

## CURRICULUM VITAE

### WEI KONG

#### CONTACT INFORMATION

Address: Center for Infectious Diseases and Vaccinology, The Biodesign Institute, Arizona State University, Tempe, AZ, 85287-5401  
Laboratory: B337, The Biodesign Institute, Arizona State University  
Phone: (480) 727-9591  
E-mail: wei.kong@asu.edu

#### EDUCATION

2005 - 2007 Postdoctoral Fellow, Arizona State University, Tempe, AZ, USA  
Adviser: Dr. Roy Curtiss III  
2001 - 2005 Postdoctoral Fellow, Washington University in St. Louis, MO. USA  
Adviser: Dr. Roy Curtiss III  
1996 - 2000 Ph.D. Molecular Genetics of Oral Bacteria, Kyushu University, Fukuoka, Japan  
Mentor: Dr. Hiroaki Nakayama  
1986 - 1989 M.S. Biochemistry of Plant Virus, Inner Mongolia University, Huhhot, China  
Mentor: Dr. Heling Zhang  
1979 - 1984 B.S. Biochemistry, Jilin University, Changchun, China

#### CURRENT MAIN AREA OF RESEARCH

Design, construction and evaluation of vaccines to elicit protective host immune responses in agriculturally important animals and humans; design, construction and evaluation of bacteria-based therapeutic cancer vaccines and exploration of mechanisms of bacterial pathogenesis and host immune responses to infections and vaccines.

#### EMPLOYMENT AND PROFESSIONAL POSITION

2009 - Present Research Assistant Professor, The Biodesign Institute, Arizona State University, Tempe, AZ, USA  
2007 - 2008 Assistant Research Scientist, The Biodesign Institute, Arizona State University, Tempe, AZ, USA  
1989 - 1996 Lecturer, Dept. of Biology, Inner Mongolia University, Huhhot, China  
1986 - 1988 Visiting Researcher, The Institute of Biochemistry, Academia Sinica, Shanghai, China  
1984 - 1986 Teaching Instructor, Dept. of Biology, Inner Mongolia University, Huhhot, China

#### SOCIETY MEMBERSHIPS

Member, American Society for Microbiology  
Member, The American Association of Avian Pathologists (AAAP)

## **PROFESSIONAL ACTIVITIES AND COMMITTEE SERVICE**

- 2014 Invited member of the review panel, Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs (CDMRP)
- 2013 Invited member of the review panel, Indo-US Collaborative Program (NIH)
- 2013 Invited member of the Early Career Reviewer (ECR) program (NIH)
- 2013 Invited reviewer, Clinical and Vaccine Immunology
- 2012-present Invited reviewer, Journal Applied Microbiology and Biotechnology
- 2012 Director of the undergraduate honor thesis committee of Lee Benson, The Barrett Honors College, ASU
- 2011 Invited reviewer, Avian Disease
- 2010-2012 Invited reviewer, Vaccine
- 2010 Invited reviewer, Fish and shellfish immunology
- 2008 Director of the undergraduate honors thesis committee of Jeffrey Tully, The Barrett Honors College, ASU
- 2008 Co-Chair, Technologies and Mucosal Immunity and Vaccine Design Section, 1st Annual World Vaccine Congress, Foshan, China
- 2008 Co-Chair, DNA Based Vaccines Section, 1st Annual World Vaccine Congress, Foshan, China

## **HONORS AND AWARDS:**

- 2014 Prairie Excellence Award (Inner Mongolia of China)
- 2014 Visiting Professor, Inner Mongolia University, China
- 2014 Invited speaker, 4<sup>th</sup> International Conference on Vaccines & Vaccination, Valencia, Spain
- 2014 Invited speaker, 4th Annual World Congress of Microbes, Dalian, China
- 2014 Faculty Honorees of AzTE Faculty Recognition Event
- 2013 Principal investigator award from Eli Lilly - Elanco
- 2013 Publication was highlighted by journal of Expert Review of Vaccines in “news in brief as one of the most important events and launches in the vaccines field”
- 2013 Faculty of 1000 prime (Microbiology)
- 2013 Invited speaker, Immunotherapeutics and Vaccine Summit (Boston, MA)
- 2013 Invited speaker, World Vaccine Congress & Expo Washington, Washington DC
- 2012 Faculty of 1000 (Microbiology)
- 2010 Principal investigator award from NIH
- 2010 Invited speaker, 2nd Annual World Vaccine Congress, Beijing, China
- 2008 Faculty of 1000 Biology
- 2008 Invited speaker, 1st Annual World Vaccine Congress, Foshan, China
- 2008 Invited speaker, American Association of Avian Pathologists (AAAP) Annual Meeting, New Orleans, LA
- 2007 First place award recipient, The First Valley-Wide Biodesign Institute Postdoctoral

