

STAFF HANDBOOK

Name : Dr. Ir. Asih Kurniawati, S.Pt., M.Si., IPM.
 Post : Bioteknologi
 Academic career : S1 UGM
 S2 UGM
 S3 UGM

Research over the last 5 years

| No. | Judul Penelitian <i>Research Title</i> | Tahun Year | Sumber Dana <i>Source of Funds</i> |
|-----|--|---------------|---|
| 1. | Teknologi Suplemen Pakan Berbasis Natural Bioactive Tanaman untuk Pengembangan Peternakan Ramah Lingkungan (Green Livestock) | 2020 | PTUPT, PTNBH-Kemenristekdikti |
| 2. | Pengaruh Penambahan Bakteri Asam Laktat Mixture dalam Pakan Tinggi Asam Lemak Tidak Jenuh terhadap Morfologi dan Keragaman Bakteri Saluran Cerna, serta Kandungan asam lemak Darah, Hati dan Daging Ayam Broiler | 2020 | Hibah Tematik Laboratorium Fakultas Peternakan UGM |
| 3. | Pemanfaatan Protein Kasein dari Hasil Ikutan Susu Sapi Pasteurisasi sebagai Bahan Baku Bioplastik | 2020 | Hibah Pascasarjana Fakultas Peternakan UGM |
| 4. | Complete Pellet dengan Imbangan Sumber Protein pada Level yang Berbeda untuk Meningkatkan Produktivitas Kelinci | 2019 | Program Rekognisi Tugas Akhir, UGM |
| 5. | Blend Essential oil sebagai Aditif Pakan Penurun Metan pada Fermentasi Rumen melalui Pendekatan Molekuler | 2019 | Program Rekognisi Tugas Akhir, UGM |
| 6. | Teknologi Suplemen Pakan Berbasis Natural Bioactive Tanaman untuk Pengembangan Peternakan Ramah Lingkungan (Green Livestock) | 2019 | Penelitian Terapan Unggulan Perguruan Tinggi, Ristekdikti |
| 7. | Kajian Senyawa Natural Bioactive dari Buah, Biji dan Daun Pala (<i>Myristica fragrance</i>) dan Aplikasinya pada Peningkatan Kualitas Pakan dan Produktivitas Ternak | 2019 | Hibah Penelitian Tematik Laboratorium Fakultas Peternakan UGM |
| 8. | Teknologi Suplemen Pakan Berbasis Natural Bioactive Tanaman untuk Pengembangan Peternakan Ramah Lingkungan (Green Livestock) | 2018 | Penelitian Terapan Unggulan Perguruan Tinggi (PTUPT), Ristekdikti |
| 9. | Rekayasa Protein Fermentasi Block sebagai Feed Aditive | 2018 | Calon Perusahaan Pemula Berbasis Teknologi (CPPBT), Ristekdikti |
| 10. | Evaluasi Berbagai Sorghum Bicolor sp. Sebagai Sumber Biomassa Pakan dan Bioethanol | 2018 | Hibah Penelitian Pascasarjana Fakultas Peternakan UGM |

| No. | Judul Penelitian <i>Research Title</i> | Tahun Year | Sumber Dana <i>Source of Funds</i> |
|-----|---|---------------|---|
| 11. | Kajian Senyawa Natural Bioactive dari Bungkil Jintan Hitam (<i>Nigella sativa L.</i>) dan Aplikasinya pada Pakan Untuk Pengembangan Peternakan Ramah Lingkungan (Green Livestock) | 2018 | Hibah Tematik Laboratorium, Fakultas Peternakan UGM |
| 12. | Metabolit Sekunder Tanaman sebagai Aditif Pakan: Pengaruh Minyak Asiri Nilam (<i>Pogostemon cablin Benth.</i>) dalam Fermentasi Rumen In Vitro | 2017 | Hibah Tematik Laboratorium Fakultas Peternakan UGM |
| 13. | Kajian Kandungan Saponin pada Beberapa Varietas Brachiaria dan Efeknya pada Kecernaan Pakan secara In Vitro (Anggota dari 3 Peneliti) | 2016 | FUNDAMENTAL, DIKTI |
| 14. | Peran Metabolit Sekunder pada Ternak: Pengaruh Suplemen Pakan dengan Minyak Essensial Pala (<i>Myristica fragans</i>) sebagai Sumber Antioksidan Terhadap Kualitas Daging Kambing (Anggota dari 7 Peneliti) | 2016 | Hibah Penelitian Tematik Laboratorium Fakultas Peternakan UGM |

