

## **The Research Outputs of the fiscal year of 2024**

### **Center for Metabolic Regulation of Healthy Aging (CMHA), Faculty of Life Sciences, Kumamoto University**

#### **● Division of Metabolic and Cardiovascular Research**

##### **1) Department of Medical Biochemistry**

1. Yamagata K, Mizumoto T, Yoshizawa T: The emerging role of SIRT7 in glucose and lipid metabolism. *Cells* 13: 48, 2024
2. Yamagata K, Tsuyama T, Sato Y: Roles of β-cell hypoxia in the pathogenesis of type 2 diabetes. *Int. J. Mol. Sci.* 25: 4186, 2024
3. Fukuda K, Haneda M, Kubota N, Araki E, Yamagata K: Age-related glucose intolerance is associated with impaired insulin secretion in community-dwelling Japanese adults: The Kumamoto Koshi Study. *Biomedicines* (in press)

##### **2) Department of Molecular Genetics**

1. Sato M, Kadomatsu T, Morinaga J, Kinoshita Y, Torigoe D, Horiguchi H, Ohtsuki S, Yamamura S, Kusaba R, Yamaguchi T, Yoshioka G, Araki K, Wakayama T, Miyata K, Node K, Oike Y: HINT1 suppression protects against age-related cardiac dysfunction by enhancing mitochondrial biogenesis. *Mol Metab*, 2025 in press
2. Sato M, Torigoe D, Kinoshita Y, Cyuman M, Toda C, Sato M, Ikeda K, Kadomatsu T, Horiguchi H, Morinaga J, Fukami H, Sugizaki T, Miyata K, Kusaba R, Okadome Y, Matsunaga E, Node K, Oike Y: Long-term intake of Tamogi-take mushroom (*Pleurotus cornucopiae*) mitigates age-related cardiovascular dysfunction and extends healthy life expectancy. *npj Aging* 11: 1, 2025
3. Horiguchi H, Kadomatsu T, Oike Y: The two faces of Angiopoietin-like protein 2 in cancer. *Cancer Sci*, 2024 Online ahead of print
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5. Horino T, Horiguchi H, Yumoto Y, Kadomatsu T, Hara Y, Yagi T, Baba Y, Miyamoto Y, Baba H, Oike: Angiopoietin-like protein 2 expression in tumor cells supports tumor-associated macrophage-induced tumor progression in esophageal cancer.  
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6. Yumoto S, Horiguchi H, Kadomatsu T, Horino T, Sato M, Terada K, Miyata K, Moroishi T, Baba H, Oike Y: Host ANGPTL2 establishes an immunosuppressive tumor microenvironment and resistance to immune checkpoint therapy.  
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7. Yamashita T, Horiguchi H, Kadomatsu T, Sato M, Moroishi T, Oike Y: Immunotherapy-induced reprogramming of cancer-associated fibroblasts can promote tumor progression.  
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8. Terada K, Endo M, Kiyonari H, Takeda H, Oike Y: Loss of Dj2 accompanies pH deviation in lysosomes and lysosome-related organelles.  
*J Cell Physiol* 239: e31174, 2024
9. Tang J, Funasaki S, Nishizawa H, Kuroda S, Motoshima T, Wu C, Mawas S A, Satou Y, Arima Y, Hasumi H, Jikuya R, Makiyama K, Oike Y, Tanaka Y, Baba M, Kamba T: ARID2 deficiency enhances tumor progression via ERBB3 signaling in TFE3-rearranged renal cell carcinoma. *Curr Issues Mol Biol* 46: 13675–13695, 2024

### 3) Department of Metabolic Medicine

1. Sasako T, Suzuki K, Odawara S, Suwanai H, Akuta N, Kubota N, Ueki K, Kadokami T, Yamauchi T: Corticosteroid-triggered acute skeletal muscle loss in lipodystrophy: A case report.  
*J. Diabetes Investig.* 15:782-785, 2024.
2. Hasegawa S, Nangaku M, Takenaka Y, Kitayama C, Li Q, Saipidin M, Hong YA, Shang J, Hirabayashi Y, Kubota N, Kadokami T, Inagi R: Organelle communication maintains mitochondrial and endosomal homeostasis during podocyte lipotoxicity.  
*JCI Insight*. 9:e182534, 2024.
3. Sakurai Y, Kubota N\*, Takamoto I, Wada N, Aihara M, Hayashi T, Kubota T, Hiraike Y, Sasako T, Nakao H, Aiba A, Chikaoka Y, Kawamura T, Kadokami T, Yamauchi T\*. Overexpression of

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*Diabetes Ther.* 15:1561-1575, 2024.
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10. Okagawa S, Sakaguchi M, Okubo Y, Takekuma Y, Igata M, Kondo T, Takeda N, Araki K, Branda BB, Qian WJ, Tseng YH, Kulkarni RN, Kubota N, Kahn CR, Araki E. Hepatic SerpinA1 improves energy and glucose metabolism through regulation of preadipocyte proliferation and UCP1 expression.  
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12. Kitai Y, Toriu N, Yoshikawa T, Sahara Y, Kinjo S, Shimizu Y, Sato Y, Oguchi A, Yamada R, Kondo M, Uchino E, Taniguchi K, Arai H, Sasako T, Haga H, Fukuma S, Kubota N, Kadokami T, Takasato M, Murakawa Y, Yanagita M. Female sex hormones inversely regulate acute kidney disease susceptibility throughout life.  
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#### 4) Department of Cardiovascular Medicine

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10. Usuku H, Yamamoto E, Sueta D, Shinriki R, Oike F, Tabata N, Ishii M, Hanatani S, Hoshiyama T, Kanazawa H, Arima Y, Takashio S, Kawano Y, Oda S, Kawano H, Ueda M, Tsujita K. A new staging system using right atrial strain in patients with immunoglobulin light-chain cardiac amyloidosis. *ESC Heart Fail.* 11(3):1612-1624, 2024
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## 5) Department of Cell Pathology

1. Etoh K, Araki H, Koga T, Hino Y, Kuribayashi K, Hino S, and Nakao M: Citrate metabolism controls the senescent microenvironment via the remodeling of pro-inflammatory enhancers.  
*Cell Rep.* 17: 114496, 2024. Accepted 27 June 2024, Available online 22 July 2024

## 6) Department of Nephrology

1. Ikushima A, Ishimura T, ... Yokoi H: Deletion of p38 MAPK in macrophages ameliorates peritoneal fibrosis and inflammation in peritoneal dialysis. *Sci Rep* 14: 21220, 2024.
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4. Matsushita K, Nagayoshi Yu, .... Yokoi H: Rituximab as an effective treatment for new-onset Evans syndrome and systemic lupus erythematosus with lupus nephritis. *Intern Med*, in press

## ● Division of Cancer and Stem Cell Research

## 7) Department of Gastroenterological Surgery

- 1 Baba Y, Yasuda N, Bundo M, Nakachi Y, Ueda J, Ishimoto T, Iwatsuki M, Miyamoto Y, Yoshida N, Oshiumi H, Iwamoto K, Baba H: LINE-1 hypomethylation, increased retrotransposition and tumor-specific insertion in upper gastrointestinal cancer. *Cancer Sci* 115:247-256, 2024
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## ● Data Science/Omics Analysis Research and Support Division

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