- Poster Symposium, Tempe, AZ
- 2003 Invited speaker, Conference of Research Workers in Animal Diseases Proceedings of the 84<sup>th</sup> Annual Meeting, Chicago, IL
- 1996 Principal investigator award from The National Natural Science Foundation (NSFC) of China
- 1994 Guanghua Outstanding Teacher Award
- 1993 Inner Mongolia Young Investigator Award

## **TEACHING EXPERIENCE:**

### **Courses at Arizona State University**

- BCH 492 Honors Directed Study, 2010
- BIO 495 Undergraduate Research (Honors contract), 2011
- MIC 401 Research Paper, 2013
- MIC 495 Undergraduate Research (Honors contracts), 2010, 2011, 2012, 2013
- MIC 499 Researcher of SOLUR program, 2012
- MBB 493 Honors Thesis, 2010, 2013
- MBB 499 Individualized Instruction, 2011
- MIC 494 Special Topics, 2011
- MIC 499 Individualized Instruction, 2010

### **Courses at Inner Mongolia University, Huhhot, China**

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|---|-------------|
| Advanced Biochemistry (Graduate School) | 1992 – 1995 |
| Genetic Engineering                     | 1990 - 1995 |
| Bacterial Physiology                    | 1990 - 1995 |
| Experimental Biochemistry               | 1984 - 1989 |

### **Supervising/Mentoring at Arizona State University**

#### Researchers

- |                 |   |
|-----------------|---|
| Xiao Wang       | Visiting Associate Professor (Inner Mongolia University in China) |
| Guang Zhao      | Postdoctoral Research Associate                                   |
| Jie Yeun Park   | Postdoctoral Research Associate                                   |
| Qilemoge Xi     | Ph.D. Student (Inner Mongolia University in China)                |
| Tiana Golding   | Research Technologist   |
| Amanda Gonzales | Research Technologist   |
| Andre Guerra    | Assistant Research Technologist                                   |
| Matthew Brovold | Assistant Research Technologist                                   |
| Blessing Okon   | Assistant Research Technologist                                   |
| Emilia Fields   | Post - Research Education Program (PREP) Scholar, ASU             |

#### Undergraduate Research Mentoring at Arizona State University

2014 - Present Michael Anthony Hoenack, the Barrett Honors College, ASU  
2014 - Present David Casper, the Barrett Honors College, ASU  
2013 - Present Alexa King, School of Life Sciences, ASU  
2012 - 2013 Andre Guerra, Post- baccalaureate research, University of Arizona  
2012 - 2012 William Bryson Bendall, the Barrett Honors College, ASU  
2012 - 2012 Lisa DiAndreth, Post- baccalaureate studies, ASU  
2011 - 2012 Tabarik Ahmad, Global Health, the Barrett Honors College, ASU  
2011 - 2013 Chelsea Danielle Warren, Microbiology, School of Life Sciences, ASU  
2011 - 2011 Matthew Brovold, Cellular & Developmental Biology, School of Life Sciences, ASU  
2011 - 2011 Kewmars Keyvani, Biological Sciences, the Barrett Honors College, ASU  
2010 - 2013 Lee Benson, the Barrett Honors College, ASU  
2009 - 2010 Jeffrey Tully, the Barrett Honors College, ASU  
2009 - 2010 Andrew Koons, the Barrett Honors College, ASU  
2008 - 2010 Andrew Diamos, the Barrett Honors College, ASU  
2008 - 2011 Alison Lee Farquhar, School of Life Sciences, ASU  
2008 - 2010 Stephanie Zankman, Barrett Honors College, University of Arizona

