

áÁÐÁ ; ÒÁ'ÒàçéÒà·àá'áÁÁÖ"Ò;µèÒ§»ÁÐà·È ÁÇÁ·Ñé§à»ç'É'èÇÁÊ'Ñ'É'Ø'; ÒÁ¼ÁÔµ°Ñ±ÔµãÈéÁÔçÒÁÁÛéáÁÐ·Ñ;ÉÐ'èÒ'

á'Çç'Ò'áÁ×éÍ§ R&D Cluster à»ç'µÇÒÁç'ÁÔáÁÔéÁ·Ôè"Ð¼Ñ²'ÒÁÐ°; ÒÁ°ÁÔÈÒÁ"Ñ' ; ÒÁ·Ôèà²×éÍÁáÁ§; ÒÁ·ÓÇÒ"ÑÁ·ÔèÁÔ áÁÐ; ÒÁ¶èÒÁ·'á·àá'áÁÁÖãÈéÁÔçá; ÒÁ' ; ÒÁ'Òà'Ò'; ÒÁ'³ Á" . àÁÔèÁá'Á; ÒÁ»ÁÑ°áµÁ§ÈÁéÒ§; ÒÁ°ÁÔÈÒÁãÈéá; Ò' ; ÒÁãé·ÁÑ BEC á'Áá°è§; ÁÐèÁ; ÒÁ°ÁÔÈÒÁáÁÐ'Òà'Ò'; ÒÁÍ; à»ç' 3 ; ÁÐèÁ×Í

- ; ÁÐèÁ°ÁÔÈÒÁáÁÐ'áÁÔÁ·ÔÉ'èÒ·Ôè; Ò; Ò; Ò·ÔÉ·Ò§ §Ò'ÇÒ"ÑÁ §Ò'¹ÔÁÔ; ÒÁÇÒ°Ò; ÒÁ áÁÐ; ÒÁ¶èÒÁ·'á·àá'áÁÁÖ ááé; Áá; ; Ò and Budgeting System: PPBS) à»ç'; Áá; á'; ÒÁ; Ò; Ò·ÔÉ·Ò§ á'ÁÁÈÒÇÒ·ÁÔÁÑÁ"Ð ¼Ô"ÔÁ³Ó Input-Output ÈèÇ'; ÁÐèÁ R&D Cluster ÁÇÁ¶Ò§; ÒÁ; ÒÉ'á§Ò'á'×ÍÈèÇ'á¼ÔèÁçÍ§¼'Ñ; §Ò'·Ñé§'ÔéµéÍ§à»ç'á»µÔÁ; @ ÁÐà°ÔÁ°çÍ§ÁÈÒÇÒ·ÁÔÁÑÁ

- ÈéÍ§»Ô°ÑµÔ; ÒÁÇÒ"ÑÁ (Research Lab) áÁÐ; ÁÐèÁÇÒ"ÑÁ (R&D Cluster) ·ÔèÁÔ; ÁÐèÁÇÒ"ÑÁ·ÔÉ'èÒ·ÔèÇÒ"ÑÁ ÈÁéÒ§ §Ò ; ÒÁ¼Ñ²'Òà·àá'áÁÁÖá; èÁÔçá; ÒÁ' ÁÇÁ·Ñé§à»ç'É'èÇÁÊ'Ñ'É'Ø'; ÒÁ¼ÁÔµ°Ñ±ÔµãÈéÁÔçÒÁÁÛéáÁÐ·Ñ; ÉÐ'èÒ'; ÒÁÇÒ"ÑÁ Ç Cluster) ·ÔèÁÔ; ÁÐèÁÇÒ"ÑÁ áÁÐÇÒ°Ò; ÒÁá»ç'á; 1 Í§µ; ÁÐ; 1°çÍ; ÁÐèÁÇÒ"ÑÁ»ÁÐ; 1°éÇÁ ÈÑÇÉ'èÒ; ÁÐèÁÇÒ"ÑÁ 1Ñ; ÇÒ"ÑÁ Í ÁÐ'Ñ°»ÁÔ--Òà; ; 1Ñ; ÈÒ; ÈÒÁÐ'Ñ°»ÁÔ--Òà·

- È'èÇÁ§Ò'É'¹Ñ'É'Ø' (Supporting Groups) ·ÔÉ'èÒ·ÔèÈ'¹Ñ'É'Ø'á'á'áÁ×éÍ§§Ò'·ÐÁ; ÒÁçÍ§áµÁ§; ÒÁáÁÐ; ÒÁ °ÁÔÈÒÁ§Ò'·ÑèÇá»ÁÐÈÒ'ÉÑÁ¼Ñ' ; 1ÁÐÈÇèÒ§ÁÈÒÇÒ·ÁÔÁÑÁ; 1Ñ°ÁÔèÍµÈÒÈ; ÁÁÁ (University-Industrial Liaison Office)

