Dr. R. Beema Shafreen
Adjunct Faculty

Contact

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Academic Qualifications

Degree	**Institution**	**Year**	Branch	**Class**
Ph.D.	Department of Biotechnology, Alagappa University	2014	Biotechnology	
Advance Diploma in Bioinformatics	Madurai Kamaraj University	2007	Bioinformatics	First
PG MSc	Department of Biotechnology Alagappa University	2006	Biotechnology	First
UG BSc	Alagappa Govt Arts College Madurai Kamaraj University	2004	Zoology	First

Teaching Experience

Position	Institution	Duration
Adjunct Faculty	Department of Biomedical Science , Alagappa University, Karaikudi	1st July 2024- Till date
Assistant Professor	Department of Biotechnology, Dr Umayal Ramanathan College for Women, Karaikudi	6th Sep 2021- 31st May 2024 (2 years 9 months)
RUSA-PDF	Department of Biotechnology, Alagappa University, Karaikudi	2years 6 months
Scientist 'C'	Sathyabama Institute of Science and Technology	4 years

Total Teaching Experience:9.2 years

Research Experience

Total years of Experience: 15 years

Position	Institution	Year
Adjunct faculty	Department of Biomedical Science , Alagappa University, Karaikudi	1st July 2024- Till date
Assistant Professor	Department of Biotechnology, Dr Umayal Ramanathan College for Women, Karaikudi	2021-2024
RUSA-PDF	Department of Biotechnology, Alagappa University	2019-2021
DST-SERB-YSS	Sathyabama Institute of Science and Technology	2015-2019
UGC-Dr. D. S. Kothari Postdoctoral fellow	Department of Microbiology, Bharathidasan University, Tiruchirappalli	2014-2015
CSIR-SRF	Department of Biotechnology, Alagappa University	2009-2015
RA-DBT	Department of Biotechnology, Alagappa University	2008-2009
Research Scientist	Institute of Bioinformatics, ITPEL, Bangalore	2007-2008

Academic and Additional Responsibilities

S. No	Position	University Bodies	Period	
			From	To
1.	Member	Placement Cell, Dr Umayal Ramanathan College for Women	2021	2024
2.	Member	Research Cell, Dr Umayal Ramanathan College for Women	2021	2024
3.	Member	ED Cell, Dr Umayal Ramanathan College for Women	2023	2024

Areas of Research

Infectious Disease Biology, Medical Microbiology and informatics, Molecular Microbiology

Research Supervision / Guidance

Program of Study		Completed	Ongoing
	Ph.D.	1	–
	M.Phil.	–	–
M.Sc., Project	PG	-	–

Publications

International	National	Others

Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
48	15	-	4	2

Cumulative Impact Factor (as per JCR)	:	140
h-index	:	20
i10 index	:	30
Total Citations	:	6153

Funded Research Projects

Completed Projects:

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1.	DST-SERB-YSS	Dec2015-2019		Exploration of small peptides from Marine echinoderms against candidal amyloid proteins using zebrafish (*Danio rerio*) as a model system	25,90,000

Distinctive Achievements / Awards

1. Won secured **Excelsior Award** in National Conference RICERCA 2022 organized by IQAC & Research Committee, St Joseph's College for Women, Alappuzha, Kerala in association with KSSP, IIC, CSIR-IMMT &KSCSTE during 27-09-2022 to 1-10-2022 for presenting paper entitled "Unraveling the bioactive potential of pitaya against Candida albicans biofilm and human disease network using a Network pharmacology based approach"
2. **Best presenter/First place** in Two days National workshop on Entrepreneurship and Career Development for Life Science Graduates (ECDLSG-2022)" programme organized by Department of Biochemistry, Government Arts college, Paramakudi, Ramanathapuram on 24 th & 25 th March 2022