#### High School Research Mentoring at Arizona State University

2012 - 2012 Elizabeth Gonzales, Summer Internship, Silver High School, Silver City, NM  
2008 - 2008 April White, Summer Internship Program (SIP), Teacher, Paradise Valley High School, Scottsdale, AZ  
2008 - 2009 Chantal McWhirter, Summer Internship Program (SIP), Student, Paradise Valley High School, Scottsdale, AZ

#### **PUBLICATIONS**

##### **Peer – reviewed research papers and reviews:**

1. Weatherspoon-Griffin, N., D.Z. Yang, **W. Kong**<sup>2</sup>, Z.C. Hua, and Y. Shi. **2014**. CpxR/CpxA activates *mar* transcription to confer bacterial resistance to antimicrobial peptides. J. Biol. Chem. (revision)
2. <sup>1</sup>Shi, Y., Guang Zhao, and **W. Kong**. **2014**. A riboswitch regulating *Salmonella mntH* transcription in response to metal divalent cation Mn<sup>2+</sup>. J. Biol. Chem. doi:10.1074/jbc.M113.517516.  
(<sup>1</sup>Article covered by multiple media)
3. **Kong, W.**, J. E. Clark - Curtiss, and R. Curtiss 3rd. **2013**. Utilizing *Salmonella* for antigen delivery: the aims and benefits of bacterial delivered vaccination. Expert Review of Vaccines. 12 (4) 345-347.
4. Brenneman, K., C. Willingham, **W. Kong**, R. Curtiss 3rd, and K. Roland. **2013**. Low pH Rescue of Acid Sensitive *Salmonella* Typhi Strains by a Rhamnose-Regulated Arginine Decarboxylase System. J. Bacteriol. 195:3062-3072.

5. <sup>1,2,3,4,5</sup>**Kong, W.**, M. Brovold, B. A. Koeneman, J. E. Clark - Curtiss, and R. Curtiss 3rd. **2012**. Turning self - destructing *Salmonella* into a universal DNA vaccine delivery platform. Proc. Natl. Acad. Sci. USA. 109 (47): 19414 - 19419  
 (<sup>1</sup>2012 Selected as Faculty of 1000 Microbiology)  
 (<sup>2</sup>2013 Selected as Faculty of 1000 prime)  
 (<sup>3</sup>2013 Highlighted by Rees, Jenaid in Hopes for safe and cost-effective disease protection with new *Salmonella* bacteria vaccine technology, Expert Review of Vaccines, 12 (1), page 9)  
 (<sup>4</sup>2013 Highlighted by Riedmann, Eva M. in Self-destructing *Salmonella* to deliver oral DNA vaccines, Human vaccines & Immunotherapeutics, 9(2), Page 229)  
 (<sup>5</sup>Article covered by multiple media)
6. Zhao, G., **W. Kong (Co - first author)**, Weatherspoon - Griffin, N., J. E. Clark - Curtiss and Y. Shi. **2011**. Premature transcription termination requires Mg<sup>2+</sup> - enhanced MgtL translation within Mg<sup>2+</sup> riboswitch. EMBO J. 30 (8): 1485 - 1496.
7. Ashraf S., **W. Kong**, S. F. Wang, J. Yang, and R. Curtiss III. **2011**. Protective cellular responses elicited by vaccination with influenza nucleoprotein delivered by live recombinant attenuated *Salmonella* vaccine. Vaccine. 29 (23): 3990 - 4002.
8. Weatherspoon-Griffin, N., G. Zhao, **W. Kong**, Y. Kong, M. Morigen, H. Andrews - Polymenis, M. McClelland, and Y. Shi. **2011**. The CpxR/CpxA two - component system upregulates two Tat - dependent peptidoglycan amidases to confer bacterial resistance to antimicrobial peptide. J. Biol. Chem. 286 (7): 5529 - 5539.
9. Zhang X. M., S. Y. Wanda, K. Brennehan, **W. Kong**, X. Zhang, K. Roland and R. Curtiss III. **2011**. Improving *Salmonella* vector with rec mutation to stabilize the DNA cargoes. BMC Microbiology 11. MS:1038164561476335.
10. Ameiss, K., S. Ashraf, **W. Kong**, A. Pekosz, W.H. Wu, J.N. Billaud, and R. Curtiss III. **2010**. Delivery of woodchuck hepatitis virus - like particle presented influenza M2e by recombinant attenuated *Salmonella* displaying a delayed lysis phenotype. Vaccine. 28: 6704 - 6713.
11. Wang S.F., Y.H. Li, G. Scarpellini, **W. Kong**, H.Y. Shi, C.H. Baek, B. Gunn, S.Y. Wanda, K.L. Roland, X. Zhang, P. Senechal-Willis and R. Curtiss III. **2010**. *Salmonella* vaccine vectors displaying delayed antigen synthesis in vivo to enhance immunogenicity. Infect. Immun. 78: 3969 - 3980.
12. Curtiss, R. III, W. Xin, Y. Li, **W. Kong**, S. Y. Wanda, B. M. Gunn, and S. Wang. **2010**. New technologies in using recombinant attenuated *Salmonella* vaccine vectors. Crit. Rev. Immunol. 30: 255 - 270.
13. Zhang, X., **W. Kong**, S. Ashraf, and R. Curtiss III. **2009**. A "one-plasmid" system to generate influenza virus in cultured chicken cells for potential use in influenza vaccine. J. Virol. 83: 9296 - 9303.
14. Curtiss, R. III, S.Y. Wanda, B. Gunn, X. Zhang, S.A. Tinge, V. Ananthnarayan, H. Mo, S. F. Wang, and **W. Kong**. **2009**. *Salmonella* vaccine strains with regulated delayed attenuation in vivo. Infect. Immun. 77: 1071 - 1082.
15. <sup>1</sup>Zhao G., N. Weatherspoon, **W. Kong**, R. Curtiss III, and Y. Shi. **2008**. A Dual- Signal Regulatory Circuit Activates Transcription of A Set of Divergent Operons in *Salmonella typhimurium*. Proc. Natl. Acad. Sci.