ÁÛ»á°; ÒÁ°ÁÔÈÒÁ"Ñ' ; ÒÁ; ÁÐèÁÇÒ"ÑÁá° R&D Cluster á'ÁÈéÍ§»Ô°ÑµÔ; ÒÁÇÒ"ÑÁà»ç'É'Ú'Á; ÁÔ§çÍ§; ÒÁ·ÓÇÒ"ÑÁáÁÐÈ'·ÔáÈé R&D Cluster ÈÒÁÔÁ¶áé·ÁÑ¼ÁÔ; ÁáÈéá; Ò'»ÁÐáá¹; ÈÚ§ÈØ'á'; ÒÁ¼ÁÔµ°Ñ±Ôµ 1Ñ; ÇÒ"ÑÁ ; ÒÁ·ÓÇÒ"ÑÁ ; ÒÁ°ÁÔ; ÒÁ á'ÁÁÔÈÑÇÉ'èÒÈéÍ§»Ô°ÑµÔ; ÒÁáÁÐ'Ñ; ÇÒ"ÑÁ ÍÒÇÒáÈá»ç'¼ÔèáÁÔéÁ§'Ñ; ÇÒ"ÑÁ á'ç³Ðà'ÔÁÇ; 1Ñ; çáÍ×éÍáÈéá; Ò' ; ÒÁ·ÓÇÒ çÒé'ÍÁÛè; 1Ñ°á·ÁáÁÐÈÑÇçéÍÇÒ"ÑÁ áÁÐÁÇÁ·Ñé§à»ç'; ÒÁÁÐ'Á·ÁÑ¼ÁÔ; ¼ÚéÁÛé áÁÐçÒÁ à°ÔèÁÇÒ°- (Expertise) "Ò; ÈÁ «Ôè§; çéÍáÈéá; Ò' µÇÒÁàçéÁáççÍ§ÁÐ°ÇÒ"ÑÁ

; ÒÁ°ÁÔÈÒÁ; ÒÁá§Ò'á»ç'Í; Ò'Ñ"ÑÁÈ'Ôè§·Ôè·ÔáÈé R&D Cluster ÁÔçÒÁÁ×'ÈÁÐè'á'; ÒÁ°ÁÔÈÒÁáÁÐ"Ñ'ÈÒ§°»ÁÐÁÒ³á; 1Ñ; ÇÒ"ÑÁáÁÐ; ÁÐèÁÇÒ"ÑÁµéÍ§·ÔçéÍáÈ'ÍáµÁ§; ÒÁ à¼×éÍçÍÁÑ°; ÒÁÈ'¹Ñ'É'Ø' ; Ò; áÈÁè§·Ø'µèÒ§æ áÁÐà»ç'ÁÑ; È³¼Ôè§µ'áÍ§ ÁÔÈ'èÇÁ§Ò'É'¹Ñ'É'Ø'·ÔÉ'èÒ·ÔèáÈé°ÁÔ; ÒÁ'èÒ'¹Ñ-°ÔáÁÐ; ÒÁà°Ò; "èÒÁ·Ñé§'Ôéá»ç'á»µÔÁµÇÒÁÁÑ°¼Ô'á'çÍ§ÈÑÇÉ'èÒáµ ; ÒÁãé·ÁÑ¼ÁÔ; ÁáÁÐ§°»ÁÐÁÒ³µèÒ§æ ÈÒÁÔÁ¶áéÁèÇÁ; 1Ñ'ÁÐÈÇèÒ§áµÁ§; ÒÁÇÒ"ÑÁ áÁÐÁÐÈÇèÒ§; ÁÐèÁÇÒ"ÑÁá'è·Ñé§ °ÁÔÈÒÁ§°»ÁÐÁÒ³Ñ§; ÁèÒÇ·ÔáÈé R&D Cluster ÁÔçÒÁÁ×'ÈÁÐè'á'; ÒÁ°ÁÔÈÒÁ§°»ÁÐÁÒ³ÇÒ"ÑÁ áÁÐÈÁéÒ§µÇÒÁàçéÁá Í§µ; ÁÁÔ; ; ÇèÒ; ÒÁÍÁÛéÁÍ'á°¼ÔÐáµÁ§; ÒÁÇÒ"ÑÁÁéÍáæ ÈÁ×Íá°¼ÔÐ; ÁÐèÁÇÒ"ÑÁà·èÒ'Ñé'

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È'¹Ñ'É'Ø'}

§°»ÁÐÁÒ³È'¹Ñ'É'Ø'

È'èÇÁ BEC á'éÁÑ°; ÒÁÈ'¹Ñ'É'Ø'; ÒÁ'Òà'Ò'§Ò'Ò; Ò; áÈÁè§·Ø'µèÒ§æ á'éá; è ÈÚ'Á; ¼Ñ'·ØÇÒÈÇ; 1ÁÁÁáÁÐà·àá'áÁÁÖ°ÔÇÀÒ¼ÁÔÁÑ°"Ò; ÒÁÁÑ°"èÒ§ÇÒ"ÑÁ §Ò'¹ÔÁÔ; ÒÁÇÒ°Ò; ÒÁ·Ñé§"Ò; È'èÇÁ§Ò'ÁÔçÁÑ°áÁÐá; 1

