

NHRI Publication _December 2020

Institute of Biomedical Engineering and Nanomedicine

1. Saurabh, K; Solovchuk, M; Sheu, TWH. [Investigating ion transport inside the pentameric ion channel encoded in COVID-19 e protein](#). *Physical Review E*. 2020 Nov 13; 102(5): Article number 52408.
2. Wu, SH; Hsieh, CC; Hsu, SC; Yao, M; Hsiao, JK; Wang, SW; Lin, CP; Huang, DM. [RBC-derived vesicles as a systemic delivery system of doxorubicin for lysosomal-mitochondrial axis-improved cancer therapy](#). *Journal of Advanced Research*. 2020 Nov 24; Article in Press.
3. Yang, IH; Chen, YS; Li, JJ; Liang, YJ; Lin, TC; Jakfar, S; Thacker, M; Wu, SC; Lin, FH. [The development of laminin-alginate microspheres encapsulated with Ginsenoside Rg1 and ADSCs for breast reconstruction after lumpectomy](#). *Bioactive Materials*. 2021 Jun; 6(6): 1699-1710.

Institute of Biotechnology and Pharmaceutical Research

1. Li, MC; Hsieh, HP. [Tumor-agnostic inhibitors in oncology: A new phase for precision medicine](#). *Journal of the Chinese Chemical Society*. 2020 Dec 10; Article in Press.
2. Yeh, CH; Chou, YJ; Kao, CH; Tsai, TF. [Mitochondria and calcium homeostasis: Cisd2 as a big player in cardiac ageing](#). *International Journal of Molecular Sciences*. 2020 Dec 3; 21(23): Article number 9238.
3. hYang, CW; Lee, YZ; Hsu, HY; Jan, JT; Lin, YL; Chang, SY; Peng, TT; Yang, RB; Liang, JJ; Liao, CC; Chao, TL; Pang, YH; Kao, HC; Huang, WZ; Lin, JH; Chang, CP; Niu, GH; Wu, SH; Sytwu, HK; Chen, CT; Lee, SJ. [Inhibition of SARS-CoV-2 by highly potent broad-spectrum anti-coronaviral tylophorine-based derivatives](#). *Frontiers in Pharmacology*. 2020 Dec 14; 11: Article number 606097.
4. Wang, HC; Hung, HC; Huang, PN; Kung, YA; Tseng, SN; Wang, YM; Shih, SR; Tsu-An Hsu, J. [Engineering a novel IgG-like bispecific antibody against enterovirus A71](#). *Biochemistry and Biophysics Reports*. 2020 Dec; 24: Article number 100860.

Institute of Cellular and Systems Medicine

1. Shih, LJ; Wang, JY; Jheng, JY; Siao, AC; Lin, YY; Tsuei, YW; Kuo, YC; Chuu, CP; Kao, YH. [Betel nut arecoline induces different phases of growth arrest between normal and cancerous prostate cells through the reactive oxygen species pathway](#). *International Journal of Molecular Sciences*. 2020 Dec 3; 21(23): Article number 9219.
2. Xu, J; Wong, CW; Hsu, SH. [An injectable, electroconductive hydrogel/scaffold for neural repair and motion sensing](#). *Chemistry of Materials*. 2020 Dec 7; 32(24): 10407-10422.
3. Ma, KSK; Chiang, CH; Lopez, AAV; Wang, LT; Tsai, SY. [Identifying mechanisms underlying the association between cardiovascular diseases and periodontitis using in silico analysis of canonical pathways](#). *American Heart Journal*. 2020 Nov; 229: 172-173.

Institute of Molecular and Genomic Medicine

1. Lin, YF; Lin, TC; Kirby, R; Weng, HY; Liu, YM; Niu, DM; Tsai, SF; Yang, CF. [Diagnosis of Arboleda-Tham syndrome by whole genome sequencing in an Asian boy with severe developmental delay](#). *Molecular Genetics and Metabolism Reports*. 2020 Dec; 25: Article number 100686.
2. Yeh, CH; Chou, YJ; Kao, CH; Tsai, TF. [Mitochondria and calcium homeostasis: Cisd2 as a big player in cardiac ageing](#). *International Journal of Molecular Sciences*. 2020 Dec 3; 21(23): Article number 9238.
3. Wu, SY; Yang, WY; Cheng, CC; Lin, KH; Sampurna, BP; Chan, SM; Yuh, CH. [Low molecular weight fucoidan inhibits hepatocarcinogenesis and nonalcoholic fatty liver disease in zebrafish via ASGR/STAT3/HNF4A signaling](#). *Clinical and Translational Medicine*. 2020 Dec; 10(8): Article number e252.

