

CURRICULUM VITAE: BARBARA ROMANO "*****"

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PERSONAL DETAILS

Date of birth: February 27th, 1984
Place of birth: Caserta (Italy)
Citizenship: Italian
Native language: Italian
Foreign languages: English (fluent)
French (scholastic)

CURRENT AFFILIATION

Mail address: Department of Pharmacy, University of Naples Federico II
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EDUCATION

2002 **High school diploma:** "Liceo Classico Domenico Cirillo"
Aversa (CE) Italy

2004-2007 Under-graduate student at the Department of Experimental
Pharmacology, University of Naples Federico II

11/07/2007 **Degree in Pharmacy with honors:** Department of Pharmacy
University of Naples Federico II
Thesis's title: "Inhibitory effect of the anorexic compound
oleoylethanolamide on gastric emptying in control and
overweight mice"

2007 Licensed to practice as a Pharmacist

- 2009** Title of “*Cultore della materia*” in Pharmacognosy, Applied Pharmacognosy, Phytopharmaceutical Vigilance and Phytotherapy field
- 28/10/2010** **Specialization in Hospital Pharmacy with honors:** Department of Pharmacy University of Naples Federico II
Thesis’s title: “Sativex[®] in multiple sclerosis: an analysis of recent clinical trials”
- 2011-2014** Ph. D. student in Pharmaceutical Science, XXVI cycle at the Department of Pharmacy University of Naples Federico II
- January-July, 2012** visiting PhD student at the Institute of Medical Sciences, University of Aberdeen, Scotland (UK)
- 05/05/2014** **Ph. D. degree in Pharmaceutical Science with the label “*Doctor Europaeus*”:** Department of Pharmacy University of Naples Federico II
Thesis’s title: “Non-psychotropic phytocannabinoid in intestinal inflammation and colon cancer”

PRESENT POSITION

Ph. D.

RESEARCH STAGES IN ITALIAN AND/OR FOREIGN UNIVERSITIES:

- Department of Pharmacy, University of Naples Federico II (Naples, Italy)
- Institute of Medical Sciences, University of Aberdeen (Scotland, UK)

SCIENTIFIC SOCIETIES MEMBERSHIP

- International Cannabinoid Research Society (ICRS)
- Italian Society of Pharmacology (SIF)
- Italian Society of Pharmacognosy (SIPHAR)

AWARDS AND HONORS

- **2008:** “*Natale Ferrara*” and “*Nunzio Pascale*” for the “Best Experimental Thesis” in Pharmacy “Inhibitory effect of the anorexic compound oleoylethanolamide on gastric emptying in control and overweight mice”;
- **2008:** “*Pirelli RE Franchising SrL Consigli e Soluzioni*” for a grant research project entitled “Possible use of cannabinoids in the colorectal cancer prevention and cure”;
- **2009:** “*Fondazione Enrico ed Enrica Sovena*” for a grant research project entitled “Cannabinoids and colorectal cancer”;
- **2011:** “*Fondazione Enrico ed Enrica Sovena*” in 2011 for a grant research project entitled “Effect of cannabidiol in colorectal cancer”;
- **2012:** “*Italian Society of Pharmacology*” for a grant encouraging the abroad research activity;
- **2014:** “*Fondazione Enrico ed Enrica Sovena*” for a grant research project entitled “Phytocannabinoids and Inflammatory bowel disease”

REFEREE ACTIVITY:

- Evidence-based Complementary and Alternative Medicine
- Natural Product Research
- Phytotherapy Research
- PlantaMedica

NATIONAL AND INTERNATIONAL MEETINGS ATTENDEE

2009 Congresso Nazionale su Farmaci Naturali: “*Piante medicinali: Attualità e prospettive future*”, Benevento (Italy); (March 27th-29th)

34° Congresso Nazionale della Società Italiana di Farmacologia (SIF): “*Il valore del farmaco per la tutela della salute*”, Rimini (Italy); (October 14th-17th)