ÈÁÒÀà'è¹;ÒÃ»ÃÐÀØ;µiãªèàµÃ×èí§Á×í'èÒ¹ªÒÇÈÒÃÈ¹à·ÈáÁÐà·µ¹Òµ'èÒ¹;ÒÃÈÃèÒ§áªª·ÓÁí§çí§à«ÁÀì ÃÇÁ¶Ö§;ÒÃ ÇÒàµÃÒ
ÈÑ§àµÃÒÐÈìáÁÐ¼ÁÒµ;Ã'äçÁÑ¹·ÒèÁÒ»ÃÐàÁªiã¹àªÒ§;ÒÃá¾·Áiã¹ÈÒè§ÁÒªÒÇÒµà«ÁÀìà'ÒèÁÇ àªè¹ ÁÒÈµì à¾×èìà»ç¹çéíÁ
ã¹ÈÑÇÁÑ¹ÈÒ»ÐÈÁÑ§à¾×èìãªè»ÃÑº»ÃØ§µØ³ÁÑ;É³Ðçí§á»é§ãÈèµÁ§µÒÁµÇÒÁµéí§;ÒÃçí§µÁÒ' áÁÐ;ÒÃãªèªªª·ÓÁí§;Ò'jÁÁ
µÑÇíÁèÒ§§Ò¹ÇÒ'ÑÁ àªè¹ jÒÃÇÒàµÃÒÐÈìáÁÐÈÃèÒ§áªª·ÓÁí§àÁµÒàªªÒ«ÒÃçí§ÁÒ»Ò'ã¹ÁÒÈµì à¾×èì »ÃÑº»ÃØ§µÇÒÁÈÒ
jÒÃÇÒàµÃÒÐÈìáµÃ§ÈÃèÒ§çí§ÇÒ¶¶;ÒÃÈÑ§àµÃÒÐÈì;Ã'¹ÒÇµÃÓÍÒ;ã¹àª×éíÁÒÀÒàÃÒÁ Plasmodium falciparum à¾×èì;ÓÈ¹

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ªªÒ;Ãçí§È¹èÇÁ Ì

jÒÃªÒÈÒÃ'Ñ¹;ÒÃçí§È¹èÇÁÌ "ÐíÁÙèÀÒÃµé;ÒÃ'ÙáÁçí§µ³Ðí¹Ø;ÃÃÁ;ÒÃªÒÈÒÃÈ¹èÇÁÌ áÁÐ;ÒÃªÒÈÒÃá·Á ·ÒÁ¼Ùèªªª
ã¹ÁÒªªÒ;Ã'Ò;È¹èÇÁ§Ò¹·ÒèÁÒµÇÒÁÃèÇÁÁ×í;Ñ¹ÁÒÃèÇÁ;Ñ¹»-ÒºÑµÒ§Ò¹ ·Ñé§ Á". áÁÐ Èª.

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§Ò¹ 1}

¼Á;ÒÃ'Òà¹Ò¹§Ò¹

1. à·µã¹áÁÃÒ·Òè¹Òã»ãªè»ÃÐàÁªiã¹áÁéÇáÁÐ¾ÃéíÁ¶èÒÃ·Í'à·µã¹áÁÃÒ

jÁØèÁÇÒ'ÑÁà·µã¹áÁÃÒÈÒÈÃèÒÁ

• à·µã¹áÁÃÒ;ÒÃ¼ÁÒµÈÒÈÃèÒÁÈã»ÁÙÁÒ¹èÒ : à·µã¹áÁÃÒ¹Òèà»ç¹»ÃÐàÁªiã¹ÁèÒ§ÁÒ;µèííØµÈÒÈ;ÃÃÁ;ÒÃ¼ÁÒµÈÒÈ
ã¹éÁÒ;ÒÃ¾Ñ²¹ÒÃÐªª·ÒÃàÁÒéÁ§ÈÒÈÃèÒÁÈã»ÁÙÁÒ¹èÒ«Òè§áÁÒèÁ"Ò;jÒÃãªè¹éÓ·Òè§"Ò;áÁ§§Ò¹á»é§ÁÑ¹ÈÒ»ÐÈÁÑ§ ã¹Á
«Òè§ÈÒÁÒ¶¼ÁÒµ¼ÁÒµÁÑª±iãÈé§·ÒèÁÒã»ÁµÒ¹ÁéíÁÁÐ 55 µèÒµÇÒÁª×é¹ ÁéíÁÁÐ 7 áÁÐã¹;ÒÃµÓ¹Ç³;ÒÃÁ§·Ø¹ÈÒÈÁÑº;Ç
»ÃÐÁÒ³à§Ò¹Á§·Ø¹ \$6,000 – \$7,000 µéíµÑ¹ »Ñ¹·Ø¹Ñ¹ã¹éÁÒ;ÒÃ¶èÒÃ·Í'à·µã¹áÁÃÒ¹ÒèáÈéáíª¹·Òè¼ÁÒµÈÒÈÃèÒÁÈã»ÁÙÁÒ¹èÒ

jÁØèÁÇÒ'ÑÁ;ÒÃ¾Ñ²¹Ò;ÃÐº¹;ÒÃ·Ò§ªÒÇÀÒ¾çí§"ØÁÒ¹·ÃÒÁìáÁÐãÁ§§Ò¹µé¹ªªª;ÒÃÈÁÑj

{mospagebreak title=¼Å;ÒÃ´Óà¹Ô¹
§Ò¹ 2}

2. §Ò¹ºÃÔ;ÒÃ·Ò§ÇÔªÒ;ÒÃ

Ë¹èÇÃĪ ä´é¶èÒÃ·Í´à·ªâ¹âÃÃÖ·Öèä´é¾Ñ²¹ÒçÖé¹áÃÐãËéºÃÔ;ÒÃ·Ò§à·ª¹ÒªµèÍÀÒªÍØµËÒË;ÃÃÁÍÃèÒ§µèÍà¹×èÍ§ á´ÃÃÖ»ÃÐà
;ÒÃãËéªÓ»ÃÖ;ÉÒ °ÃÖËÒÃ »ÃÐàÃÔ¹ªªÃ§;ÒÃ ;ÒÃ·ÉÍº·´ÁÍ§ ãËéàªèÒÍØ»;Ã³;íáÃÐãÃ§§Ò¹µé¹áºº ;ÒÃÇÒàªÃÒÐË;Ò§àªÃÖ Ë
â´ÃÃÖµÑÇÍÃèÒ§;ÒÃãËéºÃÔ;ÒÃ ´Ñ§¹Óé