Institute of Population Health Sciences

1. Yen, FS; Lai, JN; Wei, JC; Chiu, LT; Hwu, CM; Hou, MC; Hsu, CC. [Sulfonylureas may be useful for glycemic management in patients with diabetes and liver cirrhosis](#). *PLoS ONE*. 2020 Dec 14; 15(12): Article number e0243783.
2. Nielsen, JB; Rom, O; Surakka, I; Graham, SE; Zhou, W; Roychowdhury, T; Fritsche,

- LG; Gagliano Taliun, SA; et al. [Loss-of-function genomic variants highlight potential therapeutic targets for cardiovascular disease](#). *Nature Communications*. 2020 Dec 18; 11: Article number 6417.
3. Chuang, SY; Chang, HY; Tsai, TY; Cheng, HM; Pan, WH; Chen, CH. [Isolated systolic hypertension and central blood pressure: Implications from the national nutrition and health survey in Taiwan](#). *Journal of Clinical Hypertension*. 2020 Dec 22; Article in Press.
 4. Chen, PJ; Ho, CH; Liao, JY; Smits, L; Hsiung, CA; Yu, SJ; Zhang, KP; Petersen, I; Sampson, EL. [The association between home healthcare and burdensome transitions at the end-of-life in people with dementia: A 12-year nationwide population-based cohort study](#). *International Journal of Environmental Research and Public Health*. 2020 Dec 110; 17(24): Article number 9255.
 5. Clark, CE; Warren, FC; Boddy, K; McDonagh, STJ; Moore, SF; Goddard, J; Reed, N; Turner, M; Alzamora, MT; Ramos Blanes, R; Chuang, SY; Criqui, M; Dahl, M; Engström, G; Erbel, R; Espeland, M; Ferrucci, L; Guerchet, M; Hattersley, A; Lahoz, C; McClelland, RL; McDermott, MM; Price, J; Stoffers, HE; Wang, JG; Westerink, J; White, J; Cloutier, L; Taylor, RS; Shore, AC; McManus, RJ; Aboyans, V; Campbell, JL. [Associations between systolic interarm differences in blood pressure and cardiovascular disease outcomes and mortality: Individual participant data meta-analysis, development and validation of a prognostic algorithm: The INTERPRESS-IPD collaboration](#). *Hypertension*. 2020 Dec 21; Article in Press.
 6. Lin, YF; Lin, YC; Wu, IC; Chang, YH. [Urinary incontinence and its association with socioeconomic status among middle-aged and older persons in Taiwan: A population-based study](#). *Geriatrics and Gerontology International*. 2020 Dec 15; Article in Press.
 7. Blechter, B; Wong, JYY; Agnes Hsiung, C; Hosgood, HD; Yin, Z; Shu, XO; Zhang, H; Shi, J; Song, L; Song, M; Zheng, W; Wang, Z; Caporaso, N; Burdette, L; Yeager, M; Berndt, SI; Teresa Landi, M; Chen, CJ; Chang, GC; Hsiao, CF; Tsai, YH; Chen, KY; Huang, MS; Su, WC; Chen, YM; Chien, LH; Chen, CH; Yang, TY; Wang, CL; Hung, JY; Lin, CC; Perng, RP; Chen, CY; Chen, KC; Li, YJ; Yu, CJ; Chen, YS; Chen, YH; Tsai, FY; Jie Seow, W; Bassig, BA; Hu, W; Ji, BT; Wu, W; Guan, P; He, Q; Gao, YT; Cai, Q; Chow, WH; Xiang, YB; Lin, D; Wu, C; Wu, YL; Shin, MH; Hong, YC; Matsuo,