Community Service over the last 5 years

| No. | Judul Kegiatan <i>Activity Title</i> | Tahun Year | Sumber Dana <i>Source of Funds</i> |
|-----|--|---------------|---|
| 1. | Kampung Domba: Pengembangan Sentra Peternakan Domba untuk Meningkatkan Ekonomi Masyarakat Desa Kadilanggon, Kecamatan Wedi, Kabupaten Klaten | 2020 | Pemerintah Desa Kadilanggon, Wedi, Klaten |
| 2. | Pengabdian Masyarakat Melalui Budidaya Ayam Petelur Umbaran untuk Menghasilkan Telur Fungsional di Pondok Pesantren IS ASWAJA Lintang Songo, Dusun Pagergunung, Piyungan, Bantul, Yogyakarta | 2020 | PT Widodo Makmur Unggas dan Lab. Biokimia Nutrisi Fak. Peternakan UGM |
| 3. | Pengabdian Masyarakat Melalui Budidaya Ayam Petelur Umbaran untuk Menghasilkan Telur Fungsional di Paguyuban Ibu-Ibu Dasawisma Dewi Sari, Buyutan, Gadingsari, Sanden, Bantul, Yogyakarta | 2020 | PT Widodo Makmur Unggas dan Lab. Biokimia Nutrisi Fak. Peternakan UGM |
| 4. | Pengabdian kepada Masyarakat Berbasis Pengembangan Desa Binaan di Dusun Balak, Desa Pendoworejo, Kecamatan Girimulyo, Kabupaten Kulonprogo | 2020 | Persatuan Biokimia dan Biologi Molekuler Indonesia |
| 5. | Pengembangan Peternakan Ramah Lingkungan Menggunakan Teknologi Suplemen Pakan Berbasis Natural Bioaktif Tanaman Tropik di Kelompok Ternak Ayo Angon Dusun Buyutan, Desa Ngalang, Kecamatan Gedangsari Kabupaten Gunung Kidul | 2020 | Hibah Tematik Pengabdian Laboratorium Fakultas Peternakan UGM |
| 6. | Penyaluran Total Mixture Ration (TMR) Berbasis Fermentasi dan Pemberdayaan Kelembagaan Inti-Plasma Peternakan | 2019 | Fakultas Peternakan Universitas Gadjah Mada |
| 7. | Penerapan Teknologi Fermentasi Pakan Hijauan sebagai Solusi Pemenuhan Kebutuhan Pakan Ternak | 2018 | Hibah Pengabdian Tematik |

| No. | Judul Kegiatan <i>Activity Title</i> | Tahun <i>Year</i> | Sumber Dana <i>Source of Funds</i> |
|-----|---|----------------------|--|
| | Daerah Peri-Urban di Pondok Pesantren Irsyadul Anam, Kiyudan, Selomartani, Kalasan, Sleman, Yogyakarta | | Laboratorium Fakultas Peternakan UGM |
| 8. | Pengenalan Metode Pengawetan Hijauan Pakan dengan Aplikasi Teknologi Fermentasi Berbasis Sumber Pakan Lokal kepada Paguyuban Kelompok Ternak Ruminansia Desa Triharjo, Pandak, Bantul | 2016 | Hibah Tematik Pengabdian Fakultas Peternakan |