- ;ÒÃ¼ÃÔµ pressed yeast ãËé;ÑººÃÖËÑ· Bioman
- ;ÒÃãËéºÃÔ;ÒÃãÃ§§Ò¹µé¹áºº´éÒ¹;ÒÃ·´ÁÍ§¼ÃÔµ·ØÃÔ¹·ÃÖÃ; Bacillus subtilis à¾¾×èÍãªèà»ç¹ ãªÃ§;ÒÃ¹ÓÃèÍ§à¾¾×èÍ;ÒÃ·´ÁÍ§µ
- ;ÒÃãËéºÃÔ;ÒÃãÃ§§Ò¹µé¹áºº;ÒÃËÃÑ;·´ÁÍ§¼ÃÔµª¾¾×èÍãªèººÑ´¹éÓàËÖÃã¹¹Ò;Øé§ãËé;ÑººÃÖËÑ·µèÒ§æ

{mospagebreak title=¼Å;ÒÃ´Óà¹Ô¹
§Ò¹ 3}

3. ;ÒÃ¶èÒÃ·Í´à·ªâ¹âÃÃÖáÃÐà¼Ãá¾¾ÃèÍ§ª;ÇÒÃÃÙé´Ò;§Ò¹ÇÔ´ÑÃ

Ë¹èÇÃĪ ä´é·Ñ´»ÃÐªØÃËÑÃÁ¹Ò áÃÐ½Ö;ÍººÃÃàªÒ§»´ÒºÑµÒ;ÒÃ ã¹ËÑÇçéÍµèÒ§æ

- Mass Cultivation of Spirulina
- Regional mini-symposium on bio sensor and chemical sensor technology
- Bioinformatics as a Tool for Gene Manipulation
- Metabolic Engineering and Functional Genomics
- Advanced Fermentation Technology
- Practical approach to fermentation technology workshop

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§Ò¹ 4}

7. ;ÒÃàÈ¹¼Á§Ò¹áÁÐÈÒè§µÒ³¼ÒÁ³¼ì

¼ÒÃàÈ¹¼Á§Ò¹á¹àèÇ§»Õ§º»ÁÐÁÒ³ 2536-2550 È¹èÇÁÏ ÁÒ¼Á§Ò¹µÒ³¼ÒÁ³¼ìá¹ÇÒÃÈÒÃ¹Ò¹ÒªÒµÒ 76 àÃxèí§ ÇÒÃÈÒÃÁÐ´Ñ àÃxèí§ á´Áà»ç¹;ÒÃàÈ¹¼Á§Ò¹á¹ÁÐ´ÑÒ¹ÒªÒµÒ 201 àÃxèí§ áÁÐÁÐ´ÑªÒµÒ 319 àÃxèí§

ÇÒÃÈÒÃ·Ò§ÇÒªÒ;ÒÃ

- Cohen, Z.; Ruengichatchawalya, M.; Siangdung, W.; Tanticharoen, M. “Production and partial purification of g - linolenic acid and some pigments from *Spirulina platensis* ” *Journal of Applied Phycology* 1993, 5:109-115
- Tanticharoen, M.; Bunnag, B.; Vonshak, A. “Cultivation of *Spirulina* using Secondary treated starch waste water” *Journal of Australasian Biotechnology* 1993, 3:223-226.
- Cohen, Z.; Ruengichatchawalya, M.; Siangdung, W.; Tanticharoen, M.; Heimer, Y. M. “Herbicide-resistant Lines of microalgae: growth and fatty acid composition” *Journal of Phytochemistry* 1993, 34 (4):973-978.
- Chanawongse, L.; Lee, Y.K.; Bunnag, B.; Tanticharoen, M. “Productivity of the cyanobacterium *Spirulina platensis* in cultures using sunlight” *Journal of Bioresources Technology* 1994, 48:143-148.
- Tanticharoen, M.; Ruengichatchawalya, M.; Bunnag, B.; Vonktaveesuk, P.; Vonshak, A. ; Cohen, Z. “Optimization of g - linolenic acid (GLA) production in *Spirulina platensis* ” *Journal of Applied Phycology* 1994, 6:295-300.
- Vonshak, A.; Chanawongse, L.; Bunnag, B.; Tanticharoen, M. “Physiological characterization of *Spirulina platensis* isolates: Response to light and salinity” *Journal of Plant Physiology* 1995, 14:161-166.
- Vonshak, A.; Kancharaksa, N.; Bunnag, B.; Tanticharoen, M. “Role of light and photosynthesis on the acclimation process of the cyanobacterium *Spirulina platensis* to salinity stress” *Journal of Applied Phycology* 1996, 8:119-124.
- Somasundrum, M.; Kirtikara, K.; Tanticharoen, M. “Amperometric determination of hydrogen peroxide by direct and catalytic reduction at a copper electrode” *Journal of Analytica Chimica Acta* 1996, 319:59-70.
- Vonshak, A.; Chanawongse, L.; Bunnag, B.; Ta nticharoen, M. “Light acclimation and photoinhibition in three *Spirulina platensis* (cyanobacteria) isolates” *Journal of Applied Phycology* 1996, 8:35-40.
- Somasundrum, M.; Tanticharoen, M.; Kirtikara, K. “H 2 O 2 from an oxidase enzyme can be detected cathodically using metal-dispersed conducting polymer film” *Journal of Electroanalytical Chemistry* 1996, 407:247-251.
- Somasundrum, M.; Tongta, A.; Tanticharoen, M.; Kirtikara, K. “A kinetic model for the reduction of enzyme - generated H 2 O 2 at a metal-dispersed conducting polymer film” *Journal of Electroanalytical Chemistry* 1997 , 440:259-264.
- Kiattipoomchai, M.; Somasundrum, M.; Tanticharoen, M.; Kirtikara, K. “Measurement of sulfite at oxide-coated

