

## CURRICULUM VITAE

Full name : ZEILY NURACHMAN  
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Place and date of birth : Pati (Indonesia), 13 March 1965  
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### University education

Period (from/to)	Name of University	Place	Subject	Degree
Aug 1983–Mar 1988	Institut Teknologi Bandung	Bandung, Indonesia	Chemistry	Drs
Aug 1988–Oct 1991	Institut Teknologi Bandung	Bandung, Indonesia	Biochemistry	MS
Oct 1997–Sep 2000	Tokyo Institute of Technology	Tokyo, Japan	Life Sciences	D.Sc.

### Positions held

Laboratory Assistance, Biochemistry Laboratory, Department of Chemistry, Institut Teknologi Bandung, Bandung, Sep 1985 – Jun 1988  
Researcher, Inter University Center on Biotechnology (IUC Biotechnology), Institut Teknologi Bandung, Bandung, Sep 1988 – Aug 1992  
Research student (IUC-ITB fellow), Department of Biochemistry, Medical College, University of Kentucky, Lexington, USA, Sep 1992 – Jun 1993  
Postdoctoral research (DAAD fellow), Department of Pathochemistry, German Cancer Research Center, Heidelberg, Germany, Mar 2003 – Sep 2003  
Postdoctoral research (KNAW fellow), Department of Chemistry, Groningen University, Groningen, the Netherlands, Aug 2004 – Sep 2004  
Head of Biochemistry Laboratory, Department of Chemistry, Institut Teknologi Bandung, Bandung, Oct 2000 – Jul 2004  
Postdoctoral Research (KNAW Fellow), Department of Chemistry, Groningen University, Groningen, The Netherlands, Des 2007 – Feb 2008  
Head of Biochemistry Division, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Jun 2010 – Des 2010  
Lecturer, Department of Chemistry, Institut Teknologi Bandung, Bandung, Jul 1988 – present  
Senate Member, Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Jan 2013 – Des 2013

### **Membership in professional organizations**

1. Indonesian Biochemistry and Molecular Biology Association
2. Indonesian Chemist Association
3. Indonesian Microbiology Association
4. Indonesian Protein Society
5. Indonesian Phycology Association

### **Award**

1. "Innovation Award", honor from Institut Teknologi Bandung (2015)
2. "Satyalancana Karya Satya 20 Tahun": honor from the President of the Republic of Indonesia (2014)
3. "Outstanding Lecture for the Community Services in Faculty of Mathematics and Natural Sciences", honor from Institut Teknologi Bandung (2012)
4. "Outstanding Lecture for the Community Services in the category of Expertise Merits", honor from Institut Teknologi Bandung (2012)
5. "Excellent researcher of Indofood Riset Nugraha", honor from PT Indofood Sukses Makmur Tbk. (2012)
6. "Satyalancana Karya Satya 10 Tahun": honor from the President of the Republic of Indonesia (2003)

### **Research Experiences**

1. (2001, Principle Investigator), Isolation fibrinolytic enzymes from the local strain earthworm, Department of Chemistry, ITB Research Grant.
2. (2003, Principle Investigator) Development of rapid detection of fibrinolytic enzymes, Ministry of National Education of the Republic of Indonesia, Fundamental Research Grant.
3. (2004, Member) Expression of *APL1* in *Escherichia coli* and *Saccharomyces cerevisiae* (KNAW, Groningen University, Groningen, the Netherlands).
4. (2006, Principle Investigator) Isolation of gene encoding fibrinolytic enzymes from the local strain earthworm, ITB Research Grant.
5. (2007, Principle Investigator)  $\alpha$ -Amylase from the earthworm *Peyronix excavatus*
6. (2007, Member) Biochemical Characterization of raw starch degrading  $\alpha$ -amylase from Indonesian isolates, ITB International Research Grant.
7. (2007–2009, Principle Investigator) Production of amylase for textile industry, Ministry of National Education of the Republic of Indonesia, RAPID.
8. (2008, Principle Investigator) Screening, isolation, and characterization of cellulose from the tropical marine microbes, ITB Research Grant.
9. (2009, Principle Investigator) Screening of local marine microalgae for biodiesel production, SEARCA SFRT Program.
10. (2010, Member) Cloning and Overexpression of A Novel  $\alpha$ -Amylase Gene of *Bacillus aquimaris* MK5C.6.2, ITB Research Grant.
11. (2011, Principle Investigator) Initiation of modified cassava starch, ITB Research Grant
12. (2011–2013, Principle Investigator) Standardization of cassava starch, tapioca and their derivatives for food and trading purposes, Indofood Riset Nugraha.
13. (2012–2014, Principle Investigator) Development of microalgae biomass production as natural oil for food, medicine, and energy purposes. Ministry of Education and Culture of the Republic of Indonesia, MP3EI.
14. (2013, Member) Nanoencapsulation of lipase for conversion of crude palm oil into biodiesel. Ministry of Education and Culture of the Republic of Indonesia, Decentralization Research.
15. (2013–2015, Member) Production of bio-ethyl-tert-butyl ether, Ministry of Research and Technology of the Republic of Indonesia, National Strategic Incentive Research.
16. (2014, Member) Gene mapping of sucrose synthase from the tropical marine microalgae *Thalassiosira* sp., ITB Research Grant.

