DAFTAR PUSTAKA

Aarsland, D., & Kurz, M. W. (2010). The epidemiology of dementia associated with Parkinson disease. *Mental Dysfunction in Parkinson's Disease*, *289*(1), 18–22. https://doi.org/10.1016/j.jns.2009.08.034

Ahlskog, J. E., & Muenter, M. D. (2001). Frequency of levodopa-related dyskinesias and motor fluctuations as estimated from the cumulative literature. *Mov. Disord.*, *16*(3), 448–458. https://doi.org/10.1002/mds.1090

Akbar, M., Soraya, G. V., Ulhaq, Z. S., & Bintang, A. K. (2022). A Roadmap for Future Parkinson's Pharmacogenomics in Asia. *Frontiers in Aging Neuroscience*, *14*.

Bhidayasiri, R., Virameteekul, S., Sukoandari, B., Tran, T. N., & Lim, T. T. (2022). Challenges of Parkinson's Disease Care in Southeast Asia. In P. Riederer, G. Laux, T. Nagatsu, W. Le, & C. Riederer (Eds.), *NeuroPsychopharmacotherapy* (pp. 1061–1081). Springer International Publishing. https://doi.org/10.1007/978-3-030-62059-2_442

Bloem, B. R., Okun, M. S., & Klein, C. (2021). Parkinson's disease. *The Lancet*, *397*(10291), 2284–2303.

Chen, K., Du, K., Zhao, Y., Gu, Y., & Zhao, Y. (2021). Trajectory Analysis of Orthostatic Hypotension in Parkinson's Disease: Results From Parkinson's Progression Markers Initiative Cohort. *Frontiers in Aging Neuroscience*, *13*, 762759.

Cheshire, P. (2014). Influence of single nucleotide polymorphisms in COMT, MAO-A and BDNF genes on dyskinesias and levodopa use in Parkinson's disease. *Neurodegenerative Diseases*, *13*(1), 24–28.

Comi, C. (2017). Polymorphisms of dopamine receptor genes and risk of l-dopa-induced dyskinesia in parkinson's disease. *International Journal of Molecular Sciences*, *18*(2).

Day, J. O., & Mullin, S. (2021). The Genetics of Parkinson's Disease and Implications for Clinical Practice. *Genes*, *12*(7), 1006. https://doi.org/10.3390/genes12071006

de la Fuente-Fernández, R., Sellers, A., Beyer, K., & Lao, J. I. (1998). Apolipoprotein E genotypes and age at onset of Parkinson's disease. *Annals of Neurology*, *44*(2), 294–295. https://doi.org/10.1002/ana.410440231

Dos Santos, E. U. D., Duarte, E. B. C., Miranda, L. M. R., Asano, A. G. C., Asano, N. M. J., Maia, M. de M. D., & de Souza, P. R. E. (2019). Influence of DRD1 and DRD3 polymorphisms in the occurrence of motor effects in patients with sporadic Parkinson's disease. *NeuroMolecular Medicine*, *21*(3), 295–302.

Fagan, E. S., & Pihlstrøm, L. (2017). Genetic risk factors for cognitive decline in Parkinson's disease: A review of the literature. *European Journal of Neurology*, *24*(4), 561-e20. https://doi.org/10.1111/ene.13258

Falla, M., Di Fonzo, A., Hicks, A. A., Pramstaller, P. P., & Fabbrini, G. (2021). Genetic variants in levodopa-induced dyskinesia (LID): A systematic review and meta-analysis. *Parkinsonism & Related Disorders*, *84*, 52–60. https://doi.org/10.1016/j.parkreldis.2021.01.020

Federoff, M., Jimenez-Rolando, B., Nalls, M. A., & Singleton, A. B. (2012). A large study reveals no association between *APOE* and Parkinson's disease. *Neurobiology of* , 389–392. https://doi.org/10.1016/j.nbd.2012.02.002

