

## Mostafa Ezzat Rateb

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### Academic Education

**2007-2011**     **PhD in Chemistry, Marine Biodiscovery Centre, University of Aberdeen, U.K.**

Doctor of Philosophy in microbial natural product chemistry. Title of the thesis "Bioactive Secondary Metabolites from Marine and Under Explored Habitats" under the supervision of Dr. Rainer Ebel and Prof. Marcel Jaspars.

**2001-2005**     **MPharm, College of Pharmacy, Cairo University, Egypt.**

Master degree of pharmaceutical sciences, natural products isolation and plant tissue culture.

**1995-2000**     **BPharm, College of Pharmacy, Cairo University, Egypt.**

Bachelor degree of pharmaceutical sciences with general grade "Excellent with honor".

### Professional Experience

**Oct 2015-current**     **Lecturer**, Pharmacognosy Department, Faculty of Pharmacy, Beni-Suef University, Egypt.

**Dec 2011-June 2013**     **Postdoctoral Research Associate**, Chemistry Department, The Scripps Research Institute, Florida, U.S.A.

**Interim NMR core facility manager**, Bruker NMR spectrophotometers, Chemistry Department, the Scripps Research Institute, Scripps Florida, U.S.A.

**Oct 2007-Sept 2011**     **Graduate research associate and student assistant**, School of Natural and Computing Sciences, University of Aberdeen, Scotland.

**Interim NMR core facility officer**, Varian NMR spectrophotometers, Department of Chemistry, University of Aberdeen, Scotland.

**Teaching assistant** for undergraduate and graduate courses, School of Natural and Computing Sciences, University of Aberdeen, Scotland.

**2005-2007**     **Assistant lecturer**, Department of Pharmacognosy and Phytochemistry, College of Pharmacy, Cairo University, Beni-Suef campus, Egypt.

**2000-2005**     **Graduate research associate and instructor**, Department of Pharmacognosy and Phytochemistry, College of Pharmacy, Cairo University, Beni-Suef campus, Egypt.

### Research experience

1. Drug discovery from diverse natural sources, especially under-explored habitats using LC-HRESIMS and NMR guided analyses with in-depth dereplication using natural product databases as well as biology-guided analysis for sample prioritization.

2. Expertise in separation of complex natural product extracts from marine and terrestrial microbes including endophytes (fungal and bacterial), marine invertebrates as well as from plants using mainly preparative HPLC and other chromatographic techniques such as VLC, SEC, SPE, and flash chromatography.
3. Structural elucidation of complex natural products from marine, microbial and plant sources, using advanced 1D and 2D NMR techniques and high resolution spectrometric analysis.
4. Microbial isolation, purification, genomic identification, small and large scale fermentation and medium optimization for secondary metabolite production from marine, terrestrial and underexplored habitats.
5. Expertise in using different approaches such as OSMAC, microbial co-culture, genetic and epigenetic modifiers for induction and isolation of novel microbial secondary metabolites from "cryptic gene clusters".
6. Semi-synthesis and derivatization of bioactive molecules for SAR study.
7. GCMS analysis of volatile organic compounds from micro-organisms.
8. Developing and optimizing analytical methods for qualitative and quantitative analysis of natural products from diverse sources using LCMS, GCMS, HPLC, spectrophotometric, colorimetric, and densitometric techniques.

### Teaching Experience

1. Advanced analytical techniques CHEM10002, analytical chemistry CHEM09002 and analytical techniques BIOL08006, Analytical measurements CHEM09003, and Bioanalysis BIOL10005, Department of Chemistry, University of the West of Scotland, U.K Oct 2015-current. In these courses, I'm responsible for teaching chromatographic and spectroscopic techniques that used for qualitative and quantitative analysis of organic and bioorganic molecules.
2. One and two dimensional NMR techniques for structure elucidation of organic compounds: assist teaching this course for undergraduate students, Department of Chemistry, School of Natural and Computing Sciences, University of Aberdeen, U.K 2013-2014.
2. High resolution mass spectrometric analysis for dereplication and structure elucidation of natural products: assist teaching this course for undergraduate students, Department of Chemistry, School of Natural and Computing Sciences, University of Aberdeen, U.K 2013-2014.
3. Microbial natural product chemistry, biosynthetic approach; assist teaching this course for undergraduate students, Department of Chemistry, School of Natural and Computing Sciences, University of Aberdeen, Scotland, U.K 2013-2014.
4. Introduction to MestreNova and Topspin NMR software: Courses for graduate students, University of Aberdeen and The Scripps Research Institute 2009-2014.
5. Chromatographic and spectrophotometric techniques for isolation and structure elucidation of natural products: Two level courses for undergraduate and graduate students, College of Pharmacy, Cairo University, 2002-2007.