copper electrodes” Journal of Analytica Chimica Acta 1998 , 123:2017-2019.

- Nomsawai, P.; Tanticharoen, M.; Cheevadhanarak, S. ”Light regulation of phycobilisome structure and gene expression in *Spirulina platensis* C1 (*Arthrospira* sp. PCC9438)” Journal of Plant Cell Physiology 1999, 40(12):1194-1202.
- Surareungchai, W.; Worasing, S.; Sritongkum, P.; Tanticharoen, M. ”Dual electrode signal-subtracted bio sensor for simultaneous flow injection determination of sucrose and glucose.” Journal of Analytica Chimica Acta 1999 , 380:7-15.
- Samarntarn, W.; Cheevadhanarak, S.; Tanticharoen, M. ”Production of alkaline protease by genetic ally engineered *Aspergillus oryzae* U1521. ” Journal of General Applied Microbiology and Biotechnology 1999, 45:99-103 .
- Arjsriwat, S.; Tanticharoen, M.; Kirtikara, K.; Aoki, K.; Somasundrum, M. ”Metal – dispersed Conducting polymer – Coated Electrode used for Oxidase – based Bio sensor .” Journal of Electrochemistry Communication 2000, 2:441- 444.
- Laoteng, K.; Monnontara, R.; Tanticharoen, M.; Cheevadhanarak, S. ”Delta 6 desaturase of *Mucor rouxii* with high similarity to Plant delta 6–desaturase and its Heterologous Expression in *Saccharomyces cerevisiae* .” Journal of Biochemical and Biophysical Research Communications 2000 , 279:17-22.
- Passorn, S.; Laoteng, K.; Rachadawong, S.; Tanticharoen, M.; Cheevadhanarak, S. ”Heterologous Expression of *Mucor rouxii* D 12 Gene in *Saccharomyces cerevisiae* .” Biochemical and Biophysical Research Communications 1999 , 263:47-51.
- Deshniem, P.; Paitoonrangsarid, K.; Suphatrakul, A.; Meesapyodsuk, D.; Tanticharoen, M.; Cheevadhanarak, S. ”Temperature-independent and dependent expression of desaturase genes in filamentous cyanobacterium *Spirulina platensis* C1 (*Arthrospira* sp. PCC9438)” Journal of FEMS Microbiology Letter 2000, 184:207-213.
- Surareungchai, W.; Kasiwat, D. ”Electroanalysis of tert-Butylhydroquinone in Edible Oil at a Nafion – Coated Probe.” Journal of Electroanalysis 2000, 12(14):1124-1129.
- Laoteng, K.; Anjard, C.; Rachadawong, S.; Tanticharoen, M.; Maresca, B. ” *Mucor rouxii* D 9 Desaturase Gene is Transcriptionally Regulated during Cell Growth and by Low Temperature.” Molecular Cell Biology Research Communications 1999 , 1:36-43.
- Jaturapat, A.; Isaka, M.; Hywel-Jones, NL.; Lertwerawat, Y.; Kamchonwongpaisan, S.; Kirtikara, K.; Tanticharoen, M.; Thebtaranonth, Y. ”Biosanthracenes from the Insect Pathogenic Fungus *Cordyceps pseudomilitaris* BCC 1620. I. Taxonomy, Fermentation, Isolation and Antimalarial Activity.” Journal of Antibiotics 2001 , 54(1):29-35.
- Isaka, M.; Jaturapat, A.; Kladwang, W.; Panya, J.; Lertwerawat, Y.; Tanticharoen, M.; Thebtaranonth, Y. ”Antiplasmodial compounds from wood-decayed fungus *Xylaria* sp. BCC 1067” Journal of Planta Medical 2000, 66:473-475.
- Meesapyodsuk, D.; Reed, D.W.; Cheevadhanarak, S.; Deshniem, P.; Covello, P.S. ”Probing the mechanism of a cyanobacterial D 9 Fatty acid desaturase from *Spirulina platensis* C1 (*Arthrospira* sp. PCC9438)” Journal of Comparative Biochemistry and Physiology Part B 2001, 129:831 -835.
- Thammarongtham, C.; Turner, G.; Moir, A.J.; Tanticharoen, M.; Cheevadhanarak, S. ”A new class of glutaminase from *Aspergillus oryzae* .” Journal of Molecular Microbiology and Biotechnology 2001, 3(4) (Oct):611-617.
- Surareungchai, W.; Deepunya, W.; Tassakorn, P. ”Quadruple-pulsed amperometric detection for simultaneous flow injection determination of glucose and fructose” Journal of Analytica Chimica Acta 2001 , 448:215-220.
- Chairasert, P.; Bhumiratana, S.; Tanticharoen, M. ”Mesophilic and Thermophilic Anaerobic Digestion of Pineapple Cannery Wastes” Thammasat International Journal of Science and Technology 2001 , 6 (2):1-9.
- Ruengitchatchawalya, M.; Chirasuwan, N.; Chaiklahan, R.; Bunnag, B.; Deshniem, P.; Tanticharoen, M. ”Photosynthetic characteristics of a mutant of *Spirulina plantensis* ” Journal of Applied Phycology 2002 , 14:71-76.
- Posayapisit, N.; Pumputsa, K.; Mekvichitsaeng, P.; Techkarnjanaruk, S. ”Phylo genetic analysis of Baculovirus chitinase sequence” Journal of Chitin Enzymology 2001, 343-350.

