

## CURICULUM VITAE



### PERSONAL PARTICULAR

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Name : Noor Azwani Zainol (Dr)

Date of Birth : 13 June 1975

Place of birth : Butterworth, Pulau Pinang

Sex : Female

Marital status : Married

Address : No 19, Jalan P.I 28/6,  
Taman Pulau Indah,  
Kangkar Pulai,  
81110, Johor.

Mailing Address : No 30, Kampung Alor Rambai,  
Mukim Bukit Tinggi,  
Tok Jalai, 06000, Jitra,  
Kedah

Working Address: Institute of Bioproduct Development (IBD),  
N22, Universiti Teknologi Malaysia  
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Johor, Malaysia

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## **EDUCATION**

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- Current : PhD in Bioscience, Nottingham University, UK
- Sept 2004 – Sept 2005 : International Therapy Examination Council (ITEC),  
United Kingdom.  
ITEC Diploma In Holistic Massage – Credit  
ITEC Diploma In Aromatherapy - Credit
- Mei 2000 – Mei 2001 : University Kebangsaan Malaysia  
Master Science in Quality and Productivity Improvement  
CGPA : 3.24
- Mei 1995 – Mei 1998 : University Kebangsaan Malaysia  
Bachelor Science ( Hons. ) In Food Science  
CGPA : 2.73

## **ACHIEVEMENTS:**

1. Involved in the Ethical Community for Feeding Trial of Chloroplast Freeze Dried Material in 2011-2013, Nottingham University, UK
2. Accreditation of CEPP Laboratory Analysis by Jabatan Standard Malaysia (2009)
3. BIONEXUS PARTNERSHIP PROGRAM (BNP) was achieved for Chemical Analysis Laboratory (2010). Two researchers had been participated on HPLC workshop, in Kent, UK (2011).
4. Involved in documentation for HICOE Trust in 2010.

## **AREA / SPECIAL EXPERTISE**

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1. Food emulsion based on plants lipid
2. In-vitro digestion model
3. Documentation for SAMM ISO/IEC 17025
4. Analysis of food products, herbs and fermentation products.
5. Instructor and tutor for complementary therapies (ITEC, LONDON)
6. **Quality Manager** for CEPP LABORATORY SERVICES (CEPP, UTM) – ISO 17025 ( 2008 – 2010 )

## **WORKING EXPERIENCES**

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### **I . Senior Research Officer ( Nov 2001 – present )**

Current Research : Lipid based Food Emulsion for Controlling the Rate of GI- Tract .

### **Fields of Specialization**

- Handling food analysis and chemical analysis
- Quality Manager for accreditation of SAMM 17025.
- Documentation of laboratory ( Quality Manual, Quality Procedure, SOP and others)

### **2. Tutor / Instructor / Therapist**

### **3. Lecturer ( Jan – Mei 2000 ), Kolej INPENS, Kuala Selangor**

Supervised students, preparing the students lecture note, in charge of students' files and activities, evaluating student performance

### **4. Research Assistant ( Sept. 1998 – June 1999 ), MPOB, Serdang**

- Helping the research officer to do the analysis and final report
- Participate in the exhibition programme
- Responsible on the analysis job

## **RESEARCH EXPERIENCES**

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Research Title : Probiotic Microorganisms in spray Dried Non-Diary Fruit Juice Powder  
Position : **Key Researcher**  
Major outputs : Production of non-dairy fruit juice powder with probiotic  
Fund : **IRPA 09-02-06-0127 EA 001 (RM200K)**

Research Title : Sub-acute toxicity study of Carica Papaya Extract on Dengue Infected Mice  
Position : **Researcher**  
Major outputs : This study may provide useful knowledge that will aid in the development of antiviral therapy for dengue also publication.  
Fund : **Q.J13000.2544.10H70 (GUP Tier 1) (RM50K)**

Research Title : Study on the mechanism underlying the anti-dengue effect by the fractions of *Carica papaya* leaves extracts.  
Position : **Researcher**  
Major outputs : This study may provide useful knowledge that will aid in the development of antiviral therapy for dengue also publication.  
Fund : **FRGS / 1 / 2015 / ST04 / UTM / 02 / 2 ) (RM152K)**