6. Pharmacognosy, medicinal plants, phytochemistry, and basics of herbal medicine and biosynthesis: Three level courses for undergraduate students, College of Pharmacy, Cairo University, 2002-2007.

### Journal publications

1. Dominik Wichner, Hamidah Idris, Wael E. Houssen, Andrew R. McEwan, Alan T. Bull, Juan A. Asenjo, Michael Goodfellow, Marcel Jaspars, Rainer Ebel, and Mostafa E. Rateb\* "Isolation and Anti-HIV-1 Integrase Activity of Lentzeosides A-F from Extremotolerant *Lentzea* sp. H45, a strain isolated from a high altitude Atacama Desert soil", *Accepted, J. Antibiot.*, May **2016**.
2. Jon A. Sánchez, Amparo Alfonso, Marta Leirós, Eva Alonso, **Mostafa E. Rateb**, Marcel Jaspars, Wael E. Houssen, Rainer Ebel, J. Tabudravu, Luís M. Botana "Identification of *Spongionella* compounds as cyclosporine A mimics" *Pharmacol. Res.* **2016**, *107*, 407–414.
3. Raed Abdennabi, Sana Bardaa, Meriem Mehdi, **Mostafa E. Rateb**, Andrea Raab, Faizah N. Alenezi, Zouheir Sahnoun, Neji Gharsallah, Lassaad Belbahri "Phoenix dactylifera L. sap enhances wound healing in Wistar rats: Phytochemical and histological assessment" *Int. J. Biol. Macromolec.* **2016**, *88*, 443–450.
4. Seham S. El-Hawary, Rabab Mohammed, Sameh F. AbouZid, Walid Bakeer, Rainer Ebel, Ahmed M. Sayed & **Mostafa E. Rateb**\* "Solamargine production by a fungal endophyte of *Solanum nigrum*" *J Appl Microbiol.* **2016**, *120*, 900–911.
5. Mohamed S.A. Abdelkader, **Mostafa E. Rateb**, Gamal A. Mohamed, Marcel Jaspars "Harpulliasides A and B: Two new benzeneacetic acid derivatives from *Harpullia pendula*", *Phytochem. Lett.* **2016**, *15*, 131–135.
6. Eman F. Ahmed, Hossam M. Hassan, **Mostafa E. Rateb**, Noha Abdel-Wahab, Somayah Sameer, Rainer Ebel, Hanan A.A. Taie, Mohammed S. AbdelHameed & Ola Hammouda "A Comparative biochemical study on two marine endophytes, *Bacterium* SRCnm and *Bacillus* sp. JS, Isolated from red sea algae" *Pak. J. Pharm. Sci.*, **2016**, *29*, 17–26.
7. Sheng Huang, Somayah S. Elsayed, Meinan Lv, Jioji Tabudravu, **Mostafa E. Rateb**, Roland Gyampoh, Kwaku Kyeremeh, Rainer Ebel, Marcel Jaspars, Zixin Deng, Yi Yu, Hai Deng "Biosynthesis of neocarazostatin A reveals the sequential carbazole prenylation and hydroxylation in the tailoring steps" *Chem. & Biol.*, **2015**, *22*, 1633–1642.
8. Somayah S. Elsayed, Franziska Trusch, Hai Deng, Andrea Raab, Ivan Prokes, Kanungnid Busarakam, Juan A. Asenjo, Barbara A. Andrews, Pieter van West, Alan T. Bull, Michael Goodfellow, Yu Yi, Rainer Ebel, Marcel Jaspars, and **Mostafa E. Rateb**\* "Chaxapeptin, a lasso peptide from the extremotolerant *Streptomyces leeuwenhoekii* strain C58 from the hyper-arid Atacama Desert", *J Org Chem*, **2015**, *80*, 10252–10260.
9. Ming Ma, **Mostafa E. Rateb**, Qihui Teng, Dong Yang, Jeffrey D. Rudolf, Yong Huang, Li-Xing Zhao, Yi Jiang, Xiuling Li, Christoph Rader, Yanwen Duan, and Ben Shen "Angucyclines and Angucyclinones from *Streptomyces* sp.CB01913 Featuring C-ring Cleavage and Expansion", *J Nat Prod*, **2015**, *78*, 2471–2480.