, J., & Korczyn, A. (2006). Apolipoprotein ε4 advances appearance of patients with Parkinson's disease. *Acta Neurologica Scandinavica*,

r, O. M., & Südhof, T. C. (2008). A molecular pathway of ation linking α-synuclein to ApoE and Aβ peptides. *Nature* *11*(3), 301–308. https://doi.org/10.1038/nn2058

GBD 2016 Parkinson's Disease Collaborators. (2018). Global, regional, and national burden of Parkinson's disease, 1990–2016: A systematic analysis for the Global Burden of Disease Study 2016. *The Lancet. Neurology*, *17*(11), 939–953. https://doi.org/10.1016/S1474-4422(18)30295-3

Goetz, C. G., Tilley, B. C., Shaftman, S. R., Stebbins, G. T., Fahn, S., Martinez-Martin, P., Poewe, W., Sampaio, C., Stern, M. B., Dodel, R., Dubois, B., Holloway, R., Jankovic, J., Kulisevsky, J., Lang, A. E., Lees, A., Leurgans, S., LeWitt, P. A., Nyenhuis, D., … LaPelle, N. (2008). Movement Disorder Society-sponsored revision of the Unified Parkinson's Disease Rating Scale (MDS-UPDRS): Scale presentation and clinimetric testing results. *Movement Disorders*, *23*(15), 2129–2170. https://doi.org/10.1002/mds.22340

Hao, H. (2014). Association of Catechol-O-Methyltransferase and monoamine oxidase B gene polymorphisms with motor complications in parkinson's disease in a Chinese population. *Parkinsonism & Related Disorders*, *20*(10), 1041–1045.

Hastuti, P., Sofro, A. S. M., Asdie, A. H., & Sadewa, A. H. (2015). Genetic Variation of Apolipoprotein E (ApoE) in Surabaya, Palu and Alor Populations of Indonesia. *Indonesian Journal of Biotechnology*, *16*(2), 118. https://doi.org/10.22146/ijbiotech.16371

Hill, E. J., Robak, L. A., Al-Ouran, R., Deger, J., Fong, J. C., Vandeventer, P. J., Schulman, E., Rao, S., Saade, H., Savitt, J. M., von Coelln, R., Desai, N., Doddapaneni, H., Salvi, S., Dugan-Perez, S., Muzny, D. M., McGuire, A. L., Liu, Z., Gibbs, R. A., … Shulman, J. M. (2022). Genome Sequencing in the Parkinson Disease Clinic. *Neurology. Genetics*, *8*(4), e200002. https://doi.org/10.1212/NXG.0000000000200002

Hisahara, S., & Shimohama, S. (2011). Dopamine receptors and Parkinson's disease. *Int. J. Med. Chem.*, *2011*, 403039. https://doi.org/10.1155/2011/403039

Inzelberg, R., Paleacu, D., Chapman, J., & Korczyn, A. D. (1998). Apolipoprotein E and Parkinson's disease. *Annals of Neurology*, *44*(2), 294–294. https://doi.org/10.1002/ana.410440230

Jo, S., Kim, S.-O., Park, K. W., Lee, S. H., Hwang, Y. S., & Chung, S. J. (2021). The role of APOE in cognitive trajectories and motor decline in Parkinson's disease. *Scientific Reports*, *11*(1), 7819. https://doi.org/10.1038/s41598-021-86483-w

Kakinuma, S. (2020). Monoamine oxidase B rs1799836 G allele polymorphism is a risk factor for early development of levodopa-induced dyskinesia in Parkinson's disease. *eNeurologicalSci*, *19*.

Kalinderi, K., Bostantjopoulou, S., & Fidani, L. (2016). The genetic background of Parkinson's disease: Current progress and future prospects. *Acta Neurologica Scandinavica*, *134*(5), 314–326. https://doi.org/10.1111/ane.12563

Kalinderi, K., Papaliagkas, V., & Fidani, L. (2019). Pharmacogenetics and levodopa induced motor complications. *International Journal of Neuroscience*, *129*(4), 384–392.