Research Title : The nutritional composition standardization of stingless bee honey  
Position : **Researcher**  
Major outputs : Standardized nutritional compound in stingless bee Honey  
Fund : **PY / 2015 / 05123 (GUP Tier 3) (RM50K)**

Research Title : Purification And Characterization of Isoflavone Extraction From Fermented and Germinated Soybean

Position : **Researcher**

Major outputs : Production of active ingredients - isoflavone, characterization and purification of isoflavone

Fund : **IRPA 74055 (RM180K)**

Research Title : Development of Plant Derived Inulin From Sweet Potato, Yam, Soursop and Beetroot

Position : **Key Researcher**

Major outputs : Production of inulin for food industries

Fund : Internal budget from CEPP, UTM

## **PROJECT COMMERCIALIZATION**

Research Title : Product Development of Protein Supplementation added with herbal (Oct 2015 – May 2016)

Position : **Key Researcher**

Major output : Protein Supplement with added herbal extract

Fund : Platinum Company Sdn. Bhd. – **RM17K**

Research Title : Development of Spirulina Supplement added Vitamin C ( Jun 2016 – Dec 2016)

Position : **Key Researcher**

Major output : Spirulina tablet enhanced with Vitamin C

Fund : Thoriq Medic Sdn. Bhd – **RM25K**

Research Title : Formulation of natural cough syrup from pineapple fruit extract (1<sup>st</sup> April 2016 – 31<sup>st</sup> Sept 2016)

Position : **Researcher**

Major output : Produce natural cough

Fund : Lembaga Nenas, Johor Bharu – **RM25K**

Research Title : Effective Technique to reduce water content in Honey ( Jun 2016 – Dec 2016 )

Position : **Researcher**

Major output : Reduce water content in Honey ; prolonged shelf-life

Fund : Demand Driven Innovation Project by Public-Private Research Network (**PPRN**) – **RM35K**

## **GERAN GUP-IISJ FASA 1/2016 : UNIVERSITI TEKNOLOGI MALAYSIA**

Research Title : Penjenamaan bagi produk pelancongan berasaskan laut ( Julai 2016 )

Position : **Researcher**

Major output : Projek khidmat komuniti

Fund : IISJ – **RM31,500.00**

Research Title : Program Pembangunan Spa dan Produk Berasaskan Herba bagi Melestarikan Industri Pelancongan Johor ( Julai 2016 )  
Position : Penyelidik  
Major output : Projek khidmat komuniti  
Fund : IISJ – **RM29,5000.00**

## **CONSULTANCY / TRAINING**

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**LOCAL RESEARCH COLLABORATOR (R&D Projects)** - Involve as researchers in various R&D projects with cumulative value of around **RM2.0million** including providing services / consultancy.

**SHORT COURSES** – involves as TUTOR in various courses with cumulative value of around more than **RM3.0million**.

**INTERNATIONAL COURSES** – involves as TUTOR in the 4<sup>th</sup> Natural Products Chemistry Training and Development Program (International) - OPCW (2015)

## **HONOURS AND AWARDS**

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**Anugerah Kerja Berkumpulan Terbaik 2012**  
(Establishment of SAMM ISO/IEC 17025 in IBD Laboratory Services)

**Anugerah Khidmat Cemerlang 2006** - IBD, UTM

**GOLD Medal Award** – 17<sup>th</sup> Industrial Art and Technology Exhibition (INATEX 2015)  
Research project - Kacip Fatimah enriched Herbal Pastilles (**Researcher**)

**GOLD Medal Award** - 31<sup>st</sup> International Exhibition Of Invention, New Techniques and Products in **Geneva, Switzerland, April 2003**.  
Research Project - Probiotic in Non-Dairy Tropical Fruit Juices Powder (**Researcher**)

**GOLD Medal Award** - Ministry of Science & Technology Malaysia Exhibition, 2002,  
Research project - Probiotic in Non-Dairy Tropical Fruit Juices Powder  
(**Researchers**)