Important publications over the last 5 years

| No. | Judul Publikasi <i>Publication Title</i> | Tahun <i>Year</i> | Penerbit <i>Publisher</i> |
|-----|---|----------------------|--|
| 1. | Effect of purple sweet potato levels (<i>Ipomoea batatas</i> L.) carbohydrate sources on fermentation kinetics and lactic acid production by <i>Lactobacillus paracasei</i> (Tasminto, D., Bachruddin, Z., Kurniawati, A. , Muhlisin) | 2021 | IOP Conference Series: Earth and Environmental Science, 2021, 686(1), 012048 |
| 2. | Effect of addition cilembu sweet potato extract (<i>Ipomoea batatas</i> Cilembu) as a prebiotic source for the kinetics of fermentation and lactic acid production by <i>Lactobacillus paracasei</i> (Swithenia, F., Bachruddin, Z., Kurniawati, A. , Yusiqati, L.M.) | 2021 | IOP Conference Series: Earth and Environmental Science, 2021, 686(1), 012046 |
| 3. | Merino sheep nitrogen balance with the addition of mahogany leaves (<i>Swietenia mahagoni</i>) as tannins source in feed (Azizah, E.R., Hanim, C., Yusiqati, L.M., Kurniawati, A.) | 2021 | IOP Conference Series: Earth and Environmental Science, 2021, 667(1), 012014 |
| 4. | The effect of additional tannins source from Mahogany leaves (<i>Swietenia mahagoni</i>) to purine derivate excretion in urine and synthesis of rumen microbial protein of Merino sheep (Lestari, E.A., Hanim, C., Yusiqati, L.M., Kurniawati, A.) | 2021 | IOP Conference Series: Earth and Environmental Science, 2021, 667(1), 012062 |
| 5. | The effects of catfish oil supplementation as unsaturated fatty acid source on Bali cow gas production kinetics, dry matter digestibility, and organic matter digestibility in vitro (Cahyo, D.N., Yusiqati, L.M., Kurniawati, A. , Hanim, C., Muhlisin) | 2021 | IOP Conference Series: Earth and Environmental Science, 2021, 637(1), 012058 |
| 6. | Methane Production and Methanogens Diversity in in vitro Ruminal Fermentation with Mahogany Leaves Meal (<i>Swietenia mahagoni</i>) as Tannin Source (Hasanah, C., Kurniawati, A. , Yusiqati, L.M., Muhlisin,, Bachruddin, Z.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012089 |
| 7. | Heating Effect on Rumen Digestion of | 2020 | IOP Conference Series: Earth |

| No. | Judul Publikasi <i>Publication Title</i> | Tahun Year | Penerbit <i>Publisher</i> |
|-----|---|---------------|--|
| | Protein Feeds Fermented by Lactid Acid Bacteria (Sanjaya, H.L., Bachrudin, Z., Kurniawati, A. , Hanim, C., Yusiat, L.M.) | | and Environmental Science, 2020, 478(1), 012029 |
| 8. | Effect of (<i>Leucaena leucocephala</i>) Leaves as Tannin Source on Rumen Microbial Enzyme Activities and in Vitro Gas Production Kinetics (Mahanani, M.M.P., Kurniawati, A. , Hanim, C., Anas, M.A., Yusiat, L.M.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012088 |
| 9. | The Effect of Bromelain from Pineapple (<i>Ananas comosus</i>) on Increasing Protein Digestibility of Milk Replacer for Lam (Putriana, L., Bachruddin, Z., Hanim, C., Kurniawati, A. , Yusiat, L.M., Widayati, O.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012030 |
| 10. | Effect of Cinnamon Bark Meal (<i>Cinnamomun burmanni</i> Ness ex Bl) on in Vitro Methane Production and Rumen Methanogens Diversity (Hadianto, I., Yusiat, L.M., Bachrudin, Z., Suhartanto, B., Hanim, C., Kurniawati, A.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012027 |
| 11. | Antibacterial Activity of Maja Fruit Extract Against <i>Escherichia coli</i> and Its Potential as Urease Inhibitor for Reducing Ammonia Emission in Poultry Excreta (Fitriyanto, N.A., Lewa, N., Prasetyo, R.A., Kurniawati, A. , Erwanto, Y., Bachruddin, Z., Muhlisin,, Wihandoyo) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 465(1), 012006 |
| 12. | Physical and chemical characteristics of rabbit complete pellet feed containing different level of <i>leucaena</i> leaf meal (Prayoga, J., Astuti, A., Kurniawati, A.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 425(1), 012088 |
| 13. | Improvement of ruminal feed fermentation by addition of eucalyptus based mix essential oil (Kurniawati, A. , Wigati, D.N., Hasanah, C., Yusiat, L.M.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 425(1), 012086 |
| 14. | Nutrient digestibility on ruminal fermentation in vitro with addition of rumen modifier based on Clove (<i>Syzygium aromaticum</i> . L.) and Fennel (<i>Foeniculum vulgare</i> . Mill.) essential oil (Kurniawati, A. , Saputra, W.E., Mahardillah, L., Hanim, C., Yusiat, L.M.) | 2020 | IOP Conference Series: Earth and Environmental Science, 2020, 425(1), 012085 |
| 15. | Study of Local Herb Potency as Rumen Modifier: Red Ginger (<i>Zingiber Officinale</i> Var. <i>Rubrum</i>) Addition Effect on In Vitro Ruminal Nutrient Digestibility (A Kurniawati, LM Yusiat, W Widodo, WT Artama) | 2020 | Animal Production 21 (1), 30-37 |