Kaplan, N. (2014). Sequence variants in SLC6A3, DRD2, and BDNF genes and time to ced dyskinesias in Parkinson's disease. *Journal of Molecular* *53*(2), 183–188.

ent Disorders. (2015). *Buku Panduan Tatalaksana Penyakit Parkinson* *Gerak Lainnya*. Perhimpunan Dokter Spesialis Saraf Indonesia.

D., Jun, J.-S., & Jeon, B. (2021). Impact of the apolipoprotein E ε4 Parkinson's disease progression. *Parkinsonism & Related Disorders*, s://doi.org/10.1016/j.parkreldis.2021.01.004

Lechun, L., Yu, S., Pengling, H., & Changqi, H. (2013). The COMT Val158Met polymorphism as an associated risk factor for Parkinson's disease in Asian rather than Caucasian populations. *Neurol. India*, *61*(1), 12–16. https://doi.org/10.4103/0028-3886.108121

Martini, D. N., Morris, R., Kelly, V. E., Hiller, A., Chung, K. A., Hu, S.-C., Zabetian, C. P., Oakley, J., Poston, K., Mata, I. F., Edwards, K. L., Lapidus, J. A., Grabowski, T. J., Montine, T. J., Quinn, J. F., & Horak, F. (2020). Sensorimotor Inhibition and Mobility in Genetic Subgroups of Parkinson's Disease. *Frontiers in Neurology*, *11*. https://doi.org/10.3389/fneur.2020.00893

Mengel, D., Dams, J., Ziemek, J., Becker, J., Balzer-Geldsetzer, M., Hilker, R., Baudrexel, S., Kalbe, E., Schmidt, N., & Witt, K. (2016). Apolipoprotein E ε4 does not affect cognitive performance in patients with Parkinson's disease. *Parkinsonism & Related Disorders*, *29*, 112–116.

Michałowska, M. (2020). Gene polymorphisms and motor levodopa-induced complications in Parkinson's disease. *Brain and Behavior*, *10*(3).

Michałowska, M., Chalimoniuk, M., Jówko, E., Przybylska, I., Langfort, J., Toczylowska, B., Krygowska-Wajs, A., & Fiszer, U. (2020). Gene polymorphisms and motor levodopa-induced complications in Parkinson's disease. *Brain and Behavior*, *10*(3), e01537.

Mones, R., Elizan, T., & Siegel, G. (1971). Analysis of L-dopa induced dyskinesias in 51 patients with Parkinsonism. *Neurosurgery & Psychiatry*, *34*(6), 668–673.

Monsell, S. E., Besser, L. M., Heller, K. B., Checkoway, H., Litvan, I., & Kukull, W. A. (2014). Clinical and pathologic presentation in Parkinson's disease by apolipoprotein e4 allele status. *Parkinsonism & Related Disorders*, *20*(5), 503–507. https://doi.org/10.1016/j.parkreldis.2014.02.001

Morley, J. F., Xie, S. X., Hurtig, H. I., Stern, M. B., Colcher, A., Horn, S., Dahodwala, N., Duda, J. E., Weintraub, D., Chen-Plotkin, A. S., Van Deerlin, V., Falcone, D., & Siderowf, A. (2012). Genetic influences on cognitive decline in Parkinson's disease. *Movement Disorders*, *27*(4), 512–518. https://doi.org/10.1002/mds.24946

Oliveri, R. L., Nicoletti, G., Cittadella, R., Manna, I., Branca, D., Zappia, M., Gambardella, A., Caracciolo, M., & Quattrone, A. (1999). Apolipoprotein E polymorphisms and Parkinson's disease. *Neuroscience Letters*, *277*(2), 83–86.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., & Brennan, S. E. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Bmj*, *372*.