USA. 105 (52): 20924 – 20929.

**(<sup>1</sup>Selected as Faculty of 1000 Biology)**

**16.** Song H.W., **W. Kong (Co-first author)**, N. Weatherspoon, G. Z. Qin, W. Tyler, J. Turk, R. Curtiss III, and Y. Shi. **2008.** Modulation of the regulatory activity of bacterial two-component systems by SlyA. *J. Biol. Chem.*, 283 (42): 28158 - 28168.

**17.** <sup>1,2,3</sup>**Kong, W.**, S.Y. Wanda, X. Zhang, W. Bollen, S.A. Tinge, K.L. Roland, and R. Curtiss III. **2008.** Regulated programmed lysis of recombinant *Salmonella* in host tissues to release protective antigens and confer biological containment. *Proc. Natl. Acad. Sci. USA.* 105 (27): 9361 - 9366

**(<sup>1</sup>Research Highlights in News and Views, *Nature Biotechnology* 26, 888, doi:10.1038/nbt0808-888)**

**(<sup>2</sup>Article highlighted in “In This Issue” PNAS)**

**(<sup>3</sup>Article covered by multiple articles)**

**18.** **Kong, W.**, N. Weatherspoon, and Y. Shi. **2008.** Molecular mechanism for establishment of signal-dependent regulation in the PhoP/PhoQ system. *J. Biol. Chem.*, 283 (24): 16612 - 16621.

**19.** **Kong, W.**, S. Shiota, Y. Shi, H. Nakayama, and K. Nakayama. **2000.** A novel peroxiredoxin of the plant *Sedum lineare* is a homolog of *Escherichia coli* Bcp. *J. Biochem.* 1: 107 - 114.

**20.** Shi, Y., **W. Kong**, and K. Nakayama. **2000.** Human lactoferrin binds and removes the hemoglobin receptor protein of the periodontopathogen *Porphyromonas gingivalis*. *J. Biol. Chem.* 275: 30002 – 30008.

