

## 정 유 채

BK21 조교수

서울대학교 BK21 플러스사업단

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### 경력 사항:

- |                   |  |
|-------------------|--|
| 2017.7.1-         | 서울대학교 융합기술대학원 BK 조교수   |
| 2016.2.1- 2017.6  | 숙명여자대학교 연구교수 (빅데이터 활용센터)   |
| 2013.2.1 - 2016.1 | 숙명여자대학교 약학연구소 Research Fellow(책임 연구원)  |
| 2010.6 – 2012.12  | 박사 후 연구원 (Postdoctoral Training)<br>Brigham& Women's Hospital<br>연구과제명: 'miRNA cooperativity in Glioblastoma'  |
| 2008 – 2010.5     | 박사 후 연구원 (Postdoctoral Training)<br>State University of NewYork in Albany<br>연구과제: 'Genome-wide screening of miRNAs interacting with mRNA targets of GLD-1 protein in <i>C.elegans</i> ' |
| 2004 – 2008       | 가톨릭의과대학 미생물학교실 연구 조교   |

## 강의경력 :

2017.1 학기	빅데이터 연계전공 : 빅데이터 분석
2016.2 학기	빅데이터 연계전공 : 대용량데이터 관리와 튜닝
2016.1 학기	빅데이터 연계전공 : 빅데이터 분석
2015.2 학기	빅데이터 연계전공 : 대용량데이터 관리와 튜닝
2015.1 학기	멀티미디어학과, 지능형 멀티미디어 (인공지능)

## 수행 중인 프로젝트

[1] 미래부 한국연구재단 - 과학기술인문융합연구 시범사업 - **세부과제 책임**  
(2016.10.24 - 현재, 20,000,000원) (과제명 : 생체신호와 Chatbot 기반의 심리진단 및  
실시간 대응/치료 시스템) (Smart psychology analysis and healing therapy algorithm)

## 수행 완료 프로젝트

[1] 교육부: 한국연구재단: 리서치펠로우 사업: **연구책임** (2013.11-2016.10, 153,270,000 원)  
(과제명: 뇌교종 암줄기세포에서 항암제 내성 관련 miRNA 의 발굴 및 치료전략 수립)  
(Identification of TMZ-resistant miRNA in GBM using bioinformatics)

[2] (재)한국여성과학기술인지원센터 - 여대학(원)생 공학연구팀제 지원사업 - **지도교수**  
(2016.03.16 ~ 2016.10.31, 6,500,000 원) 심화과정 (과제명: 사용자의 특성을 고려한 맞춤형  
건강관리를 위한 지식베이스 구축)

## 학력사항:

2004 – 2008 가톨릭 의과대학 종양유전체학 전공 박사

**졸업논문:** Chromosomal Losses are Associated with Hypomethylation of the Gene-Control Regions in the Stomach with a Low Number of Active Genes.

2002 – 2004 Master of Medical Science, Department of Microbiology,  
가톨릭 의과대학 미생물학교실 전산생물학 전공 석사

**졸업논문:** Recombination is correlated with Alu and L1 distributions in human genome.

1998 – 2002 숙명여자대학교 정보과학부 컴퓨터 과학 심화 전공

## SCI(E) Paper

### 1. Yuchae Jung

Hybrid-Aware Model for Senior Wellness Service in Smart Home

*Sensors* **2017**, 17(5), 1182

<http://www.mdpi.com/1424-8220/17/5/1182>

### 2. Yu-Chae Jung and Tae-Min Kim

**Aneuploidy meets network analysis: leveraging copy number alterations to identify molecular pathway disrupted in high-grade serous ovarian carcinomas**

*Translational Cancer Research* 2017 (**IF=1.757**) AME Publishing Company SCIE (accepted)

### 3. Yuchae Jung, Yong Ik Yoon (**IF= 1.331**)

**Multi-level assessment model for wellness service based on human mental stress level**

*Multimedia Tools and Applications* 2016 March s11042(16)-3444-9 (Springer)

<https://link.springer.com/article/10.1007/s11042-016-3444-9>

4. **Yu-Chae Jung**; Seula Han; Hua Li ; Yeon-Hwa Ahn; Hyewon Cho; Cheol-Jung Lee; Hani Lee; Yong-Yeon Cho; Jae-Ha Ryu; Raok Jeon; WooYoung Kim (IF=2.371) (11authors)  
**Kazinol-E is a specific inhibitor of ERK that suppresses the enrichment of a breast cancer stem-like cell population**

*Biochem Biophys Res Commun.* 2016.2.5 (SCI) 470(2) Pages 294–299

<http://www.sciencedirect.com/science/article/pii/S0006291X16300663>

5. Han S, Woo JK, **Jung Y**, Jeong D, Kang M, Yoo YJ, Lee H, Oh SH, Ryu JH, Kim WY  
(IF=2.371) (10authors)

**Evodiamine selectively targets cancer stem-like cells through the p53-p21-Rb pathway.**

*Biochem Biophys Res Commun.* 2016 1 22 469(4) 1153-8 (SCI)