3. **Won First place** COVID-19 Paper presentation – micromiracle PG and Research Department of Microbiology, J.J College of Arts and Science.COVID-19 Paper presentation – micromiracle PG and Research Department of Microbiology, J.J College of Arts and Science.
4. Won the First prize for **Young Speaker and Best Poster** at "Accelerating Biology 2013-The next wave" held at Centre for Development of Advanced Computing (C-DAC), Pune, India, February 2013
5. Won The **Best poster award** for "Effect of Fluoroquinolones as antimicrobial agents against S. pyogenes" at UGC and DST sponsored National Seminar on Role of Microbes in Health, Agriculture and Industry held at Department of Biotechnology, Alagappa University, in March 2012
6. Won The **Second prize** for the paper presentation in the National Level Seminar on "Recent Advance in Biomedical Research on Infectious and Non-Infectious Disease" in October 2011 at Department of Biomedical Science, Bharathidasan University, Trichy, India
7. **RUSA-PDF Postdoctoral fellowship from RUSA**- Phase II (Aug 2019 –MAR 2021) (National Level)
8. **Certificate of Appreciation**: In recognition of research publication in high impact journal from Sathyabama University (Aug 2015 –Aug 2016) National Level
9. **Certificate of Appreciation**: For outstanding contribution in the area of Functional Genomics and Bioinformatics from Bioclues Organization (Nov 2016) International Level
10. **Young Scientist, Start Up Grant** awarded by Department of Science and Technology, **Govt of** India.
11. **Dr. D. S. Kothari Post Doctoral Fellowship,** awarded by UGC, India August 2014-Feb2015
12. **Overseas Travel grant** awarded by Department of Biotechnology, Govt of India. For presentation at 9th [BC]2 Basel Computational Biology Conference on "Multiscale Modeling" Basel congress center, Switzerland
13. **Senior Research Fellowship** Awarded by Council of Scientific and Industrial Research, New Delhi, India. APRIL 2011 - MARCH 2014
14. **State Eligibility Test for Lecturership** – 2012, for lectureship in Tamil Nadu, conducted by Bharathiyar University, Gov of Tamil Nadu
15. **Scholarship for Advanced Diploma in Bioinformatics**, for clearing all india entrance exam for pursuing the course sponsored by DBT, (MAR 2006-APR 2007) National Level
16. **Certificate of Merit**, Securing Third Rank in BSc., Zoology examination of Madurai Kamaraj University, Alagappa Government Arts College, Karaikudi (2001-2004), National Level
17. **Bhaktavatchalam 69th Birthday Commeration Prize**, Highest marks in B.Sc., Zoology, Madurai Kamaraj University, (2001-2004) National Level
18. **Dr. M. Varadarajan Memorial endowment Prize**, Highest marks in B.Sc., Zoology, Madurai Kamaraj University (2001-2004), National Level
19. **Academic Proficiency award**, First prize, college topper, Alagappa Government Arts College, Karaikudi (2004-2001) for the three year , National Level.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized:

Position	Program	Duration	Institution
Organizing Committee Member	One-day training session on TNPSC group examinations	1.02.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Dynamic training program aimed at enhancing communication skills	2.02.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Career Guidance Book Exhibition and Seminar	4.01.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Training and Placement Cell	24.02.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	One-day training session on TNPSC group examinations	1.02.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Marketing day	17.08.2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Idea Generation Workshop	24.08.2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	NSS, ED, and DIC organized, One-day Workshop on Student Startup and innovation policy (SSIP)	15.09.2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Orientation Program on Niral Thiruvizha Phase-I	03.01.2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Orientation Program on Niral Thiruvizha Phase-II	10.01.2023	Dr Umayal Ramnathan College for Women, Karaikudi

Organizing Committee Member	Visit to sivangangai collectorate	21.09.2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Sports Day	16.02.2024-17.02.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Carnival Day'2024	21.03.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Certificate Course on "Makeover Skills and Techniques"	12.03.2024	Dr Umayal Ramnathan College for Women, Karaikudi
Coordinator	MANIDHI-2023	2023	Dr Umayal Ramnathan College for Women, Karaikudi
Co-convenor	ICDMET-2023	2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Placement Programme involving different companies (SURETI Insurance Marketing Pvt Ltd, Coimbatore - FOXCONN Technologies, SIPCOT, and Sriperambadur, YAZAKI India Limited, Maraimalainagar, Coordinated-Sprouts Knowledge Solutions, Coimbatore-) 5. Member of Research cell	2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee Member	Blood donation camp at URCW	2023	Dr Umayal Ramnathan College for Women, Karaikudi
Organizing Committee	First aid and awareness program at Model Higher Secondary School,	2023	Dr Umayal Ramnathan College for Women, Karaikudi