10. **Mostafa E. Rateb**, Yin Zhai, Emmanuelle Ehrner, Christopher M Rath, Xiaoling Wang, Jioji Tabudravu, Rainer Ebel, Mervin Bibb, Kwaku Kyeremeh, Pieter C. Dorrestein, Kui Hong, Marcel Jaspars, Hai Deng “Legonaridin, a new member of linaridin RiPP from a Ghanaian *Streptomyces* Isolate” *Org Biomol Chem*, **2015**, *13*, 9585–9592.
11. Bahaa E. M. El-Gendy, **Mostafa E. Rateb\*** “Antibacterial activity of diketopiperazines isolated from a marine fungus using t-Butoxycarbonyl group as a simple tool for purification”, *Bioorg Med Chem Lett*, **2015**, *25*, 3125–3128.
12. Marwa H. A. Hassan, **Mostafa E. Rateb**, Mona Hetta, Tarek A. Abdelaziz, Mohamed A. Sleim, Marcel Jaspars, and Rabab Mohammed “Scalarane Sesterterpenes from the Egyptian Red Sea Sponge *Phyllospongia lamellose*” *Tetrahedron* **2015**, *71*, 577–583.
13. **Mostafa E Rateb**, Dong Yang, Sanja Vodanovic-Jankovic, Zhiguo Yu, Michael A Kron, and Ben Shen “Adipostatins A-D from *Streptomyces* sp. 4875 inhibiting *Brugia malayi* asparaginyl-tRNA synthetase and killing adult *Brugia malayi* parasites” *J. Antibiot.* **2015**, *68*, 540–542.
14. Belbahri L, Alenezi FN, Luptakova L, **Rateb ME**, Woodward S. “Complete genome sequence of *Aneurinibacillus migulanus* E1, a gramicidin S- and D-phenylalanyl-Lpropyl diketopiperazine-deficient mutant”. *Genome Announc.* **2015**, 3(6):e01441-15.
15. M. Leiros, E. Alonso, **M. E. Rateb**, R. Ebel, M. Jaspars, A. Alfonso And L. M. Botana “The *Streptomyces* metabolite anhydroexfoliamycin ameliorates hallmarks of Alzheimer’s disease *in vitro* and *in vivo*” *Neuroscience* **2015**, *305*, 26–35.
16. Marta Leirós, Eva Alonso, **Mostafa E. Rateb**, Wael E. Housen, Rainer Ebel, Marcel Jaspars, Amparo Alfonso, Luis M. Botana “Gracilins: *Spongionella*-derived promising compounds for Alzheimer disease” *Neuropharmacology*, **2015**, *93*, 285–293.
17. Marta Leirós, Eva Alonso, **Mostafa E. Rateb**, Wael Housen, Rainer Ebel, Marcel Jaspars, Amparo Alfonso, Luis Botana “Bromoalkaloids protect primary cortical neurons from induced oxidative stress” *ACS Chem. Neurosci.* **2015**, *6*, 331–338.
18. Jon Andoni Sánchez, Amparo Alfonso, Marta Leirós, Eva Alonso, **Mostafa E. Rateb**, Marcel Jaspars, Wael E. Housen, Rainer Ebel, Luís M. Botana “*Spongionella* Secondary Metabolites Regulate Store Operated Calcium Entry Modulating Mitochondrial Functioning in SH-SY5Y Neuroblastoma Cells”, *Cell Physiol Biochem* **2015**, *37*, 779–792.
19. Seham S. El-Hawary, Rabab Mohammed, Sameh F. AbouZid, **Mostafa E. Rateb** and Ahmed M. Sayed “Cytotoxicity of *Solanum nigrum* L green fruits on breast (MCF-7) and liver (HepG-2) cancer cell lines”, *The Pharma Innovation Journal* **2015**; 3 (11): 87-89.
20. **Mostafa E. Rateb\***, Hossam Hassan, El-Shaimaa A. Arafa, Marcel Jaspars, and Rainer Ebel “Cytotoxic flavonoid glycosides from *Rhododendron decorum* leaves”, *Nat. Prod. Commun.* **2014**, *9*, 473–476.
21. Pengfei Xie, Ming Ma, **Mostafa E. Rateb**, Khaled Shaaban, Zhiguo Yu, Sheng-Xiong Huang, Li-Xing Zhao, Xiangcheng Zhu, Yijun Yan, Ryan M. Peterson, Jeremy R. Lohman, Dong Yang, Min Yin, Jeffrey D. Rudolf, Yi Jiang, Yanwen Duan, and Ben Shen “Biosynthetic Potential-based Strain Prioritization for