2010 FITOMED 2010: “*IV Congresso Intersocietà sulle Piante Medicinali*”, Cagliari (Italy); (June, 23th-26th)

ICRS 2010: “*The 20th Annual Symposium on the Cannabinoids*”, Lund (Sweden); (July, 24th-27th)

- 2011** 35° Congresso Nazionale della Società Italiana di Farmacologia (SIF): “*Il farmaco: dalla ricerca alla salute dell’uomo*”, Bologna (Italy); (September, 14th-17th)
- Convegno Monotematico della Società Italiana di Farmacologia (SIF): “*I Cannabinoidi: dalla Biologia alla Clinica*”, Cagliari (Italy); (October 29th-30th)
- 2012** First joint Spanish-Italian meeting on cannabinoid research/13^a reunion annual de la sociedad Espanola de investigacion sobre cannabinoids, Madrid (Spain); (November 29th-December 1st)
- 2013** 36° Congresso Nazionale della Società Italiana di Farmacologia (SIF): “*I ruolo della ricerca farmacologica per la crescita e la salute in Italia*”, Torino (Italy); (October 23th-26th)
- 2014** SIFIT 2014: XXII Congresso Nazionale di Fitoterapia, Salerno (Italy); (May, 30th-June 1st)
- Convegno Monotematico della Società Italiana di Farmacologia (SIF): “*Farmacognosia: nuove opportunità terapeutiche dal mondo vegetale*”, Napoli (Italy); (June, 20th-21th)

MAIN RESEARCH INTERESTS

Dr. Romano focused her research on the preclinical pharmacological study of cannabinoids, with a special emphasis to inflammatory bowel disease and colorectal cancer. Dr. Romano is actually member of “Endocannabinoid Research Group (ERG)” (<http://srva.na.icb.cnr.it/erg/>) a multi-disciplinary research group established in 1995 composed by a network of distinguished scientists with different expertise but with the same aim in developing an internationally accepted competitive strategy aimed at investigating the endogenous cannabinoid system in different areas of research.

PRACTICAL EXPERTISE

In vivo pharmacology in rodents

(i) intestinal motility/secretion models: gastric emptying, small intestinal transit, colonic propulsion, acid gastric secretion and gastric ulcers (*eg.* pylorus ligation, stress-induced gastric ulcer), intestinal secretion (enteropooling) and diarrhoea (*eg.* cholera toxin-induced hypersecretion);

(ii) models of inflammation: inflammatory bowel disease (eg. DNBS-induced colitis, DSS-induced colitis, croton oil-induced ileitis, mustard oil-induced colitis), carrageenan-induced paw oedema;

(iii) models of tumor: azoxymethane (AOM)-induced colonrectal tumor (aberrant crypt foci and tumours in colonic mucosa evaluation), xenograft tumor models.

(iv) animal manipulation: intracardiac, intracaudal, intracerebroventricular, intracolonic, intraperitoneal, oral, subcutaneous drug administration; blood collection, vivisection.

In vitro pharmacology

(i) pharmacology in isolated organ baths (neurotransmission, peristalsis, enteric reflexes, antispasmodic activity, gastric acid secretion);

(ii) cell cultures: cell growth and cytotoxicity, proliferation [i.e. ³H-thymidine incorporation, bromodeoxyuridine (BrdU), MTT assay], apoptosis (i.e. DNA fragmentation, TUNEL, caspase activity), free radicals detection (i.e. ROS, nitrites), genotoxicity (comet assay), antioxidant and antiinflammatory drugs evaluation (i.e. MPO, SOD, cytokines detections) in both primary (i.e. intraperitoneal macrophages, enterocytes, fibroblasts), secondary gastric and intestinal cells [i.e. CaCo-2, HT-29, LoVo, HCT 116, DLD-1, AGS (tumoral cell line), PTK 6 null, MODE-K, HCEC (healthy cells)], transfected cells (hCB1-CHO cells, hCB2-CHO cells, 5HT1A-CHO cells)

(iii) receptors: competition binding, GTP γ S assay

(iv) molecular biology: western blot analyses, *q*-PCR, immunohistochemistry, Radioimmunoassay, ELISA/EIA, flow cytometry, histological techniques.