	Karaikudi (Mime act and pamphlet distribution)		
Organizing Committee Member	International Congress on Education and public welfare (ICEPW2017)	Feb 8th to 10th, 2017	Sathyabama Institute of Science and Technology, Chennai
Organizing Committee Member	International Conference on Advances in Biotechnology and Biotherapeutics (ICABBS-2017)	March 8th to 10th, 2017.	Sathyabama Institute of Science and Technology, Chennai
Organizing Committee Member	International Conference on Recent Advances In Nano-Science And Technology (RAINSAT-2015)	July 8th to 10th, 2015.	Sathyabama Institute of Science and Technology, Chennai
Organizing Committee Member	International conference on Nanoscience and Nanotechnology for energy application EAPP-2016,	Jun 27th -29th, 2016	Sathyabama Institute of Science and Technology, Chennai

Events Participated

Number of Conferences / Seminars / Workshops: 25

Overseas Exposure / Visit

Paper presentation: 9th [BC]2 Basel Computational Biology Conference on "Multiscale Modeling" Basel congress center, Switzerland (Overseas Travel grant awarded by Department of Biotechnology, Govt of India.)

Visiting Scientist: Computational, Development and data management, Muscat OMAN.

Membership

Bioclues - Life Member

Publications

S. No	Authors/Title of the paper/Journal	Impact Factor
1.	S. Seema, T. Sheela, P. Sobanadevi, **R. Beema Shafreen**, R. KrishnaPriya, D. Vithya, R. Madura, P. Umadevi, Myco-remediation of selenium contaminated environment and future prospects: An overview; Environmental Quality Management, doi.org/10.1002/tqem.22159.	2.2
2.	S. Sudha, B. Chitra, S. Arif Nisha , **R. Beema Shafreen**, Molecular Docking Studies of Nigella Sativa Linn Seed Compound Against Alzheimer's Disease: An in silico Study; Asian J. Adv. Med. Sci., vol. 6, no. 1, pp. 32-42, 2024	2.5
3	Kim YM, Lubinska-Szczygeł M, Park YS, Deutsch J, Ezra A, Luksrikul P, **Beema Shafreen** RM, Gorinstein S. Characterization of Bioactivity of Selective Molecules in Fruit Wines by FTIR and NMR Spectroscopies, Fluorescence and Docking Calculations. Molecules. 2023 Aug 12;28(16):6036. doi: 10.3390/molecules28166036.	**4.927**
4	Sethupathy S, Xie R, Liang N, **Shafreen RMB**, Ali MY, Zhuang Z, Zhe L, Zahoor, Yong YC, Zhu D. Evaluation of a dye-decolorizing peroxidase from Comamonas serinivorans for lignin valorization potentials. Int J Biol Macromol. 2023 Dec 31;253(Pt 4):127117. doi: 10.1016/j.ijbiomac.2023.127117. Epub 2023 Sep 27. PMID: 37774822.	**8.025**
5	Prakashkumar N, **Beema Shafreen R**, Jeyakanthan J, Brindhadevi K, Suganthy N, Regenerative marine waste towards CaCO3 nanoformulation for Alzheimer's therapy Environmental Research, 2023, 115631	7.7
6	**Beema Shafreen Rajamohamed**, Seema Siddharthan, Velmurugan Palanivel, Mohanavel Vinayagam, Vijayanand Selvaraj, Sivakumar Subpiramaniyam, Saleh H. Salmen, Sami Al Obaid, Sekar Palanivel, Senthilkumar Subramanian, "Facile and Eco-Friendly Fabrication of Silver Nanoparticles Using Nyctanthes arbor-tristis Leaf Extract to Study Antibiofilm and Anticancer Properties against Candida albicans", Advances in Materials Science and Engineering, vol. 2022, Article ID 2509089, 10 pages, 2022. https://doi.org/10.1155/2022/2509089	4.5
7	**Beema Shafreen**, R. M., Seema, S., Alagu Lakshmi, S., Srivathsan, A., Tamilmuhilan, K., Shrestha, A.,	3.1