- Natural Product Discovery—a Showcase for Diterpenoid Producing Actinomycetes” *J. Nat. Prod.* **2014**, *77*, 377–387.
22. Zhiwei Qin, Xiaoling Wang, **Mostafa Rateb**, Lina Ass'ad, Marcel Jaspars, Zixin Deng, Yi Yu, and Hai Deng “Disruption of a Methyltransferase Gene in Actinomycin G Gene Cluster in *Streptomyces iakyrus* Increases the Production of Phenazinomycin” *FEMS Microbiol. Lett.* **2014**, *352*, 62–68.
  23. Marta Leirós; Jon Andoni Sánchez; Eva Alonso; **Mostafa Ezzat Rateb**; Wael E. Houssem; Rainer Ebel; Marcel Jaspars; Amparo Alfonso; Luis Botana “*Spongionella* secondary metabolites protect mitochondrial function in cortical neurons against oxidative stress” *Mar. Drugs* **2014**, *12*, 700-718.
  24. **Mostafa E. Rateb**, Zhiguo Yu, Yijun Yan, Dong Yang, Tingting Huang, Sanja Vodanovic-Jankovic, Michael A. Kron, and Ben Shen “Medium optimization of *Streptomyces* sp. 17944 for tirandamycin B production and isolation and structural elucidation of tirandamycins H, I, and J”, *J. Antibiot.*, **2014**, *67*, 127-132.
  25. Leirós, Marta; Alonso, Eva; Sánchez, Jon; **Rateb, Mostafa**; Ebel, Rainer; Jaspars, Marcel; Alfonso Rancano, M. Amparo; Botana, Luis “Mitigation of ROS insults by *Streptomyces* secondary metabolites in primary cortical neurons”, *ACS Chem. Neuroscience*, **2014**, *5*, 71–80.
  26. Hartanti, D., Purwanti , D. I., Putro, H. S., **Rateb , M. E.**, Wongso, S., Sugijanto , N.E., Ebel, R., Indrayanto, G. “Isolation of Pandangolide 1 from *Cladosporium oxysporum*, An Endophyte of the Terrestrial Plant *Alyxia reinwardtii*”, *Makara J. Sci.* *18/4* (**2014**), 123-126.
  27. A. Abdel-Khaliq, H. M. Hassan, **Mostafa E. Rateb**, Ola. Hammouda “Antimicrobial Activity of Three Ulva Species Collected from Some Egyptian Mediterranean Seashores”, *International Journal of Engineering Research and General Science*, Volume 2 (5), **2014**.
  28. **Mostafa E. Rateb**, Irene Hallyburton, Wael E. Houssem, Alan T. Bull, Michael Goodfellow, Rakesh Santhanam, Marcel Jaspars, and Rainer Ebel “Induction of diverse secondary metabolites in *Aspergillus fumigatus* by microbial co-culture” *RSC Adv.*, **2013**, *3*, 14444–14450.
  29. Xiaoling Wang, Jioji Tabudravu, **Mostafa Ezzat Rateb**, Krystal Joan Annand, Zhiwei Qin, Marcel Jaspars, Zixin Deng, Yi Yu and Hai Deng “Identification and characterization of the actinomycin G gene cluster in *Streptomyces iakyrus*” *Mol. BioSyst.*, **2013**, *9*, 1286–1289.
  30. Zhiguo Yu, **Mostafa E Rateb**, Michael J Smanski, Ryan M Peterson and Ben Shen “Isolation and structural elucidation of glucoside congeners of platencin from *Streptomyces platensis* SB12600”, *J. Antibiot.* **2013**, *66*, 291–294.
  31. Mohamed A. Abdelgawad, Amany Belal, Hany A. Omar, Lamees Hegazy, and **Mostafa E. Rateb\*** “Synthesis, Anti-Breast Cancer Activity, and Molecular Modeling of Some Benzothiazole and Benzoxazole Derivatives” *Archiv Der Pharmazie Chem. Life Sci.* **2013**, *346*, 534–541.
  32. Noha A. Mohammed, Hossam M. Hassan, **Mostafa E. Rateb**, Eman F. Ahmed, Usama W. Hawas, Somayah Sameer, Rainer Ebel, Mounir M. El-Safty, Mohammed S. Abdel Hameed, Ola H. Hammouda “Diketopiperazine derivatives from *Enterobacter cloacae* isolated from the Red Sea alga *Cystoseira myrica*” *Egyptian Pharm. Journal*, **2013**, *12*, 163–172.
  33. **Mostafa E. Rateb**, Wael E. Houssem, William T. A. Harrison, Hai Deng, Chinyere K. Okoro, Juan A. Asenjo, Barbara A. Andrews, Alan T. Bull, Michael Goodfellow, Rainer Ebel, and Marcel Jaspars “Diverse

