

## Output จากโครงการ

1. ผลงานของหัวหน้าโครงการตีพิมพ์ร่วมกับนักวิจัยในกลุ่ม (ตัวอักษรตัวหนา หมายถึง เมธีวิจัยอาวุโส สกว. ตัวอักษรที่ขีดเส้นใต้ หมายถึง ผู้ที่อยู่ในทีมวิจัย)

### 1.1 ผลงานตีพิมพ์ในวารสารวิชาการนานาชาติ (\* มี acknowledge สกว. )

1. Wititsuwannakul, D., Rattanapittayaporn A., Koyama, T. and Wititsuwannakul, R. (2004) Involvement of *Hevea latex* organelle membrane proteins in rubber biosynthesis activity and regulatory function. *Macromol. Biosci.* 4, 314-323. (IF=2.521)
2. Rattanapittayaporn, A., Wititsuwannakul, D. and Wititsuwannakul, R. (2004) Significant role of bacterial undecaprenyl diphosphate (C<sub>55</sub>-UPP) for rubber biosynthesis by *Hevea latex* enzyme *Macromol. Biosci.* 4, 1039-1052. (IF=2.521)
3. Sritanyarat, W., Pearce, G., Siems, W.F., Ryan, C.A., Wititsuwannakul, R., Wititsuwannakul, D. (2005) Isolation and characterization of iso inhibitor of the potato inhibitor I family from the latex of the rubber tree, *Hevea brasiliensis*. *Phytochemistry* 67, 1644-1650. (2.417)
4. Phatthiya, A., Takahashi, S., Chareonthiphakorn, N., Koyama, T., Wititsuwannakul, D., Wititsuwannakul, R. (2007) Cloning and Expression of the Gene Encoding Solanesyl Diphosphate Synthase from *Hevea brasiliensis*. *Plant Science* 172, 824-831. (IF=1.631)
5. Wititsuwannakul, R., Pasitkul, P., Kanokwiroon, K., Wititsuwannakul, D. (2008) A role for a *Hevea latex* lectin-like protein in mediating rubber particle aggregation and latex coagulation. *Phytochemistry* 69, 339-347. (IF=2.417)
6. Wititsuwannakul, R., Pasitkul, P., Jewtragoon, P., Wititsuwannakul, D. (2008) *Hevea latex* lectin binding protein in C-serum as an anticoagulating factor and its role in a proposed new model for latex coagulation. *Phytochemistry* 69, 656-662. (IF=2.417)
7. Wititsuwannakul, R. Rukseree, K., Kanokwiroon, K., Wititsuwannakul, D. (2008) A rubber particle protein specific for *Hevea* lectin binding involved in latex coagulation. *Phytochemistry* 69, 1111-1118. (IF=2.417)

8. Kanokwiroon, K., Teanpaisam, R., Wittitsuwannakul, D., Hooper, A.B., Wittitsuwannakul, R. (2008) Antimicrobial activity of a protein purified from the latex of *Hevea brasiliensis* on oral microorganisms. *Mycoses* (2008), doi:10.1111/j.1439-0507.2008.01490.x (in press) (IF=0.959)
9. Mengumpun, K., Yayapiwatana, C., Hamilton, R.G., Sangsupawanich, P., Wittitsuwannakul, R. (2008) Identification of a novel hydrophobic allergen from *Hevea brasiliensis* bottom fraction membrane. *Asian Pacific Journal of Allergy and Immunology* ( final revision resubmitted) (IF=0.277).
10. Yoonram, K., Takahashi, S., Rattanapittayaporn, A., Koyama, T., Wittitsuwannakul, D., Wittitsuwaanakul, R. (2008) cDNA, from *Hevea brasiliensis*, encoding 1-deoxy-D-xylulose-5-phosphate reductoisomerase. *Plant Science* (being revised for resubmission) (IF=1.631)
11. Chotigeat, W., Duangchu, S., Wittitsuwannakul, R. and Phongdara, A. (2008) Cloning of pectic lyase from the rubber tree. *Plant Physiology and Biochemistry* ,submitted (IF=1.847)

#### 1.2 ผลงานตีพิมพ์ในหนังสือระดับนานาชาติ

1. Wittitsuwannakul, D. and Witisuwannakul, R. (2005) Biochemistry of Natural Rubber and Latex' in: " Biopolymers for Medicinal and Parmaceutical Applications" pp.35-85 (Eds: Alexander Steinbuchel and Robert H. Marchessault) , WILEY-VCH. Weiheim, Germany
2. Wittitsuwannakul, D. and Witisuwannakul, R. (2005) Biochemistry of Natural Rubber and Latex' in: "Biotechnology of Biopolymers" (Eds: Alexander Steinbuchel and Yoshiharu Doi), Chapter 4, 'Biochemistry of Natural Rubber and Latex' pp 71-123. , WILEY-VCH. Weiheim, Germany