**Bronze Medal Awards** -17<sup>th</sup> Industrial Art and Technology Exhibition (INATEX 2015)  
Research Project - Anti-Dengue: A novel Formulation for Dengue Treatment  
(**Researcher**)

**Bronze Medal Award** – Sciences and Technology Exhibition, 2010  
Research Project - Wellness Candy (**Project Leader**)

**Bronze Medal Award** – Sciences and Technology Exhibition, 2004,  
Research project - Edible Cosmetic (**Researchers**)

**Bronze Medal Award** - Sciences and Technology Exhibition, 2004,  
Research Project - Nutritional Herbal Candy (**Project Leader**)

**BOOKS OF ABSTRACT / PROCEEDINGS / BOOK CHAPTERS IN  
INTERNATIONAL BOOK / PAPERS IN INTERNATIONAL BOOK**

**REVIEWER SCHOLAR ONE (Thomson Reuters) Manuscripts:** Nutrition and Food  
Science

**EDITORS:** **Noor Azwani Zainol**, Ismail Ware, Siti Hajar Mat Sarip, Mariam Samani, Zainul  
Akmar Zakaria.

6<sup>TH</sup>. INTERNATIONAL CONFERENCE ON BIOTECHNOLOGY FOR THE WELLNESS  
INDUSTRY 2016 (**ICBWI 2016**). “WELLNESS FOR HEALTH AND PRODUCTIVITY –  
RECENT TRENDS AND OPPORTUNITIES”. 16-17 August 2016. **e-ISBN 978-983-99322-3-2**

Nor Farahiyah Aman Nor, Sulaiman Ngadiran, **Noor Azwani Zainol**, Siti Nor Azlina Abdul  
Rashid, Harisun Yaakob, Muna Mohamed, Ismail Ware. Efficacy Study Of Essential Oil-Based  
Insect Repellent Against Houseflies. in (eds.) Noor Azwani Zainol, Ismail Ware, Siti Hajar Mat  
Sarip, Mariam Samani and Zainul Akmar Zakaria. Proceedings of the 6th International  
Conference on Biotechnology for the Wellness Industry 2016, Melaka, Malaysia. (2016). pg. 70-  
74. **eISBN 978-983-99322-3-2**.

Norliza Abdul Latif, **Noor Azwani Zainol**, Ismail Ware, Muna Mohamad, Nur Fashya Musa, Siti  
Hajar Mat Sarip. Antioxidants and total phenolic content from leaves and stem of *Clinanthus*  
*mutans* (C.nutans ). in (eds.) Noor Azwani Zainol, Ismail Ware, Siti Hajar Mat Sarip, Mariam  
Samani and Zainul Akmar Zakaria. Proceedings of the 6th International Conference on  
Biotechnology for the Wellness Industry 2016, Melaka, Malaysia. (2016). pg. 56-64 **eISBN 978-  
983-99322-3-2**.

Ilyia Arina, M.Z., Harisun, Y., **Noorazwani, Z.**, Siti Norazlina, A.R., Norfarahiyah, A.N.,  
Norasiah, S. Effects of Time of Extraction and Solvent to Raw Material Ratio on Aqueous  
Extraction of *Quercus infectoria* Galls Extracts. in (eds.) Noor Azwani Zainol, Ismail Ware, Siti  
Hajar Mat Sarip, Mariam Samani and Zainul Akmar Zakaria. Proceedings of the 6th International  
Conference on Biotechnology for the Wellness Industry 2016, Melaka, Malaysia. (2016). Pg 35-  
39 **eISBN 978-983-99322-3-2**.