**21.** Wang, YS., T.M. Hu, M.Q. Liu, L.L. Li, and **W. Kong.** **2000.** Transgenic tobacco established with aspartic proteinase inhibitor gene. *HEREDITAS (Beijing).* 22 (3): 129 - 132.

## **Abstract and invited presentations:**

### **Oral Presentations:**

**Kong, W. 2014.** Teaching self-destructing *Salmonella* new tricks to fight cancer. 4<sup>th</sup> International Conference on Vaccines & Vaccination, Valencia, Spain

**Kong, W. 2014.** Development of a universal bacterial delivery system for preventive and therapeutic agent delivery. 4<sup>th</sup> Annual World Congress of Microbes, Dalian, China

**Kong, W. 2013.** Immunotherapeutics and Vaccine Summit. Boston, MA, USA

**Kong, W. 2013.** World Vaccine Congress & Expo Washington. Engineering a bacterial antigen and DNA vaccine delivery system. Washington DC, USA

Curtiss R. III (Speaker), S.Y. Wanda, S.F. Wang, Q.K. Kong, B. Gunn, **W. Kong**, J. Yang, J. Santander, K. Brennenman, W. Xin, X.M. Zhang, D. Six and C. Raetz. **2010.** Progress in developing a live recombinant attenuated *Salmonella* anti - pneumococcal vaccine for oral needle-free delivery to newborns. The 7<sup>th</sup> International Symposium on Pneumococci & Pneumococcal Related Diseases.

Tel Aviv, Israel

**Kong, W.** and R. Curtiss III. **2010**. Genetically Engineer *Salmonella* to Improve DNA Vaccine Host vector Delivery System. 2<sup>st</sup> Annual World Vaccine Congress. Beijing, China

**Kong, W.** and R. Curtiss III. **2008**. The delivery of DNA vaccine using genetically engineered self – destructing *Salmonella*. p101. 1<sup>st</sup> Annual World Vaccine Congress. Foshan, China

**Kong, W.**, X.M. Zhang, S.F. Wang, and R. Curtiss III. **2008**. Delivery of rapid nuclear imported and high-level expressive DNA vaccine vector by using attenuated *Samonella* displaying programmed lysis. AAAP/AVMA Annual Meeting, New Orleans, LA, USA

Curtiss, R. III (Speaker), Y.H. Li, S.F. Wang, W. Xin, S.Y. Wanda, B. Gunn, G. Scarpellini, V. Ananthnarayan, and **W. Kong**. **2007**. Protective immunity induced against *Streptococcus pneumoniae* infection by a recombinant attenuated *Salmonella* vaccine. 13<sup>th</sup> International Congress of Mucosal Immunology, 01-1. Tokyo, Japan

Curtiss R. III (Speaker), S.Y. Wanda, X. Zhang, **W. Kong**, V. Konjufca, B. Gunn. C. Wang and B. Zekarias. **2004**. Emerging Bacterial Diseases. American Veterinary Medical Association Convention, Philadelphia, PA, USA

**Kong, W.** **2003**. Regulated bacterial lysis for DNA vaccine vector delivery. Bio-forum Seminar Series of Dept. of Biology, Washington University, St. Louis, MO, USA

**Kong, W.**, S.Y. Wanda, R. Curtiss III. **2003**. DNA vaccine vector delivery by programmed cell lysis. Conference of Research Workers in Animal Diseases Proceedings of the 84<sup>th</sup> Annual Meeting, Chicago, IL, USA

### **Poster Presentations:**

Benson L., and **W. Kong**. **2012**. Investigate and characterize the means to reduce the toxicity of genetically engineered cancer therapeutic recombinant attenuated *Salmonella*. SOLUR: 19th Annual Undergraduate Research Poster Symposium. Life Sciences, C Wing Atrium, Arizona State University, Tempe, AZ, USA

Brovold M., and **W. Kong**. **2011**. Turning self-destructing *Salmonella* into anti-cancer therapy agent. Arizona Bio-industry Association (AZBio) Annual Awards and Expo-student Showcase. Sheraton Wild Horse Pass, Chandler, AZ, USA