## CURRENT RESEARCH ON MICROALGAE

<https://www.youtube.com/watch?v=iPNxq35H9A8>

### PATENT

Zeily Nurachman, Sarwono Hadi, M. Bachri Amran, Deana Wahyuningrum (2012) Alat fotobioreaktor dan biokultur, ID P0030250.

### PUBLICATIONS

- 1) **Zeily Nurachman**, Hartini H, Wiwit Ridhani Rahmaniyah, Dewi Kurnia, Rahmat Hidayat, Bambang Prijamboedi, Veinardi Suendo, Enny Ratnaningsih, Lily Maria Goretty Panggabean, Santi Nurbaiti (2015), Tropical marine *Chlorella* sp. PP1 as a source of photosynthetic pigments for dye-sensitized solar cells, *Algal Research*, 10: 25–32.
- 2) Dessy Natalia, Keni Vidilaseris, Wangsa T. Ismaya, Fernita Puspasari, Iman Prawira, Khomaini Hasan, Gentur Febriansah, Hjalmar P. Permentier, **Zeily Nurachman**, Toto Subroto, Bauke W. Dijkstra, Soetijoso Soemitro (2015), Effect of introducing a disulphide bond between the A and C domains on the activity and stability of *Saccharomycopsis fibuligera* R64  $\alpha$ -amylase, *Journal of Biotechnology*, 195:8–14.
- 3) Sari Dewi Kurniasih, Almasul Alfi, Dessy Natalia, Ocky Karna Radjasa, **Zeily Nurachman** (2014), Construction of individual, fused, and co-expressed proteins of endoglucanase and  $\beta$ -glucosidase for hydrolyzing sugarcane bagasse, *Microbiological Research*, 169:725–732.
- 4) Sri Widarti, **Zeily Nurachman**, Buchari, Muhammad Bachri Amran (2014), Diaminoalkane as spacer arm between polystyrene and  $\beta$ -cyclodextrin in affinity chromatography for  $\alpha$ -amylase separation, *International Journal of Engineering Research and Applications*, 4:709–714.
- 5) Anak Agung Istri Ratnadewi, Muchzainal Fanani, Sari Dewi Kurniasih, Makiko Sakka, Eddy Bagus Wasito, Kazuo Sakka, **Zeily Nurachman**, Ni Nyoman Tri Puspaningsih (2013),  $\beta$ -D-Xylosidase from *Geobacillus thermoleovorans* IT-08: Biochemical characterization and bioinformatics of the enzyme. *Applied Biochemistry and Biotechnology*, 170(8):1950–1964.
- 6) Enny Ratnaningsih, Dewi Handayani, Fatiha Khairunnisa, Ihsanawati, Sari Dewi Kurniasih, Bill Mangindaan, Sinta Rismayani, Cica Kasipah, **Zeily Nurachman** (2013), Screening, gene sequencing and characterising of lipase for methanolysis of crude palm oil. *Applied Biochemistry and Biotechnology*, 170(1):32–43.
- 7) Fernita Puspasari, Ocky Karna Radjasa, Achmad Saefuddin Noer, **Zeily Nurachman**, Yana Maolana Syah, Marc van der Maarel, Lubert Dijkhuizen, Štefan Janeček, Dessy Natalia (2013), Raw starch-degrading  $\alpha$ -amylase from *Bacillus aquimaris* MKSC 6.2: isolation and expression of the gene, bioinformatics and biochemical characterization of the recombinant enzyme. *Journal of Applied Microbiology*, 114(1):108–120.
- 8) **Zeily Nurachman**, Dewi Susan Brataningtyas, Hartati, Lily Maria Goretty Panggabean (2012), Oil from the tropical marine benthic-diatom *Navicula* sp. *Applied Biochemistry and Biotechnology*, 168(5):1065–1075.
- 9) **Zeily Nurachman**, Hartati, Syahfitri Anita, Etsuroyya Ewidiasari Anward, Gestria Novirani, Bill Mangindaan, Suryo Gandasmita, Yana Maolana Syah, Lily Maria Goretty Panggabean, Gede Suantika (2012), Oil productivity of the tropical marine diatom *Thalassiosira* sp. *Bioresource Technology*, 108:240–244.