Metabolic Profiles of a *Streptomyces* Strain Isolated from a Hyper-arid Environment”, *J. Nat. Prod.*, **2011**, *74*, 1965–1971.

34. **Mostafa E. Rateb**, Wael E. Houssen, Markus Arnold, Mostafa H. Abdelrahman, Hai Deng, William T. A. Harrison, Chinyere K. Okoro, Juan A. Asenjo, Barbara A. Andrews, Gail Ferguson, Alan T. Bull, Michael Goodfellow, Rainer Ebel, and Marcel Jaspars “Chaxamycins A–D, Bioactive Ansamycins from a Hyper-arid Desert *Streptomyces* sp.”, *J. Nat. Prod.*, **2011**, *74*, 1491–1499.
35. Noor Erma Sugijanto, Arnulf Diesel, **Mostafa Rateb**, Alexander Pretsch, Selma Gogalic, Noor Cholies Zaini, Rainer Ebel and Gunawan Indrayanto “Lecythomycin, a New Macrolactone Glycoside from the Endophytic Fungus *Lecythophora* sp.”, *Nat. Prod. Comm.* **2011**, *6*, 677-678.
36. **Mostafa E. Rateb**, Wael E. Houssen, Nathalie M. Legrave, Carol Clements, Marcel Jaspars and Rainer Ebel “Dibenzofurans from the marine sponge-derived ascomycete Super1F1-09”, *Bot. Mar.*, Special Issue on marine mycology **2010**, *53*, 499–506.
37. **Mostafa E. Rateb**, Wael E. Houssen, Marc Schumacher, William T. A. Harrison, Marc Diederich, Rainer Ebel, and Marcel Jaspars “Bioactive diterpene derivatives from the marine sponge *Spongionella* sp.”, *J. Nat. Prod.*, **2009**, *72*, 1471-1476.
38. **Mostafa E. Rateb**, Seham S. El-Hawary, and Ali M. El-Shamy "Qualitative and quantitative determination of parthenolide in *Tanacetum parthenium* (L.) Schultz-Bip. cultivated in Egypt", *The AOAC International Journal*, **2007**, *90*, 21-26.
39. **Mostafa E. Rateb**, Seham S. El-Hawary, Ali M. El-Shamy, and Essam M. A. Yousef "Production of parthenolide in organ and callus cultures of *Tanacetum parthenium* (L.)", *Afr. J. Biotechnol.*, **2007**, *6*, 1306-1316.
40. **Mostafa E. Rateb**, Abdel-Nasser A. M. El-Gendy, Seham S. El-Hawary, and Ali M. El-Shamy "Phytochemical and biological investigation of *Tanacetum parthenium* (L.) cultivated in Egypt", *J. Med. Plant Res.*, **2007**, *1*, 18-26.

### Book chapters and Review articles

1. **Mostafa E. Rateb**,\* Jioji Tabudravu and Rainer Ebel “NMR characterisation of natural products derived from under-explored microorganisms” *Nucl. Magn. Reson.* Volume 45, **2016**, *45*, 240–268, The Royal Society of Chemistry.
2. **Mostafa E. Rateb** and Rainer Ebel “Secondary metabolites of fungi from marine habitats”, *Nat. Prod. Rep.*, **2011**, *28*, 290-344.