<http://www.sciencedirect.com/science/article/pii/S0006291X15310718>

6. **Yuchae Jung**, WooYoung Kim. (IF=2.490)

**Cancer stem cell targeting: Are we there yet?**

*Arch Pharm Res.* 10 February 2015; 38(3): 414-422

<https://link.springer.com/article/10.1007%2Fs12272-015-0570-2>

7. **Yuchae Jung**, Heejoo Park, Hui-Yuan Zhao, Raok Jeon, Jae-Ha Ryu, and Woo-Young Kim  
(IF=2.090) Springer (6 authors)

**Systemic approaches identify a garlic-derived chemical, Z-ajoene, as a glioblastoma multiforme cancer stem cell-specific targeting agent**

*Molecules and Cells* 2014 Jul 31, 2014; 37(7): 547–553

<http://www.molcells.org/journal/view.html?doi=10.14348/molcells.2014.0158>

8. Jung H. Doh, **Yuchae Jung**, Valerie Reinke, and Min-Ho Lee

***C. elegans* RNA-binding protein GLD-1 recognizes its multiple targets using sequence, context and structural information to repress translation**

*Worm.* 2013 Oct 1;2(4) 26548 Tayler&Princess

<http://www.sciencedirect.com/science/article/pii/S1877050915009552>

9. Jiang X, Xing H, Kim TM, **Jung Y**, Huang W, Yang HW, Song S, Park PJ, Carroll RS, Johnson MD. (IF=7.133)

**Numb regulates glioma stem cell fate and growth by altering epidermal growth factor receptor and Skp1-Cullin-F-box ubiquitin ligase activity.**

*Stem Cells*. 2012 Jul; 30(7):1313-26

<http://onlinelibrary.wiley.com/doi/10.1002/stem.1120/abstract>

10. Hong SJ, Oh JH, **Jung YC**, Kim YH, Kim SJ, Kang SJ, Seo EJ, Choi SW, Kang MI, Rhyu MG. (IF= 1.253)

**DNA methylation patterns of ulcer-healing genes associated with the normal gastric mucosa of gastric cancers.**

*J Korean Med Sci*. 2010 Mar; 25(3):405-17. [Link](#)

11. Hong SJ, Kang MI, Oh JH, **Jung YC**, Kim YH, Kim SJ, Choi SH, Seo EJ, Choi SW, Rhyu MG. (IF= 1.253)

**DNA methylation and expression patterns of key tissue-specific genes in adult stem cells and stomach tissues.**

*J Korean Med Sci* 2009 Oct;24(5):918-29 [Link](#)

12. **Yuchae Jung**, Seung-Jin Hong, Young-Ho Kim, Sung-Ja Kim, Seok-Jin Kang, Sang-Wook Choi, and Mun-Gan Rhyu (IF= 1.253)

**Chromosomal Losses are Associated with Hypomethylation of the Gene-Control Regions in the Stomach with a Low Number of Active Genes.**

*J Korean Med Sci* 2008 Dec;23(6):1068-89 [Link](#)

13. Kim TM, Yim SH, Jeoung YB, **Jung YC**, Chung YJ (IF=4.621)

**PathCluster: a framework for gene set-based hierarchical clustering.**

*Bioinformatics*. 2008 Sep 1;24(17):1957-8. [Link](#)

14. Kim TM, Yim SH, **Jung YC**, Park CK, Choi JY, Park WS, Kwon MS, Fiegler H, Carter NP, Rhyu MG, Chung YJ. (IF=5.007)

**Clinical implication of recurrent copy number alterations in hepatocellular carcinoma and putative oncogenes in recurrent gains on 1q**

Int J Cancer. 2008 Dec 15;123(12):2808-15. [Link](#)

15. Kim TM, **Jung YC**, Rhyu MG, Jung MH, Chung YJ. (IF=4.621)

**GEAR: genomic enrichment analysis of regional DNA copy number changes.**

Bioinformatics 2008 Feb 1;24(3):420-1 [Link](#)

16. Moo-Il Kang, Hye-Soo Kim, **Jung YC**, Young-Ho Kim, Seung-Jin Hong, Mi-Kyoung Kim, Ki-Hyun Baek, Chun-Choo Kim, and Mun-Gan Rhyu (IF=3.368)

**Transitional CpG Methylation between Promoters and Retroelements of Tissue-Specific Genes during Human Mesenchymal Cell Differentiation**

J of cellular biochemistry. 2007 Sep 1;102(1):224-39. [PubMed Link](#)