- K; Chen, K; Pik Wong, M; Lu, D; Jin, L; Wang, JC; Seow, A; Wu, T; Shen, H; Fraumeni, JF; Yang, PC; Chang, IS; Zhou, B; Chanock, SJ; Rothman, N; Chatterjee, N; Lan, Q. [Sub-multiplicative interaction between polygenic risk score and household coal use in relation to lung adenocarcinoma among never-smoking women in Asia.](#) *Environment International*. 2020 Dec 29; 147: Article number 105975.
8. Hamasaki, T; Hung, HMJ; Hsiao, CF; Evans, SR. [On selecting the critical boundary functions in group-sequential trials with two time-to-event outcomes.](#) *Contemporary Clinical Trials*. 2020 Dec 9; 1015: Article number 106244.
 9. Chien, YL; Wu, CS; Tsai, HJ. [The comorbidity of schizophrenia spectrum and mood disorders in autism spectrum disorder.](#) *Autism Research*. 2020 Dec; Article in Press.
 10. Malik, SG; Oktavianthi, S; Wahlqvist, ML; Asih, PBS; Harahap, A; Satyagraha, AW; Syafruddin, D. [Non-nutritional anemia: Malaria, thalassemia, G6PD deficiency and tuberculosis in Indonesia.](#) *Asia Pacific Journal of Clinical Nutrition*. 2020 Dec; 29(Suppl. 1): S32-S40.
 11. Lukito, W; Wahlqvist, ML. [Intersectoral and eco-nutritional approaches to resolve persistent anemia in Indonesia.](#) *Asia Pacific Journal of Clinical Nutrition*. 2020 Dec; 29(Suppl. 1): S1-S8.
 12. Li, K; Liu, C; Wahlqvist, ML; Li, D. [Econutrition, brown and beige fat tissue and obesity.](#) *Asia Pacific Journal of Clinical Nutrition*. 2020 Dec; 29(4): 668-680.

National Institute of Cancer Research

1. Chen, CY; Liang, SH; Su, YY; Chiang, NJ; Wang, HC; Chiu, CF; Chen, LT; Bai, LY. [Modified gemcitabine, S-1, and leucovorin combination for patients with newly diagnosed locally advanced or metastatic pancreatic adenocarcinoma: A multi-center retrospective study in Taiwan.](#) *PLoS ONE*. 2020 Dec 29; 15(12): Article number e0244487.
2. Li, CJ; Lin, LT; Hou, MF; Chu, PY. [PD-L1/PD-1 blockade in breast cancer: The immunotherapy era \(Review\).](#) *Oncology Reports*. 2020 Nov 3; 45(1): 5-12.
3. Lin, HY; Li, CJ; Yang, YL; Huang, YH; Hsiau, YT; Chu, PY. [Roles of lysyl oxidase family members in the tumor microenvironment and progression of liver cancer.](#) *International Journal of Molecular Sciences*. 2020 Dec 21; 21(24): Article number 9751.

4. Blechter, B; Wong, JYY; Agnes Hsiung, C; Hosgood, HD; Yin, Z; Shu, XO; Zhang, H; Shi, J; Song, L; Song, M; Zheng, W; Wang, Z; Caporaso, N; Burdette, L; Yeager, M; Berndt, SI; Teresa Landi, M; Chen, CJ; Chang, GC; Hsiao, CF; Tsai, YH; Chen, KY; Huang, MS; Su, WC; Chen, YM; Chien, LH; Chen, CH; Yang, TY; Wang, CL; Hung, JY; Lin, CC; Perng, RP; Chen, CY; Chen, KC; Li, YJ; Yu, CJ; Chen, YS; Chen, YH; Tsai, FY; Jie Seow, W; Bassig, BA; Hu, W; Ji, BT; Wu, W; Guan, P; He, Q; Gao, YT; Cai, Q; Chow, WH; Xiang, YB; Lin, D; Wu, C; Wu, YL; Shin, MH; Hong, YC; Matsuo, K; Chen, K; Pik Wong, M; Lu, D; Jin, L; Wang, JC; Seow, A; Wu, T; Shen, H; Fraumeni, JF; Yang, PC; Chang, IS; Zhou, B; Chanock, SJ; Rothman, N; Chatterjee, N; Lan, Q. [Sub-multiplicative interaction between polygenic risk score and household coal use in relation to lung adenocarcinoma among never-smoking women in Asia.](#) *Environment International*. 2020 Dec 29; 147: Article number 105975.
5. Wu, S; Tseng, IC; Huang, WC; Su, CW; Lai, YH; Lin, C; Lee, AYL; Kuo, CY; Su, LY; Lee, MC; Hsu, TC; Yu, CH. [Establishment of an immunocompetent metastasis rat model with hepatocyte cancer stem cells.](#) *Cancers*. 2020 Dec 11; 12(12): Article number 3721.
6. Rathinasamy, B; Wang, CJ; Wan, SP; Chang, HJ. [Tumor-macrophage fusion hybrids contribute to radiation-induced progression of pancreatic cancer.](#) *Molecular Cancer Therapeutics*. 2018 Jan; 17(1, Suppl.): A209.