	Balasubramanian, B., Dhandapani, R., Paramasivam, R., Al Obaid, S., Salmen, S. H., Mohd Amin, M. F., & Muthupandian, S. (2022). In Vitro and In Vivo Antibiofilm Potential of Eicosane Against Candida albicans. *Applied biochemistry and biotechnology*, *194*(10), 4800–4816. https://doi.org/10.1007/s12010-022-03984-8	
8	Smitha Sunil Kumaran Nair, **R Beema Shafreen**, Saqar SNAM, N Sivakumar, K G Rajalekshmi and A A Mawaali, ·An in-silico approach to identify potential drug molecules for Alzheimer's disease: a case with four therapeutic targets. Letters in Drug Design & Discovery. https://doi.org/10.2174/1570180819666220124114100	1.2
9	Lakshmi, S.A., Prasath, K.G., Tamilmuhilan, K, A Srivathsan, **R Beema Shafreen**, T Kasthuri & S Karutha Pandian. Suppression of Thiol-Dependent Antioxidant System and Stress Response in Methicillin-Resistant *Staphylococcus aureus* by Docosanol: Explication Through Proteome Investigation. *Mol Biotechnol* (2022). https://doi.org/10.1007/s12033-021-00434-4	2.4
10	**Shafreen RMB**, Lakshmi SA, Pandian SK, Kim YM, Deutsch J, Katrich E, Gorinstein S.. Molecules. 2021 Nov 5;26(21):6686. 10.3390/molecules26216686	**4.927**
11	Lakshmi, S. A., Alexpandi, R., **Shafreen, R**., Tamilmuhilan, K., Srivathsan, A., Kasthuri, T., Ravi, A. V., Shiburaj, S., & Pandian, S. K. (2022). Evaluation of antibiofilm potential of four-domain α-amylase from Streptomyces griseus against exopolysaccharides (EPS) of bacterial pathogens using Danio rerio. Archives of microbiology, 204(5), 243. 10.1007/s00203-022-02847-4.	2.3
12	SA Lakshmi, **RMB Shafreen**, A Priyanga, S Shiburaj, SK Pandian. A highly divergent α-amylase from Streptomyces spp.: An evolutionary perspective. International Journal of Biological Macromolecules 163, 2415-2428. https://doi.org/10.1016/j.ijbiomac.2020.09.103	5.162
13	S. Seema and **R.M.B. Shafreen.** Investigation of potential antibiofilm properties of Antimicrobial Peptide (AMP) from Linckia laevigata against Candida albicans: An in vitro and in vivo study. Process biochemistry (2020). 99(340-347) https://doi.org/10.1016/j.procbio.2020.09.008	2.952
14	**R.M.B. Shafreen**, S.A. Lakshmi, S.K. Pandian, Y.S. Park, Y.M. Kim, P. Pasko, J. Deutsch, E. Katrich, S. Gorinstein, Unraveling the Antioxidant, Binding and Health-Protecting Properties of	3.267