Pang, S. Y.-Y., Lo, R. C. N., Ho, P. W.-L., Liu, H.-F., Chang, E. E. S., Leung, C.-T., Malki, Y., Choi, Z. Y.-K., Wong, W. Y., Kung, M. H.-W., Ramsden, D. B., & Ho, S.-L. (2022). LRRK2, GBA and their interaction in the regulation of autophagy: Implications on therapeutics in Parkinson's disease. *Translational Neurodegeneration*, *11*(1), 5. https://doi.org/10.1186/s40035-022-00281-6

Pankratz, N., Byder, L., Halter, C., Rudolph, A., Shults, C. W., Conneally, P. M., Foroud, T., & Nichols, W. C. (2006). Presence of an APOE4 allele results in significantly earlier onset of Parkinson's disease and a higher risk with dementia. *Movement Disorders*, ıttps://doi.org/10.1002/mds.20663

:arrer, M. J., Stone, J. T., Milkovic, N. M., Ross, O. A., Calvo, L., le, D., & Mash, D. C. (2007). Phenotypic associations of tau and ApoE disease. *Neuroscience Letters*, *414*(2), 141–144.

Creek, M. M., Sinsheimer, J. S., Bronstein, J. M., Bordelon, Y., & Ritz, OE, MAPT, and COMT and Parkinson's disease susceptibility and tom progression. *Journal of Parkinson's Disease*, *6*(2), 349–359.

Pavlova, R., Mehrabian, S., Petrova, M., Skelina, S., Mihova, K., Jordanova, A., Mitev, V., & Traykov, L. (2014). Cognitive, Neuropsychiatric, and Motor Features Associated With Apolipoprotein E∈ 4 Allele in a Sample of Bulgarian Patients With Late-Onset Parkinson's Disease. *American Journal of Alzheimer's Disease & Other Dementias®*, *29*(7), 614–619.

Perez-Lloret, S. (2017). L-DOPA-induced dyskinesias, motor fluctuations and health-related quality of life: The COPARK survey. *European Journal of Neurology*, *24*(12), 1532–1538.

Postuma, R. B., Berg, D., Stern, M., Poewe, W., Olanow, C. W., Oertel, W., Obeso, J., Marek, K., Litvan, I., & Lang, A. E. (2015). MDS clinical diagnostic criteria for Parkinson's disease. *Movement Disorders*, *30*(12), 1591–1601.

Purcaro, C. (2019). DAT gene polymorphisms (rs28363170, rs393795) and levodopa-induced dyskinesias in Parkinson's disease. *Neuroscience Letters*, *690*, 83–88.

Qian, Y., Liu, J., Xu, S., Yang, X., & Xiao, Q. (2017). Roles of functional catechol-O-methyltransferase genotypes in Chinese patients with Parkinson's disease. *Translational Neurodegeneration*, *6*(1), 1–11.

Rodriguez-Oroz, M. C., Jahanshahi, M., Krack, P., Litvan, I., Macias, R., Bezard, E., & Obeso, J. A. (2009). Initial clinical manifestations of Parkinson's disease: Features and pathophysiological mechanisms. *The Lancet Neurology*, *8*(12), 1128–1139.

Sampaio, T. F. (2018). MAO-B and COMT genetic variations associated with levodopa treatment response in patients with Parkinson's disease. *The Journal of Clinical Pharmacology*, *58*(7), 920–926.

Santos, E. U. D. (2019). The influence of SLC 6A3 and DRD 2 polymorphisms on levodopa-therapy in patients with sporadic Parkinson's disease. *Journal of Pharmacy and Pharmacology*, *71*(2), 206–212.

Soraya, G. V., & Ulhaq, Z. S. (2020a). Crucial laboratory parameters in COVID-19 diagnosis and prognosis: An updated meta-analysis. *Medicina Clinica*, *155*(4), 143–151.

Soraya, G. V., & Ulhaq, Z. S. (2020b). Crucial Laboratory Parameters in COVID-19 Diagnosis and Prognosis: An Updated Meta-Analysis. *Medicina Clinica*.