### Conference Proceedings

- 1) “Potential production of biofuel by genetically-modified Algae or fungi”, Renewable Energy Technology: Future, Opportunity, and Challenges for the UK and Turkey, Istanbul, Turkey, Talk, April **2016**.
- 2) “Dual induction of microbial secondary metabolites by fungal bacterial co-cultivation”, 9<sup>th</sup> European Conference on Marine Natural Products, UK, Talk, Aug **2015**.
- 3) “NMR of Natural Products Derived From Under-Explored Microorganisms” Symposium on NMR Applications in Industry, UK, Talk, Jul **2015**.

- 4) "Actinobacterial Diversity in High Altitude Atacama Desert Soils as a Source of Novel Metabolites" The 17<sup>th</sup> International Symposium on the Biology of Actinomycetes, Turkey, Poster, Oct **2014**.
- 5) "Scalarane Sesterterpenes from the Egyptian Red Sea Sponge *Phyllospongia lamellose*", *Research Gordon Conference on Marine Natural Products*, USA, Poster, Mar **2014**.
- 6) "Evaluation of derived compounds from sponges against induced oxidative stress in cortical neurons" International Meeting on Marine Research, Portugal, Poster, Jul **2014**.
- 7) "Taxonomic Diversity of Acidophilic Actinobacteria as a Roadmap to Drug Discovery" Bergey's International Society for Microbial Systematics (BISMiS), UK, Poster, Apr **2014**.
- 8) "Actinobacterial Diversity in High Altitude Atacama Desert Soils and its Biotechnological Potential", Bergey's International Society for Microbial Systematics (BISMiS), UK, Poster, Apr **2014**.
- 9) "Potential fungal endophytes of *Solanum nigrum* L (Black nightshade) as a novel source of Steroidal alkaloids and there glycosides" 3<sup>rd</sup> Euro-Med Conference on Plant Natural Products - BioNat-III - Cairo, Egypt, Poster, Jan **2014**.
- 10) "Chemical Investigation of a Marine Soft Coral *Lobophytum paciforum* Collected from the Red Sea" 3<sup>rd</sup> Euro-Med Conference on Plant Natural Products - BioNat-III - Cairo, Egypt, Poster, Jan **2014**.
- 11) "LCMS, NMR, Antimicrobial and Antimalarial Activities of *Phyllanthus emblica* Cultivated in Egypt" 3<sup>rd</sup> Euro-Med Conference on Plant Natural Products - BioNat-III - Cairo, Egypt, Poster, Jan **2014**.
- 12) "Chaxapeptin, a new lasso peptide from Atacama Desert *Streptomyces* sp. C58", 42<sup>nd</sup> *RCS Perkin Meeting of Scottish Universities*, UK, Poster, Dec **2013**.
- 13) "Toward The Discovering and Optimization of New Anticancer Lead Compounds from Marine Soft Corals", *Research Gordon Conference on Marine Natural Products*, USA, Poster, Mar **2012**.
- 14) "Exploring natural products from hyper-arid environment", *From Natural Products to Chemical Biology VI*, University of Bristol, Talk, Jul **2011**.
- 15) "Atacamamycins A-D, new bioactive ansamycins from hyper-arid desert actinomycete", 39<sup>th</sup> *RCS Perkin Meeting of Scottish Universities*, Poster, **2010**.
- 16) "New microbial secondary metabolites from chemically underexplored habitats", *The 21<sup>st</sup> SCI Regional Graduate Symposium on Novel Organic Chemistry* (Scotland), University of Aberdeen, Talk, **2010**.
- 17) "New Bioactive Dibenzofurans from a Marine-Derived Fungal Strain Obtained from The Fijian Sponge *Acanthella cavernosa*", 38<sup>th</sup> *RCS Perkin Meeting of Scottish Universities*, Poster, **2009**.
- 18) "The Bio-Origin of 4-Chlorothreonine Motif from an Anticancer Agent Antinomycin Z3 from *Streptomyces fradiae* EDH-20675", 38<sup>th</sup> *RCS Perkin Meeting of Scottish Universities*, Poster, **2009**.
- 19) "New Diterpene Derivatives from the Marine Sponge *Spongionella* sp." 1<sup>st</sup> *Euro-Mediterranean Conference on Marine Natural Products* (EMCMNP-I), Poster, **2008**.
- 20) "Production of Parthenolide in Callus Cultures of *Tanacetum parthenium* (L.) Schultz-Bip. Cultivated in Egypt" 30<sup>th</sup> *International Conference of Pharmaceutical Sciences*, Poster, **2006**.
- 21) "Phytochemical and Botanical Studies of *Tanacetum parthenium* (L.) Schultz-Bip. Cultivated in Egypt" 30<sup>th</sup> *International Conference of Pharmaceutical Sciences*, Poster, **2006**.

