urinary Lactulose/Mannitol Ratio for Dysbiosis Assessment. *Biomedicines*, 12(7), 1557.
- 22) Iannuzzo, F., **Schiano, E.**, Pastore, A., Guerra, F., Tenore, G. C., Novellino, E., & Stornaiuolo, M. (2024). Controlled Cultivation Confers *Rhodiola rosea* Synergistic Activity on Muscle Cell Homeostasis, Metabolism and Antioxidant Defense in Primary Human Myoblasts. *Antioxidants (Basel, Switzerland)*, 13(8), 1000.
- 23) **Schiano, E.**, Vaccaro, S., Scorcìa, V., Carnevali, A., Borselli, M., Chisari, D., Guerra, F., Iannuzzo, F., Tenore, G. C., Giannaccare, G., & Novellino, E. (2024). From Vineyard to Vision: Efficacy of Maltodextrinated Grape Pomace Extract (MaGPE) Nutraceutical Formulation in Patients with Diabetic Retinopathy. *Nutrients*, 16(17), 2850. <https://doi.org/10.3390/nu16172850>.
- 24) Sagliocchi, S., **Schiano, E.**, Acampora, L., Iannuzzo, F., Cicatiello, A. G., Miro, C., Nappi, A., Restolfer, F., Stornaiuolo, M., Zarrilli, S., Guerra, F., Tenore, G. C., Dentice, M., & Novellino, E. (2024). AbaComplex Enhances Mitochondrial Biogenesis and Adipose Tissue Browning: Implications for Obesity and Glucose Regulation. *Foods (Basel, Switzerland)*, 14(1), 48. <https://doi.org/10.3390/foods14010048>.
- 25) Iannuzzo, F., **Schiano, E.**, Maisto, M., Schettino, A., Marigliano, N., Saviano, A., Abo Mansour, A., Iqbal, A. J., Maione, F., Tenore, G. C., & Novellino, E. (2024). Effect of Proanthocyanidins from Grape Seed Extract on Benign Prostatic Hyperplasia. *Nutrients*, 17(1), 73. <https://doi.org/10.3390/nu17010073>.
- 26) **Schiano, E.**, Guerra, F., Abate, F., Piccinocchi, G., Tenore, G. C., & Novellino, E. (2025). Exploring the Role of AbaComplex in Managing Dysglycemia: Insights from a Randomized, Three-Arm, Placebo-Controlled Trial. *Diabetology*, 6(2), 14. <https://doi.org/10.3390/diabetology6020014>.
- 27) Caradonna, E., Abate, F., **Schiano, E.**, Paparella, F., Ferrara, F., Vanoli, E., Difruscolo, R., Goffredo, V. M., Amato, B., Setacci, C., Setacci, F., & Novellino, E. (2025). Trimethylamine-N-Oxide (TMAO) as a Rising-Star Metabolite: Implications for Human Health. *Metabolites*, 15(4), 220. <https://doi.org/10.3390/metabo15040220>.
- 28) Miro, C., Iannuzzo, F., Acampora, L., Cicatiello, A.G., Sagliocchi, S., **Schiano, E.**, Nappi, A., Restolfer, F., Stornaiuolo, M., Tenore, G.C., Dentice, M., & Novellino, E. (2025). Ursolic Acid-Based Nutraceutical Mitigates Muscle Atrophy and Improves Exercise Performance in Mouse Model of Peripheral Neuropathy. *Int J Mol Sci*, 26(11):5418. doi: 10.3390/ijms26115418.