Stoker, T. B., & Greenland, J. C. (2018). *Parkinson's disease: Pathogenesis and clinical aspects [internet]*.

Sullivan, P. M., Han, B., Liu, F., Mace, B. E., Ervin, J. F., Wu, S., Koger, D., Paul, S., & Bales, K. R. (2011). Reduced levels of human apoE4 protein in an animal model of cognitive impairment. *Neurobiology of Aging*, *32*(5), 791–801. https://doi.org/10.1016/j.neurobiolaging.2009.05.011

Szwedo, A. A., Dalen, I., Pedersen, K. F., Camacho, M., Bäckström, D., Forsgren, L., Tzoulis, C., Winder-Rhodes, S., Hudson, G., & Liu, G. (2022). GBA and APOE impact cognitive decline in Parkinson's disease: A 10-year population-based study. *Movement Disorders*, *37*(5), 1016–1027.

Ulhaq, Z. (2020). Chemokine IL-8 level in aqueous humor of open-angle glaucoma: A meta-analysis. *Archivos de La Sociedad Española de Oftalmología (English Edition)*, *95*(3),

. (2020). Aqueous humor interleukin-6 levels in primary open-angle AG): A systematic review and meta-analysis. *Archivos de La Sociedad ftalmología (English Edition)*, *95*(7), 315–321.

A., Mihailovic, A., & Pontone, G. M. (2022). APOE4 Allele, Sex, and in Parkinson's Disease: Lessons From a Longitudinal Cohort. *Journal*

of Geriatric Psychiatry and Neurology, *35*(6), 810–815. https://doi.org/10.1177/08919887211060019

Váradi, C. (2020). Clinical features of Parkinson's disease: The evolution of critical symptoms. *Biology*, *9*(5), 103.

Vefring, H., Haugarvoll, K., Tysnes, O., Larsen, J., Kurz, M. W., & Norwegian ParkWest Study group. (2010). The role of APOE alleles in incident Parkinson's disease. The Norwegian ParkWest Study. *Acta Neurologica Scandinavica*, *122*(6), 438–441.

Wang, J., Liu, Z.-L., & Chen, B. (2001). Dopamine D5 receptor gene polymorphism and the risk of levodopa-induced motor fluctuations in patients with Parkinson's disease. *Neuroscience Letters*, *308*(1), 21–24.

Watanabe, M. (2003). Association between catechol-O-methyltransferase gene polymorphisms and wearing-off and dyskinesia in Parkinson's disease. *Neuropsychobiology*, *48*(4), 190–193.

Williams-Gray, C. H., Goris, A., Foltynie, T., Brown, J., Maranian, M., Walton, A., Compston, D. a. S., Sawcer, S. J., & Barker, R. A. (2006). Prevalence of the LRRK2 G2019S mutation in a UK community based idiopathic Parkinson's disease cohort. *Journal of Neurology, Neurosurgery, and Psychiatry*, *77*(5), 665–667. https://doi.org/10.1136/jnnp.2005.085019

Wu, H. (2014). Catechol-O-methyltransferase Val158Met polymorphism: Modulation of wearing-off susceptibility in a Chinese cohort of Parkinson's disease. *Parkinsonism & Related Disorders*, *20*(10), 1094–1096.

Yang, L. G., March, Z. M., Stephenson, R. A., & Narayan, P. S. (2023). Apolipoprotein E in lipid metabolism and neurodegenerative disease. *Trends in Endocrinology & Metabolism*, *34*(8), 430–445. https://doi.org/10.1016/j.tem.2023.05.002

Zareparsi, S., Camicioli, R., Sexton, G., Bird, T., Swanson, P., Kaye, J., Nutt, J., & Payami, H. (2002). Age at onset of Parkinson disease and apolipoprotein E genotypes. *American Journal of Medical Genetics*, *107*(2), 156–161. https://doi.org/10.1002/ajmg.10111