- Suriyawattanakul, L.; Surareungchai, W.; Sritongkum, P.; Tanticharoen, M.; Kirtikara, K. “The use of co-immobilization of *Trichosporon cutaneum* and *Bacillus licheniformis* for a BOD sensor ” *Journal of Applied Microbiology and Biotechnology* 2002, 59:40-44.
- Na Nakon P.; Suphantharika M.; Udomsopagit S.; and Surareungchai W. "Poly (vinylferrocene)-Polyethylene Glycol Glutamate Oxidase Electrode for Determination of Glutamate in Commercial Soy Sauces." *Journal of Microbiology & Biotechnology* 2003, 19, 479-485.
- Khunyoshyeng, S.; Cheevadhanarak, S.; Rachdawong, S.; Tanticharoen, M. “Differential expression of desaturases and changes in fatty acid composition during sporangiospore germination and development in *Mucor rouxii* ” *Journal of Fungal Genetics and Biology* 2003 , 37, 13-21.
- Laoteng, K.; Pongchuachidthai, R.; Rueksomtawin, K.; Dandusitapunth, Y.; Tanticharoen, M.; Cheevadhanarak, S. “A *Mucor rouxii* mutant with high accumulation of an unusual trans -linoleic acid (9c, 12 t -C18: 2)” *Journal of FEMS Microbiology Letters* 2003, 10993, 1-7.
- Suvajittanont, W.; Chairprasert, P. “Potential of biogas recirculation to enhance biomass accumulation on supporting media” *Journal of Bioresource Technology* 2003 , 88(2) , 157-162.
- Chairprasert, P., W. Suvajittanont, B. Surarak, M. Tantichroen, and S. Bhumiratana. “ Nylon fiber as supporting media in anaerobic hybrid reactors: its effects on system's performance and microbial distribution .” *Journal of Water Research* , 2003, 37, 4605-4612.
- Devahastin, S.; Suvarnakuta, P.; Soponronnarit, S.; Mujumdar, A.S. “A Comparative Study of Low-Pressure Superheated Steam and Vacuum Drying of a Heat-Sensitive Material,” *Journal of Drying Technology ‐ An International* 2004, 22(8).
- Namsanguan, Y.; Tia, W., Devahastin, S.; Soponronnarit, S. “Drying Kinetics and Quality of Shrimp Undergoing Different Two -Stage Drying Processes,” *Journal of Drying Technology ‐ An International* 2004, 22(4), pp. 759-778.
- Wiyarath, W.; Somasundrum, M. and Surareugchai, W. “A voltammetric sensor for general purpose organohalide at picogramper-litre concentrations based on a simple collector-generator method” *Journal of Analytical Chemistry* 2004, Vol.76, pp.859-862.
- Ngamchana, S.; Surareungchai, W. “Sub-millimolar determination of formalin by pulsed amperometric detection” *Journal of Analytica Chimica Acta* 2004, Vol. 510, pp.195-201.
- Hongsthong, A.; Subudhi, S.; Sirijuntarat, M. and Cheevadhanarak, S. “Mutation study of conserved amino acid residues of *Spirulina r 6* - acyl-lipid desaturase showing involvement of histidine 313 in the regioselectivity of the enzyme” *Journal of Applied Microbiology and Biotechnology* 2004, 66:74-84
- Hongsthong, A.; Paithoonrangsarid, K.; Prapugrangkul, P.; Deshniem, P.; Sirijuntarut, M.; Subhudhi, S.; Cheevadhanarak, S. and Tantichroen, M. “The expression of three desaturase genes of *Spirulina platensis* in *Escherichia coli* DH5 alpha.” *Journal of Molecular Biology Reports* 2004, 31:177- 189
- Ruengjitchatchawalya, M.; Kovcs, L.; Mapaisansup, T.; Sallai, A.; Gombos, Z.; Ponglikitmongkol, M. and Tanticharoen, M. “Higher plant-like fluorescence induction and thermoluminescence characteristics in cyanobacterium, *Spirulina* mutant defective in PQH 2 oxidation by cyt b 6 /f complex” *Journal of Plant Physiology* 2005, 162: 1123- 1132.
- Wiyaratn, W.; Somasundrum, M. and Surareungchai, W. “Votammetric detection of organohalides by redox catalysis: Improved sensitivity by immobilisation within a cubic phase liquid crystal” *Journal of The Analyst*, (2005), 130:626-631 and Also highlighted as a Hot Paper on The RSC website and highlighted in Chemical science 2005, 2:C41
- Wiyaratn, W.; Hrapovic, S.; Liu, Y.; Surareungchai, W.; Luong, J.H.T. “Light- assisted synthesis of Pt-Zn porphyrin nanocomposites and their use for electrochemical detection of organohalides” *Analytical Chemistry* 2005, 77:5742-5749.
- Rijiravanich, P.; Aoki, K.; Chen, J.; Surareungchai, W. and Somasundrum, M. “Electrode reactions of catechol at tyrosinase- immobilized latex suspensions” *Journal of Electroanalysis* 2004, 16:605-611.
- Loetanantawong, B. ; Suracheep, C. ; Somasundrum, M.; Surareungchai, W. “Electrocatalytic Tetracycline