**N.Zainol**, Farahiyah, A.N, Siti Azlina, A.R and Harisun, Y. Impact of *Eurycoma longifolia* in  
Protein Supplementation . 6<sup>th</sup> International Symposium on Wellness Healthy Lifestyle and  
Nutrition. USM, Kubang Kerian, Kelantan (2015). **ISBN: 978-967-5651-76-2**

**Noorazwani Zainol**, David Gray and Bettina Wolf (2014). Spinach Lipid Extract for Interfacial  
Engineering of O/W emulsions to mediate lipolysis. Symposium proceedings; The 3<sup>rd</sup>  
International Symposium on Processing of Foods, Vegetables and Fruits. Nottingham University,  
UK / Malaysia **ISBN: 978 – 967 – 1127-90-2**

**Noorazwani Zainol**, David Gray and Bettina Wolf (2013). Engineering Interfaces in Food Emulsions for Controlled Digestion. In the book of Abstract in EURO FOOD CHEM XVII. Istanbul, Turkey **ISBN: 978 – 605 – 63935 – 0 -1**

Abd Malek, Roslinda, Sallehuddin Hamdan, Ali El-Enshasy, Hesham Ali Metwally, **Noor Azwani Zainol**, Nor Zalina Othman, and Mohamad R. Sarmidi. "Production of Lactobacillus salivarius, a new probiotic strain isolated from human breast milk, in semi-industrial scale and studies on its functional characterization." **Vol. 2 (2010): 1196-1204. In Current Research, Technology and Education Topics in Applied Microbiology and Microbial Biotechnology. Spain: Formatex Research Centre, Badajoz1196-1204.**

### **BOOK CHAPTER (UTM PRESS/LOCAL)**

Noorazwani Zainol, Zarani Mat Taher, Harisun Yaakob, Muhammad Fauzi Abd Jalil. Functional Plant Material on Lipid Application: in Recent Trends in Research into Malaysian Medicinal Plants. Submission to UTM Press, Skudai, Johor.

### **JURNALS (IMPACT)**

The nutrient composition of chloroplasts from a range of green leaf tissues (2016). Mohamed A Gedi, Rhianna Briars, Felius Yuseli, **Noor A Zainol**, Randa Darwish, David Gray. **Journal of Food Composition and Analysis.**

**N.A.Zainol**, S.C.Voo, M.R.Sarmidi, R.A.Aziz. Profiling of Centella Asiatica (L) Urban Extract. (2008) MALAYSIAN JOURNAL OF ANALYTICAL SCIENCE. Vol.12 (2): 322-327

**Noorazwani Zainol**, Mohamed Abdulkadir Gedi, David Gray and Bettina Wolf (2015). Spinach freeze dried materials: source of nutrients for health benefits. The International Journal of Science & Technoledge (ISSN 2321 – 9191512-041)

### **SCOPUS**

K.H. Mah, H. W. Yussof, N. A. Jalanni, and **N.Zainol**. Separation of Xylose from Glucose Using Thin Film Composite (TFC) Nanofiltration Membrane: Effect of Pressure, Total Sugar concentration and Xylose/glucose ratio. August 2014, Journal Teknologi. 70 :1 (2014), 93-98 DOI:10.1113/jt.v70.2746  
<http://www.researchgate.net/publication/273298607>

K.H.Mah, H.W. Yussof, M.N/Aby Seman & **N.Zainol** (2015). Study on factors affecting separation of xylose from glucose by nanofiltration using composite membrane developed from triethanolamine (TEOA) and trimesoyl chloride (TMC). Journal of Engineering Science and Technology. Special Issue on SOMCHE 2014 & RSCE 2014 Conference, January (2015) 92 – 100  
<http://www.researchgate.net/publication/273298602>

## **GOOGLE SCHOLAR**

1. R.A. Malek, S. Hamdan, H.A. El Enshasy, N.Z Othman, **N.A. Zainol**, M.R. Sarmidi and R.A. Aziz (2011). Current Research, Technology and Education Topics in Applied Microbiology and Microbial Biotechnology. 1196-1204.
2. Sarmidi,M, **Zainol, N.A.**, Mashudin, M., Sabri,N.A., Musa,H.H & Aziz, R.A. Prebiotic From Tropical Fruits. 10<sup>th</sup> ASEAN Food Conference 2007. August 21-23, 2007
3. Yaakob, H., **Zainol, N. A.**, Aziz, R. A., & Sarmidi, M. R. (2004). The effect of temperature and time processing on the isoflavone content from fermented soybean. In *18. Seminar of the Malaysian Natural Products Society, 18, Kota Kinabalu, Sabah (Malaysia), 21-24 Oct 2002*. Universiti Malaysia Sabah.
4. R Abdul Aziz, NAI Muhammad, ZM Taher, **NA Zainol** – 2005. Penyelidikan semasa ke atas herba tempatan bagi mengekalkan kesihatan.
5. H.Yaakob, **N.A. Zainol.**, R.A Aziz and MR Sarmidi. The Effect of temperature and time processing on the isoflavone content from fermented soybean. Annual Seminar on Natural Products Society. 2004