- 10) Anceu Murniati, Buchari, Suryo Gandasasmita, **Zeily Nurachman** (2012), Synthesis and characterization of polypyrrole polyphenol oxidase (PPy/PPO) on platinum electrode. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 3(4):855–864.
- 11) Anceu Muniarti, Buchari, Suryo Gandasasmita, **Zeily Nurachman** (2011), Sintesis dan karakterisasi polipirol pada elektroda kerja kasa baja dengan volumetric siklik (in Bahasa Indonesia). *Indonesia Journal of Materials Science*, 13(3):210–215.
- 12) Fernita Puspasari, **Zeily Nurachman**, Achmad Saefuddin Noer, Ocky Karna Radjasa, Marc J. E. C. van der Maarel, Dessy Natalia (2011), Characteristics of raw starch degrading  $\alpha$ -amylase from *Bacillus oquimoris* MKSC 6.2 associated with soft coral *Sinularia* sp. *Starch/Stärke*, 63(8):461–467.
- 13) Dessy Natalia, Keni Vidilaseris, Pasjan Satrimafitrah, Wangsa T. Ismaya, Purkan, Hjalmar Permentier, Guntur Fibriansah, Fernita Puspasari, **Zeily Nurachman**, Bauke W. Dijkstra, Soetijoso Soemitro (2011), Biochemical characterization of  $\alpha$  glucoamylase from *Saccharomycopsis fibuligera* R64. *Biologia*, 66(1):27–32.
- 14) **Zeily Nurachman** (2011), Tropical marine microalgae for biodiesel production. *SEAMEO-SEARCA*, Policy Brief Series 3.
- 15) **Zeily Nurachman**, Lily Maria Goretti Panggabean, Syahfitri Anita (2010), Screening of local marine microalgae for biodiesel production. *SEAMEO-SEARCA: SEARCA Agriculture and Development*, Discussion Paper Series 3.
- 16) **Zeily Nurachman**, Alfredo Kono, Ocky Karna Radjasa, Dessy Natalia (2010), Identification a novel raw-starch-degrading- $\alpha$ -amylase from a tropical marine bacterium. *American Journal of Biochemistry and Biotechnology*, 6(4):300–306.
- 17) **Zeily Nurachman**, Sari Dewi Kurniasih, Ferra Puspitawati, Sarwono Hadi, Ocky Karna Radjasa, Dessy Natalia (2010), Cloning of the endoglucanase gene from a *Bocillus amyloliquefaciens* PSM 3.1 in *Escherichia coli* revealed catalytic triad residues Thr-His-Glu. *American Journal of Biochemistry and Biotechnology*, 6(4):268–274.
- 18) Qomarudin Helmy, Edwan Kardena, **Zeily Nurachman**, Wisjnuaprpto (2010), Application of biosurfactant produced by *Azotobacter vinelandii* AV01 for enhanced oil recovery and biodegradation of oil sludge. *International Journal of Civil and Environmental Engineering UCEE*, 10(1):7–14.
- 19) Keni Vidilaseris, Karina Hidayat, Debbie S. Retnoningrum, **Zeily Nurachman**, Achmad Saifuddin Noer, Dessy Natalia (2009), Biochemical characterization of raw starch degrading  $\alpha$ -amilase from the Indonesian marine bacterium *Bacillus* sp. ALSHL3. *Biologia*, 64(6):1047–1052.
- 20) Hera Noviana, **Zeily Nurachman**, Maelita Ramdani, AS Noer (2007), Multiplex PCR for rapid detection of rifampin and Isoniazid resistance in *Mycobacterium tuberculosis* isolated from Bandung, Indonesia. *Microbiology Indonesia*, 1(3):114–118.
- 21) **Zeily Nurachman**, Jatnika Hermawan, Yanti Rachmayanti, Lubna Baradja (2003), A simple way to visualize fibrinolysis n the classroom. *Biochemistry and Molecular Biology Education*, 31(1):16–19.
- 22) **Zeily Nurachman**, Tairo Oshima, Nobua Tanaka (2003), Domain motion in 3-isopropylmalate dehidrogenase: A strategy to enhance its thermal stability. *Proceedings ITB Sains & Teknologi*, 35A(2):163–177.
- 23) **Zeily Nurachman**, Satoshi Akanuma, Takao Sato, Tairo Oshima, Nobuo Tanaka (2000), Crystal structure of 3-isopropylmalate dehydrogenases with mutations at the C-terminus: crystallographic analyses of structure-stability relationships. *Protein Engineering*, 13(4):253–258.