Zareparsi, S., Kaye, J., Camicioli, R., Grimslid, H., Oken, B., Litt, M., Nutt, J., Bird, T., Schellenberg, G., & Payami, H. (1997). Modulation of the age at onset of Parkinson's disease by apolipoprotein E genotypes. *Annals of Neurology*, *42*(4), 655–658. https://doi.org/10.1002/ana.410420417

Zhao, C., Wang, Y., Zhang, B., Yue, Y., & Zhang, J. (2020). Genetic variations in catechol-o-methyltransferase gene are associated with levodopa response variability in chinese patients with parkinson's disease. *Scientific Reports*, *10*(1), 1–8.

Zhu, S.-G., Chen, Z.-L., Xiao, K., Wang, Z.-W., Lu, W.-B., Liu, R.-P., Huang, S.-S., Zhu, J.-H., Zhang, X., & Wang, J.-Y. (2024). Association analyses of apolipoprotein E genotypes and cognitive performance in patients with Parkinson's disease. *European Journal of Medical Research*, *29*(1), 334. https://doi.org/10.1186/s40001-024-01924-2

LAMPIRAN

Lampiran 1 – Persetujuan Setelah Penjelasan

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

LAMPIRAN 1

FORMULIR PERSETUJUAN SETELAH PENJELASAN (PSP)
(INFORMED CONSENT)

Selamat pagi Bapak / Ibu /Saudara(i), saya (tim peneliti) bermaksud untuk melakukan penelitian **Analisa dan Pemetaan Genetik Penyakit Parkinson Bawaan di Sulawesi Selatan: Pendekatan Berfokus pada Keluarga.**

Disini tim peneliti bermaksud untuk mengetahui apa saja mutasi genetik yang dapat ditemukan pada Bapak / Ibu /Saudara(i) dan keluarga, yang terkait dengan gejala penyakit Parkinson yang sedang dialami. Hal ini sangat penting agar ke depan kami dapat lebih memahami kondisi genetik yang bisa mencetuskan penyakit Parkinson, serta memahami pola pewarisan dalam keluarga yang terkena. Terutama di Sulawesi Selatan, dimana peneelitian genetik Parkinson masih sangat jarang dilakukan.

Bapak / Ibu /Saudara(i) dan keluarga dipilih untuk mengikuti penelitian ini karena memenuhi kriteria penelitian, yaitu merupakan pasien terdiagnosis Penyakit Parkinson, yang juga memiliki Riwayat keluarga dengan keluhan serupa. Tentunya bahwa partisipasi dalam penelitian ini bersifat sukarela dan dapat mengundurkan diri kapan saja tanpa mengurangi hak mendapatkan pelayanan kesehatan. Dan jika Bapak / Ibu /Saudara(i) dan keluarga, menyetujui untuk ikut maka harus mengikuti protocol penelitian sampai selesai.

Tes genetik dilakukan dengan sampel darah Bapak / Ibu /Saudara(i) dan keluarga. Saat pengambilan sampel darah kemungkinan Bapak / Ibu /Saudara(i) dan keluarga dapat mengalami rasa kurang nyaman, namun kami akan berusaha sebisa mungkin untuk minimalisir hal tersebut. Darah akan diambil oleh tenaga Kesehatan professional pada daerah lengan, dengan jumlah

sebanyak 3 ml. Efek samping tindakan pengambilan sampel misalnya nyeri atau perdarahan ringan, namun jika terjadi akan kami tangani secepatnya sesuai protocol. Setelah pengambilan, sampel akan dikirim ke laboratorium penelitian untuk dilakukan pemeriksaan genetik. Pada prosedur ini, tidak ada biaya yang dibebankan kepada pasien dan keluarga. Tentu kami sangat menghargai partisipasi Bapak / Ibu /Saudara(i) dan keluarga, dan jika berkenan akan diberikan uang transport dan cinderamata sebagai kompensasi waktu dan tenaga Bapak / Ibu /Saudara(i) dan keluarga

Segala data pribadi yang diperoleh dalam penelitian ini akan kami jaga kerahasiaannya. Adapun jika hasil penelitian ini dipublikasikan sebagai naskah akademik atau dalam presentasi ilmiah, maka identitas Bapak / Ibu /Saudara(i) dan keluarga akan kami jaga. Jika ada hal yang ingin ditanyakan mengenai penelitian ini dapat menghubungi peneliti dengan alamat dan nomor kontak di bawah ini.