Brenneman K. E., C. Willingham, J. C. Jensen, **W. Kong**, R. Curtiss III, and K. L. Roland. **2012**. A Rhamnose-Regulated Arginine Decarboxylase System Increases Survival of Acid-Sensitive Vaccine Strains of *Salmonella* Typhi During Low pH Challenge. ASM 112th General Meeting. San Francisco, CA, USA

**Kong W.**, M. Brovold, J. Tully, L. Benson, and R. Curtiss III. Reprogramming *Salmonella* Chemotaxis System by Rhamnose-Regulating and/or Constitutive Up-regulating Synthesis of Their Chemoreceptors for Therapeutic Use. ASM 112th General Meeting. San Francisco, CA, USA

**Kong W.**, X.M. Zhang, S. Ashraf, K. Ameiss and R. Curtiss III. 2010. Live Recombinant Attenuated *Salmonella* Vaccine Delivering Multiple Antigens and a DNA Vaccine to Induce Protective Immunity Against Influenza Viruses. The 6th Annual Grand Challenges in Global Health Meeting. Seattle, WA, USA

Xin W, S.Y. Wanda, J. Yang, **W. Kong**, X.M. Zhang, S. Hollingshead, D. Briles, A. Focareta, J. Paton, A. Camilli, and R. Curtiss III. 2010. Delivering multiple pneumococcal protective antigens by AroD<sup>+</sup> AroC<sup>+</sup> and Asd<sup>+</sup> MurA<sup>+</sup> vectors in a recombinant attenuated *Salmonella* vaccine. The 7th International Symposium on Pneumococci & Pneumococcal Related Diseases. Tel Aviv, Israel

**Kong, W.** and R. Curtiss III. 2008. Using genetically engineered *Salmonella* to deliver DNA vaccine by self-destructing mechanism. p68. The 7<sup>th</sup> Arizona Biosciences Leadership Symposium: Translational Medicine. Tucson, AZ, USA

**Kong, W.**, X.M. Zhang, S. Ashraf, and R. Curtiss III. 2008. Improving DNA vaccine vector for efficient vaccine delivery using live attenuated bacterial carrier. T-010. American Society of Microbiology 108th General Meeting. Boston, MA, USA

Ameiss, K., **W. Kong**, and R. Curtiss III. 2008. Delivery of virus-like particle presented Influenza M2e epitope via recombinant attenuated *Salmonella* exhibiting a regulated delayed lysis phenotype. E- 021. American Society of Microbiology 108th General Meeting. Boston, MA, USA

**Kong, W.**, and R. Curtiss III. 2007. Self-destructing recombinant *Salmonella* for protective antigen delivery. The First Valley-Wide Biodesign Postdoctoral Poster Symposium, Tempe, AZ, USA

**Kong, W.**, S.Y. Wanda, X. Zhang, W. Bollen, S. Tinge, and R. Curtiss III. 2007. Regulated programmed lysis of recombinant *Salmonella* in vivo to release protective antigens and confer biological containment. E-082, p282-283. American Society of Microbiology 107th General Meeting. Toronto, Canada

Wang, S., Y. Li, G. Scarpellini, **W. Kong**, and R. Curtiss III. 2007. *Salmonella* vaccine vectors displaying regulated delayed antigen expression in vivo to enhance immunogenicity, abstract. E-064, p278. American Society of Microbiology 107th General Meeting. Toronto, Canada

**Kong, W.**, S.Y. Wanda, and R. Curtiss III. 2003. Construction and application of host vector systems for DNA vaccine vector delivery. American Society for Microbiology 103<sup>rd</sup> Annual Meeting. Z-106, p677, Washington. DC, USA

**Kong, W.**, S.Y. Wanda, and R. Curtiss III. 2003. Regulated bacterial lysis for antigen release. American Society for Microbiology 103<sup>rd</sup> Annual Meeting. E - 031, p255, Washington DC, USA

**Kong, W.**, S.Y. Wanda, and R. Curtiss III. 2003. Regulated bacterial lysis for DNA vaccine vector delivery. Congress of the World Veterinary Poultry Association, AAAP and AVMA Annual Meeting. 42:133 - 134, Denver, CO, USA