- 29) Bonfanti, A., Silvestri, R., Novellino, E., Tenore, G. C., **Schiano, E.**, Iannuzzo, F., Reverberi, M., Faino, L., Beccaccioli, M., Sivori, F., Rizzello, C. G., & Mazzoni, C. (2025). Microbial Profiling of Buffalo Mozzarella Whey and Ricotta Exhausted Whey: Insights into Potential Probiotic Subdominant Strains. *Microorganisms*, 13(8), 1804. <https://doi.org/10.3390/microorganisms13081804>.
- 30) Abate, F., **Schiano, E.**, Guerra, F., Piccinocchi, G., Tenore, G. C., & Novellino, E. (2025). Abscisic Acid as a Marker of Metabolic Imbalance: Serum Levels from Diabetic and Smoking Subjects. *Diabetology*, 6(9), 93. <https://doi.org/10.3390/diabetology6090093>

ROLES AS GUEST EDITOR:

- Guest Editor of the journal “Antioxidant”, Special Issue: Bioaccessible and Bioavailable Natural Bioactive Compounds for the Management of Metabolic Syndrome”- MDPI, ISSN 2076-3921- IF: 6.0. (2023) – Journal rank: JCR - Q1 (Biochemistry & Molecular Biology) / CiteScore -Q1 (Food Science).
- Guest Editor of the journal “Antioxidant”, Special Issue: Natural Antioxidants and Metabolic Diseases”- MDPI, ISSN 2076-3921- IF: 6.0 (2023) – Journal rank: JCR - Q1 (Biochemistry & Molecular Biology) /CiteScore - Q1 (Food Science).
- Topical Advisory Panel Member of the journal “International Journal and Molecular Sciences”, Special Issue: Advances in Natural Active Products Derived from Foods: Antioxidant, Antinociceptive and Anti-inflammatory Activities”- MDPI, ISSN 1422-0067- IF: 4.9 (2023)- Journal rank: JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry).
- Topical Advisory Panel Member of the journal “International Journal and Molecular Sciences”, Special Issue: Harnessing Nature’s Potential: Plant-Derived Substances for Controlling Appetite and Promoting Weight Management”- MDPI, ISSN 1422-0067- IF: 4.9 (2023)- Journal rank: JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry).
- Topic Coordinators of the journal “Frontiers in Food Science and Technology”, Special Issue: Innovations in Food Digestion and Fermentation Strategies”- Frontiers, ISSN 2674-1121.

REFEREE

- Referee of the journal “**Life**”- MDPI, ISSN: 2075-1729- IF: 3.2 (2023) – Journal rank: JCR - Q1 (Biology) / CiteScore - Q1(Paleontology).
- Referee of the journal “**Nutrients**” MDPI, ISSN:2072-6643 - IF: 4.8 (2023) – Journal rank: JCR - Q1 (Nutrition and Dietetics)/ CiteScore - Q1 (Food Science).
- Referee of the journal “**International Journal of Molecular Sciences**” – MDPI, ISSN: 1422-0067 - IF: 4.9 (2023) – Journal rank: JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry).
- Referee of the journal “**Cosmetics**” – MDPI, ISSN: 2079-9284 - IF: 3.4 (2023) – Journal rank: JCR - Q2 (Dermatology) / CiteScore - Q1 (Surgery).
- Referee of the journal “Current Issue in Molecular Biology” - MDPI, ISSN: 2313-5786 - IF: 2.8 (2023).
- Referee of the journal “**Foods**”- MDPI, ISSN: 2304-8158- IF: 4.7 (2023) – Journal rank: JCR - Q1 (Food Science and Technology) / CiteScore - Q1 (Health Professions (miscellaneous)).
- Referee of the journal “**Metabolites**”- MDPI, ISSN: 2218-1989- IF: 4.0 (2023) – Journal rank: JCR -

- Q2 (Biochemistry and Molecular Biology) / CiteScore - Q2 (Endocrinology, Diabetes and Metabolism).
- Referee of the journal "**Molecules**"- MDPI, ISSN: 1420-3049- IF: 4.2 (2023) – Journal rank: JCR - Q2 (Chemistry, Multidisciplinary)/ CiteScore - Q1 (Chemistry (miscellaneous)).

Naples, 02/09/2025

Elisabetta Schiavo

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.