	Phenolic Compounds of Beers with Main Human Serum Proteins: In Vitro and In Silico Approaches, Molecules, 25 (2020) 4962. https://doi.org/10.3390/molecules25214962	
15	SA Lakshmi*, **RMB Shafreen***, K Balaji, KS Ibrahim, S Shiburaj, V Gayathri, and S. K Pandian. Ethnomedicines of Indian origin for combating COVID-19 infection by hampering the viral replication: using structure-based drug discovery approach. Journal of Biomolecular Structure and Dynamics, (2020). *Equal contribution. doi: 10.1080/07391102.2020.1778537	4.986
16	Kim, Y.M.; Park, Y.S.; Park, Y.-K.; Ham, K.-S.; Kang, S.-G.; **Shafreen, R.M.B**.; Lakshmi, S.A.; Gorinstein, S. Characterization of Bioactive Ligands with Antioxidant Properties of Kiwifruit and Persimmon Cultivars Using *In Vitro* and *In Silico* Studies. Appl. Sci. 2020, 10, 4218.	2.474
17	Siddharthan, **R. Beema Shafreen**, & Gopal, V. *Streptomyces diastaticus* isolated from the marine crustacean *Portunus sanguinolentus* with potential antibiofilm activity against *Candida albicans*. Arch Microbiol 202, 1977–1984 (2020). https://doi.org/10.1007/s00203-020-01918-8.	1.884
18	María A Lozano-Grande, Alma Leticia Martínez-Ayala, **R. Beema Shafreen**, Arkadiusz Szterk, Zenon Jastrzębski, Hanna Leontowicz, Jerzy Drzewiecki, Pawel Pasko, Aviva Ezra, Shela Gorinstein. Antioxidant, quenching, electrophoretic, antifungal and structural properties of proteins and their abilities to control the quality of Amaranthus industrial products. Food Control,115, (2020), 107276.	4.420
19	SA Lakshmi, **RMB Shafreen**, K Balaji, KS Ibrahim, S Shiburaj, V Gayathri, and S. Karutha Pandian. Cloning, expression, homology modelling and molecular dynamics simulation of four domain-containing α-amylase from *Streptomyces griseus*. Journal of Biomolecular Structure and Dynamics, 39, 2152-2163. (2021).	4.986
20	S Seema, **RB Shafreen**. Elucidating the Antibiofilm effect of bioactive metabolites from Streptomyces diasticus Strain against Candida albicans. BMC Infectious Diseases	-
21	Binding and potential antibiofilm activities of Amaranthus proteins against *Candida albicans*, ***Colloids and Sur B: Biointerfaces,*** 183 (2019) 110479	3.973
22	Modulatory effects of Amukkara Choornam on *Candida albicans* biofilm: *in vitro* and *in vivo* study, ***Mol Biol Rep***, 46 (2019) 2961-2969	2.107

23	Human serum interactions with phenolic and aroma substances of Kaffir (*Citrus hystrix*) and Key lime (*Citrus aurantifolia*) juices. ***Journal of Luminescence*** 201(2018): 115-122	2.961
24	Quality of limes juices based on the aroma and antioxidant properties. ***Food control*** 89 (2018): 270-279	4.248
25	*Grewia tiliaefolia* and its active compound vitexin regulate the expression of glutamate transporters and protect Neuro-2a cells from glutamate toxicity. ***Life Sci*** 203 (2018): 233-241	3.448
26	An *in vitro* and *in silico* identification of antibiofilm small molecules from seawater metaclone SWMC166 against *Vibrio cholerae* O1. **Mol cell probe** 39 (2018): 14-24	2.511
27	Assessment of antioxidant, anticholinesterase and antiamyloidogenic effect of *Terminalia chebula*, Terminalia arjuna and its bioactive constituent 7-Methyl gallic acid – An *in vitro* and *in silico* studies. ***Journal of Molecular Liquids*** 257 (2018): 69-81	4.561
28	A powerful binding of plant bioactive compound swertiamarin to ompf porins resembling antibiotics-an in silico study. ***International journal of current advanced research*** 6 (2017)(3):2604-2607	------
29	Inhibitory Effect of Biosynthesized Silver Nanoparticles from Extract of Nitzschia palea Against Curli-Mediated Biofilm of *Escherichia coli*. ***Appl Biochem Biotechnol.***183 (2017) (4) 1351-1361.	2.14
30	Interaction of human serum albumin with volatiles and polyphenols from some berries ***Food hydrocolloids*** 72(2017): 297-303	5.839
31	Cholinesterase inhibitory, anti-amyloidogenic and neuroprotective effect of the medicinal plant Grewia tiliaefolia - An in vitro and in silico study***. Pharm Biol*** 55 (2017): 381-393	2.492
32	Neuroprotective effect of the marine macroalga Gelidiella acerosa: identification of active compounds through bioactivity-guided fractionation. ***Pharm Biol*** 54 (2016)(10):2073-81	2.492
33	An *in silico*, *in vitro* and *in vivo* investigation of indole-3-carboxaldehyde identified from the seawater bacterium Marinomonas sp. as an anti-biofilm agent against *Vibrio cholerae* O1. ***Biofouling*** *32*(2016): 1-12	2.847
34	Usnic acid inhibits biofilm formation and virulent morphological traits of *Candida albicans*. ***Microbiological Research***. 179 (2015):20-8.	3.701
35	Essential oils from commercial and wild Patchouli modulate Group A Streptococcal biofilms. ***Industrial Crops and Products***. 69 (2015): 180-186	4.191
36	Inhibition of *Candida albicans* virulence factors by novel levofloxacin derivatives. ***Applied Microbiology and Biotechnology***. 15, (2014): 6775-85.	3.67