#### 1.3 ผลงานจดสิทธิบัตร

อนุสิทธิบัตร โมโนโคลนอลแอนติบอดีและการสร้างเซลล์ลูกผสมซึ่งหลั่งโมโนโคลนอลแอนติบอดี ต่อ โปรตีน 30 กิโลดาลตันของยางธรรมชาติ (เลขที่คำขอ 0603000145, กรมทรัพย์สินทางปัญญา)

## 2 ผลงานของทีมวิจัยแต่ละคนโดยเฉพาะผู้ที่ได้รับค่าตอบแทนรวมทั้งนักศึกษาปริญญาโท/เอก

### 2.1 ศ.ดร.ธีรยศ วิทิตสุวรรณกุล

1. **Wititsuwannakul, D., Rattanapittayaporn A., Koyama, T. and Wititsuwannakul, R. (2004)** Involvement of *Hevea latex* organelle membrane proteins in rubber biosynthesis activity and regulatory function. *Macromol. Biosci.* 4, 314-323. (IF=2.521)
2. Rattanapittayaporn, A., **Wititsuwannakul, D.** and Wititsuwannakul, R. (2004) Significant role of bacterial undecaprenyl diphosphate (C<sub>55</sub>-UPP) for rubber biosynthesis by *Hevea latex* enzyme *Macromol. Biosci.* 4, 1039-1052. (IF=2.521)
3. Sritanyarat, W., Pearce, G., Siems, W.F., Ryan, C.A., **Wititsuwannakul, R., Wititsuwannakul, D.** (2005) Isolation and characterization of iso inhibitor of the potato inhibitor I family from the latex of the rubber tree, *Hevea brasiliensis*. *Phytochemistry* 67, 1644-1650. (IF=2.417)
4. Phatthiya, A., Takahashi, S., Chareonthiphakorn, N., Koyama, T., **Wititsuwannakul, D., Wititsuwannakul, R.** (2007) Cloning and Expression of the Gene Encoding Solanesyl Diphosphate Synthase from *Hevea brasiliensis*. *Plant Science* 172, 824-831. (IF=1.631)
5. **Wititsuwannakul, R., Pasitkul, P., Kanokwiroon, K., Wititsuwannakul, D.** (2008) A role for a *Hevea latex* lectin-like protein in mediating rubber particle aggregation and latex coagulation. *Phytochemistry* 69, 339-347. (IF=2.417)
6. **Wititsuwannakul, R., Pasitkul, P., Jewtragoon, P., Wititsuwannakul, D.** (2008) *Hevea latex* lectin binding protein in C-serum as an anticoagulating factor and its role in a proposed new model for latex coagulation. *Phytochemistry* 69, 656-662. (IF=2.417)
7. **Wititsuwannakul, R. Rukseree, K., Kanokwiroon, K., Wititsuwannakul, D.** (2008) A rubber particle protein specific for *Hevea* lectin binding involved in latex coagulation. *Phytochemistry* 69, 1111-1118. (IF=2.417)
8. Kanokwiroon, K., Teanpaisam, R., **Wititsuwannakul, D., Hooper, A.B., Wititsuwannakul, R.** (2008) Antimicrobial activity of a protein purified from the latex of *Hevea brasiliensis* on oral microorganisms. *Mycoses* (2008), doi:10.1111/j.1439-0507.2008.01490.x (in press) (IF=0.959)
9. Yoonram, K., Takahashi, S., Rattanapittayaporn, A., Koyama, T., **Wititsuwannakul, D., Wititsuwannakul, R.** (2008) cDNA, from *Hevea*

*brasiliensis*, encoding 1-deoxy-D-xylulose-5-phosphate reductoisomerase. Plant Science (being revised for resubmission) (IF=1.631)

10. **Wititsuwannakul, D.** and **Wititsuwannakul, R.** (2005) Biochemistry of Natural Rubber and Latex' in: " Biopolymers for Medicinal and Parmaceutical Applications" pp.35-85 (Eds: Alexander Steinbuchel and Robert H. Marchessault) , WILEY-VCH. Weiheim, Germany

11. **Wititsuwannakul, D.** and **Wititsuwannakul, R.** (2005) Biochemistry of Natural Rubber and Latex' in: "Biotechnology of Biopolymers" (Eds: Alexander Steinbuchel and Yoshiharu Doi), Chapter 4, 'Biochemistry of Natural Rubber and Latex' pp 71-123. , WILEY-VCH. Weiheim, Germany

## 2.2 รศ.ดร.วิไลวรรณ โชติเกียรติ

**Chotigeat, W., Duangchu, S., Wititsuwannakul, R. and Phongdara, A.** (2008) Cloning of pectic lyase from the rubber tree. Plant Physiology and Biochemistry ,submitted (IF 1.847)

## 2.3 รศ.ดร.อมรรัตน์ พงศ์คารา

**Chotigeat, W., Duangchu, S., Wititsuwannakul R. and Phongdara, A.** (2008) Cloning of pectic lyase from the rubber tree. Plant Physiology and Biochemistry, submitted (IF 1.847)

## 2.4 อ.พญ. ภาสุวี แสงศุภวานิช

**Mengumpun, K., Yayapiwatana, C., Hamilton, R.G., Sangsupawanich, P., Wititsuwannakul, R.** (2008) Identification of a novel hydrophobic allergen from *Hevea brasiliensis* bottom fraction membrane. Asian Pacific Journal of Allergy and Immunology (final revision resubmitted) (IF=0.277).