**Kong, W.**, and H. Zhang. 1989. The preparation of plant viral cDNA probes and detection of potato virus Y and potato roll leaf virus in crude extracts using southern blot. International Plant Breeding Conference, Beijing, China



**Kong, W.,** H. Zhou and Y.Q. Lin. 1985. The identification and enzymatic analysis of the polymer form of nitrogenase. 3rd Enzymology Conference, Beijing, China

**Kong, W.,** and Y.Q. Lin. 1984. The functional analysis of Mo - Fe co-factor of nitrogenase. 5th Biochemistry Conference, Beijing, China

## INTELLECTUAL PROPERTY

**1. Curtiss, R. III, and W. Kong.** Regulated bacterial lysis for gene vaccine vector delivery and antigen release. Provisional filed Sep. 1, 2002. PCT filed Aug. 29, 2003.

COUNTRY	STATUS	PAT. NO.	ISSUE DATE	APPL. NO./ SERIAL NO.	DOCKET NO.
United States	Pending			10/526,365	
United States	Provisional			60/407,522	56029-35347
PCT		WO 2004/020643		PCT/US03/26883	56029-42524
Australia				2003278729	
Europe	Issued	1537214	3/1/06	03770256.0	56029-53711

**2. Curtiss, R. III, S. Wang, S.Y. Wanda, and W. Kong.** Regulated expression of antigen and/or regulated attenuation to enhance vaccine immunogenicity and/or safety. Provisional filed 5/10/07. PCT filed 5/9/08. Europe Nationalized Application No. 08827622.5. Publication No. EP2150616, filed 5/9/08.

COUNTRY	STATUS	PAT. NO.	ISSUE DATE	APPL. NO./SERIAL NO.	INTERNAL TECH ID
United States	Issued	8,445,254	5/21/13	12/615,872	M7-011L
United States	Provisional			60/917,313	M7-011L
PCT		WO 2009/025888		PCT/US08/063293	M7-011L

**3. Curtiss, R. III, and W. Kong.** Regulated Bacterial Lysis for Gene Vector Delivery and Antigen Release. Filed 9/1/02 and PCT filed 8/29/03. U.S. Provisional Patent Application No. 60/407,522, filed 9/1/02. PCT/US08/063293, filed 8/29/03 (WO 2004/020643). U.S. Patent Application No. 10/526,365, Pub. No.: US 2006/0140975 A1, Pub. Date: Jun. 29, 2006. US National application, filed 11/22/11. Europe Patent Application 03770256.0, International publication number: WO 2004/020643 (11.03.2004 Gazette 2004/11), pub. Date: 01/03/2006. UK application, filed 11/22/11.

**4. Curtiss, R. III, and W. Kong.** Recombinant bacterium for delivering plasmid DNA. U.S. Provisional Patent Application No. 61/180,620, filed 5/22/09. Recombinant bacterium and methods of antigen delivery. U.S. Application No. 61/222,306, filed 7/01/09. Recombinant bacterium and methods of antigen and nucleic acid delivery. PCT/US10/35630, filed 5/20/10 (Internal Tech ID M9 - 141L).

**5. Curtiss, R. III, and W. Kong.** Recombinant bacterium to decrease tumor growth (I). Engineering self-destructing *Salmonella* as a cancer cure. U.S. Provisional Application No. 61/349,425, filed 05/28/10. PCT/US2011/038588, filed 04/25/11. WO 2011/150421 A2. U.S. Patent Application. 13/700,591, filed 11/28/12. (Internal Tech ID M10-154L).

6. Curtiss, R. III, and **W. Kong**. Recombinant bacterium to decrease tumor growth (II)- Engineered *S. Typhimurium* to facilitate the cross - presentation of tumor antigens & Development of a universal *Salmonella* delivery platform for RNAi therapies. Filed 01/19/11 (Internal Tech ID M11 - 058L).

7. Curtiss, R. III, **Kong, W.**, and M. Brovold. Delivery of *Salmonella*-based universal Flu vaccine to target M cells using a two-step vaccine strategy. Discloser was filed on 2/15/2013 (Internal Tech ID M13-136L).