Oxidation at a Mixed-Valent Ruthenium Cyanide-Modified Glassy Carbon Electrode and Determination of Tetracyclines by Liquid Chromatography with Electrochemical Detection” *Journal of Analytical Chemistry* , 2004, 76: 2266-2272

- Laoteng, K.; Ruenwai, R.; Tanticharoen, M. and Cheevadhanarak, S. “Genetic modification of essential fatty acids biosynthesis in *Hansenula polymorpha*” *Journal of Microbiology Letters* 2005, 245:169-178.
- Na-Ranong, S.; Laoteng, K.; Kittakoop, P.; Tantichareon. M. and Cheevadhanarak, S. Substrate specificity and preference of $\Delta 6$ -desaturase of *Mucor rouxii* . *Journal of FEBS Letters* 2005, 579:2744-2748.
- Laoteng, K.; Cheevadhanarak, S.; Tanticharoen, M. and Maresca, B. “Promoter analysis of *Mucor rouxii* $\Delta 9$ -desaturase: Its implication for transcriptional regulation in *Saccharomyces cerevisiae* ” *Journal of Biochemical and Biophysical Research Communications* 2005, 335 :400-405.
- Meechai, A.; Pongakarakun, S.; Deshniem, P.; Cheevadhanarak, S. and Bhumiratana, S. “Metabolic flux distribution for $\Delta 6$ -linolenic acid synthetic pathways in *Spirulina platensis* ” *Journal of Biotechnol. Bioprocess Eng* 2004, 9(6):506-513.
- Jupraputtasri, W.; Cheevadhanarak, S.; Chairprasert, P.; Tanticharoen, M. and Techkarnjanaruk , S. “Use of Fluorochrome-Labeled rRNA Targeted Oligonucleotide Probe and Tyramide Signal Amplification to Improve Sensitivity of Fluorescence in situ Hybridization. *Journal of BioScience and Bioengineering* 2004, 98(4):282-286.
- Jupraputtasri, W.; Cheevadhanarak, S.; Chairprasert, P.; Tanticharoen, M. and Techkarnjanaruk, S. “Use of an Alternative Archaea -Specific probe for Methanogen Detection” *Journal of Microbiological Methods* . 2005, 61:95 - 104.
- Kurdrit, P.; Subudhi, S.; Hongsthong, A.; Ruengjitchatchawala, M. and Tanticharoen, M. “Functional expression of *Spirulina* - $\Delta 6$ desaturase gene in yeast, *Saccharomyces cerevisiae*” *Journal of Molecular Biology Reports* 2005, 32: 215-226.
- Wachiraphansakul, S. and Devahastin, S. “Drying Kinetics and Quality of Soy Residue (Okara) Dried in a Jet Spouted Bed Dryer” *Journal of Drying Technology*, 2005, Vol. 23, No. 6, pp. 1229- 1242.
- Na-Ranong, S.; Laoteng, K.; Kittakoop, P.; Tanticharoen, M. and Cheevadhanarak, S. “Targeted mutagenesis of a fatty acid $\Delta 6$ -desaturase from *Mucor rouxii* : Role of amino acid residues adjacent to histidine-rich motif II” *Journal of Biochemical and Biophysical Research Communications* 2005, 339:pp.1029- 1034.
- Jeennor, S.; Laoteng, K.; Tanticharoen, M. and Cheevadhanarak, S. “Comparative fatty acid profiling of *Mucor rouxii* under different stress conditions” *Journal of FEMS Microbiol Lett* 259 2006, pp.60-66.
- Kurdrit, P.; Subudhi, S.; Cheevadhanarak, S.; Tanticharoen, M. and Hongsthong, A . “Effect of two intermediate electron donors, NADPH and FADH₂ , on *Spirulina delta 6* desaturase co-expressed with two different immediate electron donors, cytochrome b5 and ferredoxin, in *Escherichia coli* ” *Journal of Molecular Biology*, Oct 2006 published on-line.
- Hongsthong, A.; Subudhi, S.; Sirijuntarut, M.; Kurdrid, P.; Cheevadhanarak, S. and Tanticharoen, M. “Revealing the complementation of ferredoxin by cytochrome b5 in the *Spirulina* - $\Delta 6$ -desaturation reaction by N-terminal fusion and coexpression of the fungal-cytochrome b5 domain and *Spirulina* - $\Delta 6$ -acyl-lipid desaturase” *Journal of Applied Microbiology and Biotechnology* . 2006,72 (6), 1192-1201.
- Hongsthong, A.; Sirijuntarut, M.; Thammathorn, S.; Prommenate, P.; Bunnag, B.; Cheevadhanarak, S. and Tanticharoen, M. “Revealing differentially expressed proteins in two morphological forms of *Spirulina platensis* by proteomic analysis ” *Journal of Molecular Biotechnology* . 2007, 36(2), 123-130.
- Rijiravanich, P.; Aoki, K.; Chen, J.; Surareungchai, W. and Somasundrum, M. “Micro-cylinder bio sensor for phenol and catechol based on layer-by-layer immobilization of tyrosinase on latex particles: Theory and experiment" *Journal of Electroanalytical Chemistry* 589 (2006) 249-258.
- Punbusayakul, N.; Ci, L.; Talapatra, S.; Surareungchai, S. and Ajayan, P.M. “Double-Walled Carbon Nanotube Electrodes for Electrochemical sensing” *Journal of Electrochemical and Solid-State Letter*, 2007, 10(5) F13-F17.
- Chiewchan, N.; Pakdee, W.; and Devahastin, S. “ Effects of Water Activity and Hot Air Drying on Thermal Resistivity of *Salmonella krefeld* on Rawhide Surface ” *Journal of Food Microbiology* , 2007, Vol. 114, No. 1, pp. 43-49. (February 28)