## **ORAL PRESENTATION (INTERNATIONAL)**

Joanne. G., Perrine D., N.Zainol, B.Wolf (2014). Surface Active Ingredients in O/W Application. **Food Structure and Functionality Forum Symposium (ELSEVIER), 31<sup>st</sup> March – April 2014 Amsterdam.**

## **POSTER PRESENTATION (INTERNATIONAL)**

**N.Zainol**, Farahiyah, A.N, Siti Azlina, A.R and Harisun,Y. (2015). Impact of *Eurycoma longifolia* in Protein Supplementation . 6<sup>th</sup> International Symposium on Wellness Healthy Lifestyle and Nutrition. USM, Kubang Kerian, Kelantan

**Noorazwani Zainol**, David Gray and Bettina Wolf. (2014). Spinach lipid extract for interfacial engineering of o/w emulsions to mediate lipolysis. **Food Structure and Functionality Forum Symposium (ELSEVIER), 31st March – April 2014 Amsterdam.**

**Noorazwani Zainol**, avid Gray and Bettina Wolf. (2013). Spinach lipid extract for interfacial engineering of o/w emulsions to delay lipolysis. **Islamic Development Bank (IDB) Annual Symposium, Harvard University, UK. 23<sup>rd</sup> June 2013.**



## **PAPER / POSTER PRESENTATIONS (LOCAL)**

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1. Harisun Yaakob, **Noor Azwani Zainol**, Ramlan Abdul Aziz, Mohammad Roji Sarmidi. Quantification of Genistein & Diadzein in Fermented Soy Food Products. Symposium Kimia Analysis – 15. 20-23 September 2002. Pulau Pinang
2. Harisun Yaakob, **Noor Azwani Zainol**, Ramlan Abdul Aziz, Mohammad Roji Sarmidi. Kesan suhu dan masa pemprosesan terhadap kandungan isoflavone daripada proses fermentasi kacang soya. Malaysia Natural Product 2002. 21-24 Oct 2002. Promenade Hotel, Kota Kinabalu Sabah.
3. Harisun Yaakob, **Noor Azwani Zainol**, Yuzaini Yusof, Rozilawati Abdul Rahim, Ramlan Abdul Aziz. Study on factor that affect the isoflavone extraction from fermented soybean. RSCE 2002-SOMChE 2002. 28-30 Oct 2002. PJ Hilton
4. H. Yaakob, **N.A. Zainol**, R.A. Rahim, M.R. Sarmidi, R.A. Aziz, Z.M. Taher. The Effect Of Processing Parameter On Antioxidant Activities in Fermented Soybean Using *Rhizopus Oligosporus* Mold. International Conference On Chemical and Bioprocess Engineering. Shangri- La, Tawau, Sabah. 27 – 30 August 2003
5. F.M. Said, N. Othman, **N.A. Zainol**, M.R. Sarmidi, R.A. Aziz. The Effect of Environment Stress on the Spray Dried *Lactobacillus bulgaricus*. 20<sup>th</sup> Annual Seminar of the Malaysian Natural Products Society. 29 – 30 th November 2004.
6. H. Yaakob, N. Othman, **N. A. Zainol**, F.M. Said, R. Hisham, M.R. Sarmidi, R.A. Aziz. Tropical Fruits Juice Powder With Probiotics. – IPTA Conference, PWTC, 9-12 October 2003, k. Lumpur.
7. F.M Said, N. Othman, **N. A. Zainol**, H. Yaacob, R.A Malek, N. Sadek, M.R. Sarmidi, R.A Aziz. Effect of Heat Stress on The Survival of *Lactobacillus bulgaricus* in Semi Define Medium. Seminar of Chemical Engineering. Penang. 27<sup>th</sup> – 29<sup>th</sup> August 2003.
8. **N.A. Zainol**, N. Othman, M.C. Harun, M.R. Sarmidi, H. Yaakob. Production of Natural Vinegar From Pineapple. IPTA Conference, PWTC, 9-12 October 2003, Kuala Lumpur.
9. N. Othman, F.M Said, **N. A. Zainol**, H. Yaacob, R.A Malek, N. Sadek, M.R. Sarmidi, R.A Aziz. Effect of Peptone-yeast-glucose On the growth of *Lactobacillus bulgaricus*. International Conference On Chemical and Bioprocess Engineering. Shangri- La, Tawau, Sabah. 27 – 30 August 2003
10. **N.A. Zainol**, M. Muhammad, M.R. Roji, R. Abdul Aziz. Prebiotic Yogurt. Seminar On Food Biotechnology. Hotel Equatorial, Bangi. 25-26 November 2008.
11. **N.A. Zainol**, N.M. Shafie, M.R. Roji, R. Abdul Aziz. The Effect of Processing Parameter On The Yield of Inulin In Sweet Potato. Biodiversity And Biotechnology Symposium 2008. Hilton, Kuching, Sarawak. 19<sup>th</sup> -21 November 2008.
12. **Noor Azwani Zainol**, Nur Izwana Abdullah, Mohamad Roji Sarmidi, Ramlan Abdul