37	Usnic acid, a lichen secondary metabolite inhibits Group A Streptococcus biofilms. ***Antonie van leeuwenhoek***. 179 (2014) 20-28	1.934
38	Ligand based pharmacophore modelling and screening of DNA Minor Groove Binders targeting *Staphylococcus aureus*. ***Journal of Molecular Recognition***. 27, (2014), 429-437	1.919
39	*In silico* and *In vitro* effects of cinnamaldehyde and their derivatives against LuxS in *Streptococcus pyogenes*: effects on biofilm and virulence genes. ***Journal of Molecular Recognition*** 27, (2014) 106-116	1.919
40	Molecular modeling and simulation of FabG: An enzyme involved in fatty acid pathway of *Streptococcus pyogenes*. ***Journal of Molecular Graphics and Modeling***. 45, (2013) 1-12	1.863
41	Exploration of fluoroquinolone resistance in Streptococcus pyogenes: comparative structure analysis of wild-type and mutant DNA gyrase. **Journal of Molecular Recognition** 26, (2013) 276-285	1.919
42	Biofilm formation by Streptococcus pyogenes: modulation of exopolysaccharide by fluoroquinolone derivatives. ***Journal of Bioscience Bioengneering*** 112, (2011) 345-350	2.032
43	Homology modeling of Cobra C3 and comparative analysis with human and bovine C3 protein, ***Journal of Biotechnology and Bioinformatics***.	--
44	Synthesis and *in vitro* antimicrobial evaluation of novel fluoroquinolone derivatives. ***European Journal of Medicinal Chemistry*** 45, (2010) 6101-6105	4.833
45	Human Proteinpedia: a unified discovery resource for proteomics research. ***Nucleic Acids Research*** 37, (2009) D773-781	11.147
46	Human Protein Reference Database--2009 update. ***Nucleic Acids Research*** 37, (2009) D767-772.	11.147
47	Protective effect of silymarin on erythrocyte haemolysate against benzo(a)pyrene and exogenous reactive oxygen species (H2O2) induced oxidative stress. ***Chemosphere*** 68, (2007a) 1511-1518	5.108
48	Silymarin protection against major reactive oxygen species released by environmental toxins: exogenous H2O2 exposure in erythrocytes. ***Basic Clinical Pharmacology Toxicology*** 100, (2007b) 414-419	2.452

Events Participated

National Conferences : 3

International Conferences : 6

Invited Lectures : 5

National Conferences : 3

Book Chapter Published

S.No	Title of the Book	Title of the Chapter	Publisher & Year	ISBN
1.	Recent Advances in the Molecular Mechanism of Flavonoids,	Molecular mechanism of flavonoids against Ocular diseases	Studium Press India Pvt Ltd, 2018	978-93-8504-621-6
2.	Algal Biotechnology: Current Trends, Challenges and Future Prospects.	Microalgae-based Nanoparticles and Bio-composites for Biomedical Applications	Taylor and Francis group, CRC Press	978-10-3211-2770