- Pimpaporn, P.; Devahastin, S.; and Chiewchan, N. “ Effects of Combined Pretreatments on Drying Kinetics and Quality of Potato Chips Undergoing Low-Pressure Superheated Steam Drying ” Journal of Food Engineering , 2007, Vol. 81, No. 2, July, pp. 318-329
- Nimmol, C.; Devahastin, S.; Swasdisevi, T. and Soponronnarit, S. “ Drying of Banana Slices Using Combined Low-Pressure Superheated Steam and Far-Infrared Radiation ” Journal of Food Engineering , 2007, Vol. 81, No. 3, August, pp. 624-633.
- Kerdpi boon, S. and Devahastin, S. “Fractal Characterization of Some Physical Properties of a Food Product under Various Drying Conditions” Journal of Drying Technology , 2007, Vol. 25, No. 1, pp. 135-146.
- Thomkapanich, O.; Suvarnakuta, P. and Devahastin, S. “Study of Intermittent Low-Pressure Superheated Steam and Vacuum Drying of a Heat-Sensitive Material” Journal of Drying Technology , 2007, Vol. 25, No. 1, pp. 205-223.
- Wachiraphansakul, S. and Devahastin, S., 2007, Drying Kinetics and Quality of Okara Dried in a Jet Spouted Bed of Sorbent Particles , Journal of LWT - Food Science and Technology , Vol. 40, No. 2, March, pp. 207-219.
- Panyawong, S. and Devahastin, S. “ Determination of Deformation of a Food Product Undergoing Different Drying Methods and Conditions via Evolution of a Shape Factor ” Journal of Food Engineering , 2007, Vol. 78, No. 1, January, pp. 151-161.
- Kerdpi boon, S.; Kerr, W.L.; Devahastin, S. “ Neural Network Prediction of Physical Property Changes of Dried Carrot as a Function of Fractal Dimension and Moisture Content ” Journal of Food Research International , 2006, Vol. 39, No. 10, December, pp. 1110-1118.
- Kongsoontornkijkul, P.; Ekwongsupasarn, P.; Chiewchan, N. and Devahastin, S. "Effects of Drying Methods and Tea Preparation Temperature on the Amount of Vitamin C in Indian Gooseberry Tea” Journal of Drying Technology , 2006, Vol. 24, No. 11, pp. 1509-1513.
- • Leeratanarak, N.; Devahastin, S. and Chiewchan, N. “ Drying Kinetics and Quality of Potato Chips Undergoing Different Drying Techniques ” Journal of Food Engineering , 2006, Vol. 77, No. 3, December, pp. 635-643.
- Srisamran, C. and Devahastin, S. “ Numerical Simulation of Flow and Mixing Behavior of Impinging Streams of Shear- Thinning Fluids ” Journal of Chemical Engineering Science , 2006, Vol. 61, No. 15, August, pp. 4884-4892.
- Devahastin, S.; Tapaneyasin, R.; and Tansakul, A. “ Hydrodynamic Behavior of a Jet Spouted Bed of Shrimp ” Journal of Food Engineering, 2006, Vol. 74, No. 3, June, pp. 345-351.
- Devahastin, S. and Pitaksuriyarat, S. “ Use of Latent Heat Storage to Conserve Energy during Drying and Its Effect on Drying Kinetics of a Food Product ” Journal of Applied Thermal Engineering , 2006, Vol. 26, No. 14-15, October, pp. 1705-1713.
- Laoteng, K.; Jitsue, S.; Dandusitapunth, Y. and Cheevadhanarak, S. “Ethanol- induced changes in expression profiles of cell growth, fatty acid and desaturase genes of *Mucor rouxii* ” Journal of Fungal Genet Biol, April 2007 published on-line.
- Nookaew, I. ; Meechai, A.; Thammarongtham, C.; Laoteng, K.; Ruanglek, V.; Cheevadhanarak, S.; Nielsen, J. and Bhumiratana, S. “Identification of Flux Regulation Coefficients from Elementary Flux Modes: A new tool in systems biology for analysis of metabolic networks” Journal of Biotechnology and Bioengineering . 2007, 97(6), 1535-1549.

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