National Institute of Environmental Health Sciences

1. Chen, HM; Kuo, FC; Chen, CC; Wu, CF; Sun, CW; Chen, ML; Hsieh, CJ; Wang, SL; Wu, MT. [New trimester-specific reference intervals for clinical biochemical tests in Taiwanese pregnant women-cohort of TMICS.](#) *PLoS ONE*. 2020 Dec 14; 15(12): Article number e0243761.
2. Fang, YJ; Wu, TY; Lin, CL; Su, CY; Li, JR; Chung, YL; Tien, N; Lim, YP. [Effects of urate-lowering therapy on risk of hyperlipidemia in gout by a population-based cohort study and on in vitro hepatic lipogenesis-related gene expression.](#) *Mediators of Inflammation*. 2020 Nov; 2020: Article number 8890300.
3. Chen, CC; Tsai, SS; Yang, CY. [Change in risk of hospital admissions for ischemic heart disease after the implementation of a mass rapid transit system in Taipei.](#) *Journal of Toxicology and Environmental Health - Part A: Current Issues*. 2020 Dec 3; Article in

Press.

4. Huang, CC; Pan, SC; Chin, WS; Chen, YC; Hsu, CY; Lin, PP; Guo, YL. [Maternal proximity to petrochemical industrial parks and risk of premature rupture of membranes.](#) *Environmental Research*. 2021 Mar; 194: Article number 110688.
5. Asri, AK; Yu, CP; Pan, WC; Guo, YL; Su, HJ; Lung, SCC; Wu, CD; Spengler, JD. [Global greenness in relation to reducing the burden of cardiovascular diseases: Ischemic heart disease and stroke.](#) *Environmental Research Letters*. 2020 Dec; 15: Article number 124003.
6. Tsai, TL; Kuo, CC; Hsu, LI; Tsai, SF; Chiou, HY; Chen, CJ; Hsu, KH; Wang, SL. [Association between arsenic exposure, DNA damage, and urological cancers incidence: A long-term follow-up study of residents in an arseniasis endemic area of northeastern Taiwan.](#) *Chemosphere*. 2021 Mar; 266: Article number 129094.
7. Tuan, LH; Tsao, CY; Jyuhn-Hsiarn Lee, L; Lee, LJ. [Voluntary exercise ameliorates synaptic pruning deficits in sleep-deprived adolescent mice.](#) *Brain, Behavior, and Immunity*. 2020 Dec 24; Article in Press.

National Institute of Infectious Diseases and Vaccinology

1. Long, KC;Alphey, L;Annas, GJ;Bloss, CS;Campbell, KJ;Champer, J;Chen, CH;Choudhary, A;Church, GM;Collins, JP;Cooper, KL;Delborne, JA;Edwards, OR;Emerson, CI;Esvelt, K;Evans, SW;Friedman, RM;Gantz, VM;Gould, F;Hartley, S;Heitman, E;Hemingway, J;Kanuka, H;Kuzma, J;Lavery, JV;Lee, Y;Lorenzen, M;Lunshof, JE;Marshall, JM;Messer, PW;Montell, C;Oye, KA;Palmer, MJ;Papathanos, PA;Paradkar, PN;Piaggio, AJ;Rasgon, JL;Rašić, G;Rudenko, L;Saah, JR;Scott, MJ;Sutton, JT;Vorsino, AE;Akbari, OS. [Core commitments for field trials of gene drive organisms.](#) *Science*. 2020 Dec 18; 370(6523): 1417-1419.
2. Huang, SW; Tsai, HP; Hung, SJ; Ko, WC; Wang, JR. [Assessing the risk of dengue severity using demographic information and laboratory test results with machine learning.](#) *PLoS Neglected Tropical Diseases*. 2020 Dec 23; 14(12): Article number e0008960.
3. Chuang, C; Su, CF; Lin, JC; Lu, PL; Huang, CT; Wang, JT; Chuang, YC; Siu, LK; Fung, CP; Lin, YT. [Does antimicrobial therapy affect mortality of patients with carbapenem-](#)