Identitas Peneliti

Nama: dr. Gita Vita Soraya

Alamat: Jl. Bunaken No 48 Bukit Baruga

No Hp: 082346816358

Lampiran 2 – Rekomendasi Persetujuan Etik

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK. TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK
Nomor : 248/UN4.6.4.5.31/ PP36/ 2024

Tanggal: 17 April 2024

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH24020095	No Sponsor	
Peneliti Utama	**dr. Gita Vita Soraya, Ph.D**	Sponsor	
Judul Peneliti	Analisis Dasar Genetik Penyakit Parkinson Bawaan di Sulawesi Selatan: Pendekatan Berfokus pada Keluarga		
No Versi Protokol	**2**	Tanggal Versi	**2 April 2024**
No Versi PSP	**2**	Tanggal Versi	**2 April 2024**
Tempat Penelitian	RSUP. Dr. Wahidin Suhirohusodo dan RS Jejaring Makassar		
Jenis Review	[ ] Exempted [x] Expedited [ ] Fullboard Tanggal	Masa Berlaku **17 April 2024** sampai **17 April 2025**	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	**Prof. dr. Muh Nasrum Massi,PhD,SpMK, Subsp. Bakt(K)**	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	**dr. Firdaus Hamid, PhD, SpMK(K)**	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Daftar Istilah, Singkatan, dan Lambang

Daftar Istilah

Istilah	Arti dan Penjelasan
Motorik	Kemampuan untuk menggerakkan anggota tubuh, seperti tangan, kaki, kepala, dan bibir.
Bradikinesia	Suatu kondisi yang menyebabkan gerakan menjadi lambat
Tremor	Gerakan gemetar yang tidak disengaja dan terjadi berulang kali.
Gait	Gaya berjalan atau berlari seseorang.
Freezing	Posisi diam tanpa bergerak.
Instabilitas Postural	Ketidakmampuan untuk mempertahankan keseimbangan tubuh.
Disabilitas	Keterbatasan atau gangguan pada fungsi tubuh yang memengaruhi mobilitas, ketangkasan, kapasitas fisik, atau stamina.
Kognitif	Proses mental yang berkaitan dengan berpikir, memahami, mengingat, dan memproses informasi.

Daftar Singkatan dan Lambang

APOE : Apolipoprotein E

BDNF : *brain-derived neurotrophic factor*

CI : *confidence interval*

COMT : *catechol-o-methyl-transferase*

DAT : *dopamine transporter*

DRD : *dopamine receptor*

FTD : *frontotemporal dementia*

FP : *forward primer*

HWE : *hardy-weinberg equilibrium*

LBD : *lewy body dementia*

LID : *levodopa induced dyskinesia*

LRRK2 : *leucine-rich repeat kinase-2*

MAO : *monoamine oxidase*

MDS-UPDRS : *movement disorders society – unified parkinson's disease rating scale*

MLIC : *motor levodopa induced complication*

MMSE : *mini mental state examination*

or fluctuation

iple systems atrophy

s ratio

merase chain reaction

PD : *parkinson's disease*

PRISMA : *preferred reporting items in systematic reviews and meta-analysis*

PSP : *progressive supranuclear palsy*

RP : *reverse primer*

REM : *random effect model*

SLC6 : *solute carrier-6*

SNP : *single nucleotide polymorphism*

SNCA : *alpha-synuclein*

SMD : *standardized mean difference*