| No. | Judul Publikasi <i>Publication Title</i> | Tahun Year | Penerbit <i>Publisher</i> |
|-----|--|---------------|---|
| 16. | Parameter of ruminal feed fermentation in vitro with addition of clove essential oil (<i>Syzygium aromaticum L.</i>) as feed additive (Mulyandari, F., Yusiatyi, L.M., Kurniawati, A.) | 2019 | IOP Conference Series: Earth and Environmental Science, 2019, 387(1), 012111 |
| 17. | The effect of addition of turmeric (<i>Curcuma longa L.</i>) on the rancidity process of concentrate feed based on lactic acid bacteria fermentation during aerobic storage (Pangistika, A.W., Bachruddin, Z., Kurniawati, A. , Utomo, R., Hanim, C.) | 2019 | IOP Conference Series: Earth and Environmental Science, 2019, 387(1), 012099 |
| 18. | Addition of essential oil source, Amomum compaction Soland ex Maton, and its effect on ruminal feed fermentation in-vitro (Kurniawati, A. , Widodo,, Artama, W.T., Yusiatyi, L.M.) | 2019 | Biotropia, 2019, 26(3), pp. 172–180 |
| 19. | Effects of Lemongrass Leaves as Essential Oil Sources on Rumen Microbial Ecology and Nutrient Digestibility in an in vitro System (Insani Hubi Zulfa, Zaenal Bachruddin and Asih Kurniawati) | 2019 | Pak. J. Nutr., 18 (3): 254-259, 2019 |
| 20. | Addition of essential oil source, amomum compactum soland ex maton and its effect on ruminal feed fermentation in-vitro (A Kurniawati , W Widodo, WT Artama, LM Yusiatyi) | 2019 | BIOTROPIA-The Southeast Asian Journal of Tropical Biology 26 (3), 172-180 |
| 21. | Protein Binding Capacity of Different Forages Tannin (Yusiatyi, L.M., Kurniawati, A. , Hanim, C., Anas, M.A.) | 2018 | IOP Conference Series: Earth and Environmental Science, 2018, 119(1), 012007 |
| 22. | Study of Local Herb Potency as Rumen Modifier: The Effect of Red Ginger (<i>Zingiber officinale</i> Var. <i>Rubrum</i>) on Parameters of Ruminal Fermentation in Vitro (Kurniawati, A. , Widodo, W., Artama, W.T., Yusiatyi, L.M.) | 2018 | IOP Conference Series: Earth and Environmental Science, 2018, 119(1), 012058 |
| 23. | Effects of adding chicken blood meal and fishmeal to sludgebiogas as white oyster mushroom media (Pertiwiningrum, A., Hapsari, D.J., Ratnaningrum, P., Kurniawati, A. , Rochijan, Nugroho, R.D.) | 2018 | Pakistan Journal of Biological Sciences, 2018, 21(1), pp. 29–37 |
| 24. | Effects of <i>Pinus merkusii</i> jungh. & de Vriesse Essential Oil on Methane Production and Ruminal Feed Fermentation (Asih Kurniawati) | 2018 | Presented at International Congress on Agriculture and Animal Sciences (ICAGAS), Turkey |
| 25. | The Effect of Lactose Level as Substrate to Bacteriocins Production on <i>Lactobacillus paracasei</i> Fermentation (Bachruddin, Z., Kurniawati, A. , Yusiatyi, L.M., Hanim, C. & | 2018 | E-Proceedings 18th AAAP Congress 2018, 1-5 Aug. 2018, Kuching, Malaysia. pp. 98 |