- [resistant klebsiella pneumoniae bacteriuria? A nationwide multicenter study in Taiwan.](#) *Microorganisms*. 2020 Dec 19; 8(12): Article number 2035.
4. Teng, CF; Li, TC; Wang, T; Wu, TH; Wang, J; Wu, HC; Shyu, WC; Su, IJ; Jeng, LB. [Increased expression of programmed death ligand 1 in hepatocellular carcinoma of patients with hepatitis B virus pre-S2 mutant.](#) *Journal of Hepatocellular Carcinoma*. 2020 Dec 17; 7: 385-401.
 5. Lu, ZY; Cheng, MH; Yu, CY; Lin, YS; Yeh, TM; Chen, CL; Chen, CC; Wan, SW; Chang, CP. [Dengue nonstructural protein 1 maintains autophagy through retarding caspase-mediated cleavage of beclin-1.](#) *International Journal of Molecular Sciences*. 2020 Dec 19; 21(24): Article number 9702.
 6. Tsai, YW; Fu, SH; Dong, JL; Chien, MW; Liu, YW; Hsu, CY; Sytwu, HK. [Adipokine-modulated immunological homeostasis shapes the pathophysiology of inflammatory bowel disease.](#) *International Journal of Molecular Sciences*. 2020 Dec 15; 21(24): Article number 9564.
 7. Yang, CW; Lee, YZ; Hsu, HY; Jan, JT; Lin, YL; Chang, SY; Peng, TT; Yang, RB; Liang, JJ; Liao, CC; Chao, TL; Pang, YH; Kao, HC; Huang, WZ; Lin, JH; Chang, CP; Niu, GH; Wu, SH; Sytwu, HK; Chen, CT; Lee, SJ. [Inhibition of SARS-CoV-2 by highly potent broad-spectrum anti-coronaviral tylophorine-based derivatives.](#) *Frontiers in Pharmacology*. 2020 Dec 14; 11: Article number 606097.

National Mosquito-Borne Diseases Control Research Center

1. Huang, SW; Tsai, HP; Hung, SJ; Ko, WC; Wang, JR. [Assessing the risk of dengue severity using demographic information and laboratory test results with machine learning.](#) *PLoS Neglected Tropical Diseases*. 2020 Dec 23; 14(12): Article number e0008960.
2. Toki, W; Chiu, MC; Huang, CG; Wu, WJ. [Larval host plants of two lizard beetles in the genus *Tetraphala* \(Coleoptera, Erotylidae, Languriinae, Languriini\) from Taiwan, with a host plant list of *Languriini*.](#) *Entomological Science*. 2020 Dec; Article in Press.

Center for Neuropsychiatric Research

1. Kao, CF; Kuo, PH; Yu, YWY; Yang, AC; Lin, E; Liu, YL; Tsai, SJ. [Gene-based](#)

[association analysis suggests association of HTR2A with antidepressant treatment response in depressed patients](#). *Frontiers in Pharmacology*. 2020 Dec; 11: Article number 559601.

2. Hu, PJ; Chen, YW; Chen, TT; Sung, LC; Wu, MY; Wu, MS. [Impact of dialysis modality on major adverse cardiovascular events and all-cause mortality: A national population-based study](#). *Nephrology, Dialysis, Transplantation*. 2020 Dec 12; Article in Press.

Graduate Student Program

1. Fang, YJ; Wu, TY; Lin, CL; Su, CY; Li, JR; Chung, YL; Tien, N; Lim, YP. [Effects of urate-lowering therapy on risk of hyperlipidemia in gout by a population-based cohort study and on in vitro hepatic lipogenesis-related gene expression](#). *Mediators of Inflammation*. 2020 Nov; 2020: Article number 8890300.
2. Chou, SY; Chan, L; Chung, CC; Chiu, JY; Hsieh, YC; Hong, CT. [Altered insulin receptor substrate 1 phosphorylation in blood neuron-derived extracellular vesicles from patients with Parkinson's disease](#). *Frontiers in Cell and Developmental Biology*. 2020 Dec 3; 8: Article number 564641.