BIBLIOMETRIC INDICATORS

Dr. Barbara Romano is a young productive Italian researcher as highlighted by her bibliometric indicators:

H-index= 14 (Google scholar); 11 (Scopus)

Total citations= 557 (Google scholar); 440 (Scopus)

25 scientific articles in peer-reviewed international Journals (papers cited in JCI) have been published with an IF total of 98.76.

SELECTION OF 10 PUBLICATIONS

1. Di Marzo V, Capasso R, Matias I, Aviello G, Petrosino S, Borrelli F, **Romano B**, Orlando P, Capasso F, Izzo AA. The role of endocannabinoids in the regulation of gastric emptying: alterations in mice fed a high-fat diet. *Br J Pharmacol.* 2008;153:1272-1280.
2. Aviello G, Matias I, Capasso R, Petrosino S, Borrelli F, Orlando P, **Romano B**, Capasso F, Di Marzo V, Izzo AA. Inhibitory effect of the anorexic compound oleoylethanolamide on gastric emptying in control and overweight mice. *J Mol Med.* 2008;86:413-422.
3. Izzo AA, Piscitelli F, Capasso R, Aviello G, **Romano B**, Borrelli F, Petrosino S, Di Marzo V. Peripheral endocannabinoid dysregulation in obesity: relation to intestinal motility and energy processing induced by food deprivation and re-feeding. *Br J Pharmacol.* 2009;158:451:461.
4. Borrelli F, Aviello G, **Romano B**, Orlando P, Capasso R, Maiello F, Guadagno F, Petrosino S, Capasso F, Di Marzo V, Izzo AA. Cannabidiol, a safe and non-psychotropic ingredient of the marijuana plant *Cannabis sativa*, is protective in a murine model of colitis. *J Mol Med.* 2009;87:1111-1121.
5. Aviello G, **Romano B**, Borrelli F, Capasso R, Gallo L, Piscitelli F, Di Marzo V, Izzo AA. Chemopreventive effect of the non-psychotropic phytocannabinoids cannabidiol on experimental colon cancer. *J Mol Med (Berl).* 2012;90:925-934.
6. **Romano B**, Fasolino I, Borrelli F, Capasso R, Piscitelli F, Cascio MG, Pertwee R, Coppola D, Vassallo L, Orlando P, Di Marzo V, Izzo AA. The cannabinoid TRPA1 agonist cannabichromene inhibits nitric oxide production in macrophages and ameliorates murine colitis. *Br J Pharmacol.* 2013;169:213-229.
7. **Romano B**, Pagano E, Montanaro V, Fortunato AL, Milic N, Borrelli F. Novel insights into the pharmacology of flavonoids. *Phytother Res.* 2013;27:1588-1596.
8. **Romano B**, Fasolino I, Pagano E, Capasso R, Pace S, De Rosa G, Milic N, Orlando P, Izzo AA, Borrelli F. The chemopreventive action of bromelain, from pineapple stem (*Ananas comosus* L.), on colon carcinogenesis is related to antiproliferative and proapoptotic effects. *Mol Nutr Food Res.* 2014;58:457-465.
9. **Romano B**, Borrelli F, Pagano E, Cascio MG, Pertwee R, Izzo AA. Inhibition of colon carcinogenesis by a standardized *Cannabis sativa* extract with high content of cannabidiol. *Phytomedicine.* 2014;21:631-639.
10. Borrelli F*, **Romano B***, Petrosino S, Pagano E, Capasso R, Coppola D, Battista G, Orlando P, Di Marzo V, Izzo AA. Palmitoylethanolamide, a naturally-occurring lipid, is an orally effective intestinal anti-inflammatory agent. *Br J Pharmacol.* 2014 (in press) (*These two Authors equally contributed to this work).