## 2.5 รศ.ดร.วีเจียรไพศาล

**Kanokwiroon, K., Teanpalsarn, R., Wititsuwannakul, D., Hooper, A.B., Wititsuwannakul, R.** (2008) Antimicrobial activity of a protein purified from the latex of *Hevea brasiliensis* on oral microorganisms. Mycoses (2008), doi:10.1111/j.1439-0507.2008.01490.x (in press) (IF=0.959)

## 2.6 อ.ดร.อธิยา รัตนพิทยาภรณ์

**Yoonram, K., Takahashi, S., Rattanapittayaporn, A., Koyama, T., Wititsuwannakul, D., Wititsuwannakul, R.** (2008) cDNA, from *Hevea brasiliensis*, encoding 1-deoxy-D-xylulose-5-phosphate reductoisomerase. Plant Science (being revised for resubmission) (IF=1.631)

## 2.7 อ.ดร. นพแก้ว เจริญธิพาการ

Phatthiya, A., Takahashi, S., Chareonthiphakorn, N., Koyama, T., Wititsuwannakul, D., Wititsuwannakul, R. (2007) Cloning and Expression of the Gene Encoding Solanesyl Diphosphate Synthase from *Hevea brasiliensis*. *Plant Science* 172, 824-831. (IF=1.631)

## 2.8 ดร.ภัทธาวุธ จิวตระกูล

Wititsuwannakul, R., Pasitkul, P., Jewtragoon, P., Wititsuwannakul, D. (2008) *Hevea latex* lectin binding protein in C-serum as an anticoagulating factor and its role in a proposed new model for latex coagulation. *Phytochemistry* 69, 656-662. (IF=2.417)

## 2.9 ดร. อติพน พัดนิยะ (กปก)

Phatthiya, A., Takahashi, S., Chareonthiphakorn, N., Koyama, T., Wititsuwannakul, D., Wititsuwannakul, R. (2007) Cloning and Expression of the Gene Encoding Solanesyl Diphosphate Synthase from *Hevea brasiliensis*. *Plant Science* 172, 824-831. (IF=1.631)

## 2.10 ดร.วรรณภา ศรีชัยรัตน์ (กปก)

Sritanyarat, W., Pearce, G., Siems, W.F., Ryan, C.A., Wititsuwannakul, R., Wititsuwannakul, D. (2005) Isolation and characterization of isolectin of the potato inhibitor I family from the latex of the rubber tree, *Hevea brasiliensis*. *Phytochemistry* 67, 1644-1650. (IF= 2.417)

## 2.10 ดร.กมลวรรณ กนกวิรุพณ์ (กปก)

1. Kanokwiroon, K., Teanpaisarn, R., Wititsuwannakul, D., Hooper, A.B., Wititsuwannakul, R. (2008) Antimicrobial activity of a protein purified from the latex of *Hevea brasiliensis* on oral microorganisms. *Mycoses* (2008), doi:10.1111/j.1439-0507.2008.01490.x (in press) (IF=0.959)
2. Wititsuwannakul, R., Pasitkul, P., Kanokwiroon, K., Wititsuwannakul, D. (2008) A role for a *Hevea latex* lectin-like protein in mediating rubber particle aggregation and latex coagulation. *Phytochemistry* 69, 339-347. (IF=2.417)
3. Wititsuwannakul, R., Rukserree, K., Kanokwiroon, K., Wititsuwannakul, D. (2008) A rubber particle protein specific for *Hevea* lectin binding involved in latex coagulation. *Phytochemistry* 69, 1111-1118. (IF=2.417)

### 2.11 เกศจี เม่งอำพันธ์ (คปก)

Mengumpun, K., Yayapiwatana, C., Hamilton, R.G., Sangsupawanich, P., Wititsuwannakul, R. (2008) Identification of a novel hydrophobic allergen from *Hevea brasiliensis* bottom fraction membrane. *Asian Pacific Journal of Allergy and Immunology* (final revision resubmitted) (IF=0.277).

### 2.12 เครือวัลย์ ชุณหรัมย์ (คปก)

Yoonram, K., Takahashi, S., Rattanapittayaporn, A., Koyama, T., Wititsuwannakul, D., Wititsuwaanakul, R. (2008) cDNA, from *Hevea brasiliensis*, encoding 1-deoxy-D-xylulose-5-phosphate reductoisomerase. *Plant Science* (being revised for resubmission) (IF=1.631)