Aziz. CHARACTERIZATION OF INULIN FROM *DIOSCOREA SPECIES*. Asian Conference on Analytical Sciences (ASIANALYSIS X) 2009.PWTC, KL. 11-13 August 2009.

## **TUTOR / LECTURING**

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1. Palm Oil Porcessing  
Course : Skill Realignment Training Porgramme for The Chemical Industry. Bilik Seminar Jasmine, CEPP. Mac, Jun and September 2005
2. Organic Chemistry  
Course: A Four Day Foundation Course on Chemical Process Engineering For Plant Operators And Technician. Mac, Jun and September 2006
3. Petroleum Refining Technology For Non-technical Executives, Century Mahkota Hotel, Melaka. April 2006
4. Herbal Product Formulation Courses (throughout the year 2008)
5. Certificate in Holistic Advance Course ( Aromatherapy ) – year 2008
6. Certificate in Holistic Treatment Introductory Course (Anatomy and Physiology) – year 2008
7. Kursus Pengurusan Urut Tradisional (KKLW) – sepanjang tahun 2008
8. Kursus Persijilan Profesional Holistik Terapi ( SPA & Urutan), November 2008
9. Kursus Kesedaran Terapi Holistik. ( 2009 )
10. Kursus Persijilan Profesional aromatherapy, Refleksologi dan Urutan Holistik (Jan-Jun 2010)
11. Scaling-up chloroplast extraction, Sutton Campus, Nottingham University, UK (2011-2012).
12. Supervised undergraduate students (3 students) under Biosciences Department, Sutton Campus Nottingham University, UK (2011 -2013).

## **OTHER SKILLS**

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Computer skill – experience in the usage of several packages including Microsoft Office and Excel, SPSS.

Able to operate analysis equipment: Tensiometer, Particle size, high pressure homogenizer, GC-MS, HPLC, TLC, ICP/MS, Particle size equipment and common analytical equipment.

Able to formulate aromatherapy blending and active in complementary activities (massage, reflexology).

Demonstrator and instructor for holistic massage and reflexology.

## **REFERENCES:**

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1. Prof. Mohamad Roji Sarrmidi  
Dean of Research Alliance Biotechnology  
N22, Institute of Bioproduct Development (IBD),

Universiti Teknologi Malaysia  
Skudai, Johor  
Tel: 07-5536480

2. Prof. Ramlan bin Abd Aziz  
Director,  
N22, Institute of Bioproduct Development (IBD),  
Universiti Teknologi Malaysia,  
Skudai, Johor  
Tel: 07-5536476
  
3. Assoc. Prof. Dr. David Gray,  
Senior Lecturer,  
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