8. Curtiss, R. III, **Kong, W.**, and M. Brovold. Turning *Salmonella* into live bioactive components to facilitate enhancement of natural killer (NK) cell tumoricidal activity. Discloser was filed on 2/18/2013 (Internal Tech ID M13-137L).

## RESEARCH AND TRAINING SUPPORT:

### Current support (Only Direct Costs Listed):

NIH R01 AI093348 - Recombinant attenuated bacterial vaccines against biodefense agents.

**(Role: Co-PI)**

01	May 1, 2011 - Apr. 30, 2012	\$673,374
02	May 1, 2012 - Apr. 30, 2013	692,774
03	May 1, 2013 - Apr. 30, 2014	712,757
04	May 1, 2014 - Apr. 30, 2015	733,338
05	May 1, 2015 - Apr. 30, 2016	746,650

Sponsor supported research - Attenuated *Salmonella* vaccines against poultry disease.

**(Role: PI)**

Mar. 22, 2013 - May. 31, 2014	\$213,173
June 1, 2014 -	(no-cost extension)

### Past support (Only Direct Costs Listed):

NIH R21 CA152456 - Engineered self-destructing *Salmonella* as a colorectal cancer cure.

**(Role: PI)**

01	Jun. 1, 2010 - May 31, 2011	\$108,750
02	Jun. 1, 2011 - May 31, 2012	\$126,585
03	Jun. 1, 2012 - May 31, 2013	(no-cost extension)

USDA 03-35204 - 13748 - Attenuated *Salmonella* antigen and DNA vaccine delivery vaccines against *Eimeria*.

**(Role: Co-PI)**

Aug. 1, 2003 - Jul. 31, 2006	\$218,800
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China - National Natural Science Foundation (NSFC) 39560048 - Transgenic tobacco established with aspartic protease inhibitor gene

**(Role: PI)**

Jul. 1, 1996 - Jun. 30, 2000	¥75,000
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China - Inner Mongolia Young Investigator Award - The development of plant viral cDNA probes kit for detection of potato virus Y and potato roll leaf virus.

**(Role: PI)**

Apr. 1, 1993 - Mar. 31, 1996

¥15,000

**PRESS RELEASES AND NEWS ARTICLES (Selected)**

2014 ASU Biodesign Institute News. "Switched-on bacteria: new RNA regulatory system found in Salmonella."

(<http://www.biodesign.asu.edu/news/switched-on-bacteria-new-rna-regulatory-system-found-in-salmonella>)

2012 Eurekalert News. "New DNA vaccine technology poised to deliver safe and cost-effective disease protection. ([http://www.eurekalert.org/pub\\_releases/2012-11/asu-ndv110512.php](http://www.eurekalert.org/pub_releases/2012-11/asu-ndv110512.php))

2012 ASU News Release. "Vaccine technology takes dramatic step forward."

([https://asunews.asu.edu/20121106\\_DNA\\_vaccine](https://asunews.asu.edu/20121106_DNA_vaccine))

2012 ASU Biodesign Institute News. "New DNA vaccine technology poised to deliver ultra-rapid, safe and cost-effective disease protection."

(<http://www.biodesign.asu.edu/news/new-dna-vaccine-technology-poised-to-deliver-ultra-rapid-safe-and-cost-effective-disease-protection->)

2012 ASU School of Life Science News. "Vaccine technology takes dramatic step forward."

([https://sols.asu.edu/news-events/news/%5bfield\\_event\\_date-yyyy%5d/vaccine-technology-takes-dramatic-step-forward?q=news/\[field\\_event\\_date-yyyy\]/vaccine-technology-takes-dramatic-step-forward](https://sols.asu.edu/news-events/news/%5bfield_event_date-yyyy%5d/vaccine-technology-takes-dramatic-step-forward?q=news/[field_event_date-yyyy]/vaccine-technology-takes-dramatic-step-forward))

2012 ScienceDaily News. "New DNA Vaccine Technology Poised to Deliver Safe and Cost-Effective Disease Protection."

(<http://www.sciencedaily.com/releases/2012/11/121105151342.htm>)

2012 The State Press. "Researchers use *Salmonella* as host for oral DNA vaccine."

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