## Grants awarded

### a) Grants worked in as a postdoctoral research fellow

- BBSRC/DEFRA phase 2 funding “LWEC Tree Health & Plant Biosecurity Initiative”, Prof. Stephen Woodward (Plant & Soil Science, IBES, Aberdeen) and Dr. Rainer Ebel (Department of Chemistry, Aberdeen) in major research consortium led by DEFRA, awarded 04/14.
- Servier, “Generation of a library of pure compounds from extremophilic actinobacteria”, industrial collaboration, Prof. Marcel Jaspars (Aberdeen), Dr. Rainer Ebel (Aberdeen) and Prof. Michael Goodfellow, (Newcastle), awarded 01/13.
- NIH grant “Natural product library initiative at the Scripps Research Institute”, Prof. Ben Chen, (Department of Chemistry, The Scripps Research Institute, Florida, USA), awarded 02/11.

### b) Other awards

- PhD studentship award “Drug discovery from fungal endophytes”, The University of the West of Scotland, UK, **2016**.
- The Scripps Research Institute Travel Award for best researchers, TSRI, Florida, USA **2012**.
- The Best Achiever Award 2010, *The 2<sup>nd</sup> Annual Conference For Egyptian Scholars in UK*, **2010**.
- The Best Achiever Award 2009, *The 1<sup>st</sup> Annual Conference For Egyptian Scholars in UK*, **2009**.
- The Best Poster Award for presentation at *the 1<sup>st</sup> Euro-Mediterranean Conference on Marine Natural Products (EMCMNP-I)*, **2008**.
- Honorary Certificates from Faculty of Pharmacy, Cairo University, Faculty of Pharmacy, Beni-Suef University, and from Beni-Suef Pharmacists Syndicate, **2007**.
- The Best Master Thesis Award in Pharmacognosy Department, Faculty of Pharmacy, Cairo University from The Medicinal Plants Arab Co. (MEBACO), **2005**.

## Other activities and skills

- 1) Fluent in English (excellent oral and written communication skills), and in Arabic (mother tongue)
- 2) Excellent computer skills, and basic statistical techniques such as using SPSS.
- 3) Substantial practical experience in specialized Chemistry software packages such as MestreNova, ChemBioOffice, Topspin, ACDLabs Structure Elucidator suite, and Xcalibur.
- 4) Great practical experience with Chemistry databases such as AntiBase, AntiMarine, DNP, Super Natural II, SciFinder, Reaxys, Asit-RIO-BD, Chemspider, and Web of Knowledge.
- 5) Excellent ability to work independently and in a team environment.
- 6) Personal training sessions in University of Aberdeen (academic writing, presentation skills, essential skills for success, stress and relaxation techniques).
- 7) Conduct chemistry and microbiology safety inductions in the Marine Biodiscovery Centre for undergraduates, postgraduates and visiting scholars.
- 8) Deputy supervision of two BSc/MChem students at University of Aberdeen.

- 9) Lab manager and depute supervisor on daily basis and when my mentor is away. Mentoring undergraduate and graduate students on daily basis in their lab practical work.
- 10) Training of undergraduates, postgraduates and visiting researchers at the Department of Chemistry on our Varian 600 MHz and 400 MHz systems. In the meantime, visiting the NMR facility at University of Edinburgh to run samples on the high field 800 MHz NMR system.
- 11) Running mass spectrometry service for the Chemistry department on Thermo Orbitrap Discovery

### **Membership**

- Member at the Royal Society of Chemistry
- Member at the American Society of Pharmacognosy
- Member at the Marine Fungal Natural Products Consortium (MAFNAP)
- Member at the Marine Alliance for Science and Technology Scotland (MASTS)
- Member in the Egyptian Pharmaceutical Society
- Member in the Egyptian Syndicate of Pharmacists

### **Journal reviewing:** a reviewer for the following journals:

- Journal of Natural Products
- FEMS Microbiology Letters
- Medicinal Chemistry Research
- Tetrahedron Letters
- Journal of Herbs, Spices and Medicinal Plants.
- European Journal of Medicinal Plants
- Journal of Medicinal Plants Research
- Marine Drugs
- Archive der Pharmazie
- Natural Product Research
- Journal of Antibiotics