17. Kim YH, Hong SJ, **Jung YC**, Kim SJ, Seo EJ, Choi SW, Rhyu MG. (IF= 3.32)

**The 5'-end transitional CpGs between the CpG islands and retroelements are hypomethylated in association with loss of heterozygosity in gastric cancers.**

BMC Cancer. 2006 Jul 10;6:180. [PubMed Link](#)

18. Kang MI, Rhyu MG, Kim YH, **Jung YC**, Hong SJ, Cho CS, Kim HS. (IF= 2.917)

**The length of CpG islands is associated with the distribution of Alu and L1 retroelements.**

Genomics. 2006 May;87(5):580-90. Epub 2006 Feb 20. [PubMed Link](#)

19. Kim TM, **Jung YC**, Rhyu MG. (IF= 1.253)

**Alu and L1 retroelements are correlated with the tissue extent and peak rate of gene expression, respectively.**

J Korean Med Sci. 2004 Dec;19(6):783-92. [PubMed Link](#)

1. **Yuchae Jung**, Yong Ik Yoon

**Hybrid-Aware Model for the Detection of Abnormal Activity of Users**

*Journal of Information Processing Systems*, KIPS(발행기관) (학진등재지) – under review

2. Yuchae Jung, Yongik Yoon

**Ontology model for wellness contents recommendation based on risk ratio EM**

Procedia Comp Sci. 2016.3.22

## **International Conference**

1. ICUFN 2016, International Conference on Ubiquitous and Future Network, July

Title: **Data integration for clinical decision support**

2. BigComp 2016, 1<sup>st</sup> International Workshop on Big Data Analytics for Healthcare and Well-being  
Jan 18-20, 2016, Hongkong, China

Title: **Monitoring Senior Wellness Status using Multimodal Biosensors**

Yuchae Jung, Yongik Yoon

3. The 2nd International Workshop on Machine Learning and Data Mining for Sensor Networks  
(MLDM-SN 2015) June 2-5, 2015, London, UK

<http://www.sciencedirect.com/science/article/pii/S1877050915009552#>

Title: **Ontology model for wellness contents recommendation based on risk ratio EM**

Yuchae Jung, Yongik Yoon

4. HIMS 2015, International Conference on Health Informatics and Medical Systems July.27, 2015

Title: **Bio-emotional Index Assessment for Elders Wellness Service in Smart Home**

5. ICUFN 2015, International Conference on Ubiquitous and Future Network July, 7-10, 2015

Title: **Wellness Contents Recommendation Based on Human Emotional and Health Status Using EM**

Yuchae Jung , Yongik Yoon

6. WorldITCongress, Feb, 24-26, 2015

C-4 ACS, AIM Session Chair: Jung Yuchae

Title: **Wellness Contents Recommendation for Mental and Physical health using EM model**

Yuchae Jung , Yongik Yoon

7. BigComp, Feb, 2015 Invited talk

Title: **Sensing Recognition-based Intelligent Suggestion for Wellness**

Yuchae Jung , Yongik Yoon

8. International conference on information Networking, Jan, 2015

Title: **Behavior tracking model in dynamic situation using risk ration EM**

Yuchae Jung, Yongik Yoon

9. International conference on information Networking, Jan, 2015

Title: **Prediction Model for Mental and Physical Health Condition using Risk Ratio EM**

Yuchae Jung, Yongik Yoon

10. 17<sup>th</sup> International C.elegans meeting (June, 2009)

**Toward the understanding the rules of GLD-1 binding specificity**

Doh, Jung Hoon, **Jung, Yuchae**, Reinke, Valerie, Lee, Min-Ho

Link (<http://www.wormbase.org/db/misc/paper?name=WPaper00034465;class=Paper>)

#### <국내논문>

1. 생체 신호 특징 기반의 감정분석을 통한 음악 추천 시스템. 정유채, 임보연, 윤용익



## **포스터 발표**

AACR 106th Annual Meeting 2015; April 18-22, 2015; Philadelphia, PA

### **Targeting cancer stem cell through blocking the Erk pathway with Kazinol-E from *Broussonetia kazinoki***

Yu-Chae Jung, Seula Han, Li Hua, Hui-Yuan Zhao, Cheol-Jung Lee, Yong-Yeon Cho, Raok Jeon, Jae-Ha Ryu, and Woo-Young Kim

## **2013 암학회**

### **The effect of Z-ajoene on WNT, TGF $\beta$ , and NOTCH signaling in GBM cancer stem cell using proteomics and expression profiling**

Yuchae Jung, Heejoo Park, Raok Jeon, Jea-Ha Ryu, Woo-Young Kim

### **Research Interests:** Computational Biology

- Analysis of Biomedical Big Data
- Machine Learning, Deep learning
- DNA/RNA binding motif discovery in *C.elegans*.
- Human genome analysis (Transcription Factor, Repeat sequence)
- Functional analysis from microarray data (TCGA GBM data)