| No. | Judul Publikasi <i>Publication Title</i> | Tahun <i>Year</i> | Penerbit <i>Publisher</i> |
|-----|--|----------------------|---|
| | Marantika, Y.) | | |
| 26. | The Effect of Lactose Level as Substrate to Bacteriocins Production on Lactobacillus paracasei Fermentation (Bachruddin, Z., Kurniawati, A. , Yusiaty, L.M., Hanim, C. & Marantika, Y.) | 2018 | E-Proceedings 18th AAAP Congress 2018, 1-5 Aug. 2018, Kuching, Malaysia. pp. 98 |
| 27. | Effects of Adding Chicken Blood Meal and Fishmeal to Sludge Biogas as White Oyster Mushroom Media (Ambar Pertiwiningrum, Dianita Juli Hapsari, Palupi Ratnaningrum, Asih Kurniawati , Rochijan and Ramdhana Dwi Nugroho) | 2018 | Pakistan Journal of Biological Sciences Vol. 21 No.1 Page 29-37. |
| 28. | Effects of Four Essential Oils on Nutrients Digestibility of In Vitro Ruminal FermentationEffects of Four Essential Oils on Nutrients Digestibility of In Vitro Ruminal Fermentation (Asih Kurniawati , Widodo, Wayan Tunas Artama, Lies Mira Yusiaty) | 2018 | Buletin Peternakan Vol. 42 No. 2 Hal. 122-126. |
| 29. | Effect of Fermentation on Compositional Changes of Cinnamomum osmophloeum Kaneh Leaves (Kurniawati, A. , D., Huang, T.C., Kusnadi, J.) | 2017 | IOP Conference Series: Materials Science and Engineering, 2017, 193(1), 012013 |
| 30. | The Effect of Cumin (<i>Cuminum cyminum</i>) Addition as Source of Essential Oils on Nutrien Digestibility, VFA, Amonia and Methan Production (Penulis ke-1 dari 4) | 2017 | The 7th International Seminar on Tropical Animal Production (ISTAP), September 12-14, 2017, Yogyakarta, Indonesia. Pages: 128-132. ISBN: 978-979-1215-29-9 |
| 31. | In Vitro Gas Production of Lemongrass Leaves as Essential Oil Source and its Effect on The Kinetics of Gas Production (Penulis ke-2 dari 3) | 2017 | The 7th International Seminar on Tropical Animal Production (ISTAP), September 12-14, 2017, Yogyakarta, Indonesia. Pages: 147-151. ISBN: 978-979-1215-29-9 |
| 32. | Amomum compactum Soland ex Maton Addition as Essential Oil Source and Its Effect on Ruminal Feed Fermentation (Penulis ke-1 dari 4) | 2017 | 1st International Conference of Essential Oil (ICEO 2017), Oktober, 11-12, 2017. Malang – Indonesia |
| 33. | Feed supplementation for dairy cattle by using multi nutrient feed supplement without molasses (MFSWM) (Penulis ke-3 dari 4) | 2017 | Program and Abstract Book of the Sixth SAADC Conference, Batu 16 – 19 October 2017 “Wisdom of Using Local Resources for Development of Sustainable Animal Production in |

| No. | Judul Publikasi <i>Publication Title</i> | Tahun <i>Year</i> | Penerbit <i>Publisher</i> |
|-----|--|----------------------|--|
| | | | Developing Countries". Batu City, Indonesia. Page: 209 |
| 34. | Study of local herb potency as rumen modifier: The effect of Red Ginger (<i>Zingiber officinale</i> Var. <i>Rubrum</i>) on parameters of ruminal fermentation parameter in vitro (Penulis ke-1 dari 4) | 2017 | International Ruminant Seminar, Universitas Diponegoro, Semarang, Indonesia, 24 October 2017 |
| 35. | The Effect of Hibiscus Rosa-Sinensis L. Leaves as Defaunating Agent on In Vitro Gas Production of Feed (Penulis ke-2 dari 3) | 2017 | Proceedings of The 5th International Seminar of Animal Nutrition & Feed Science (ISAINI), Mataram-Indonesia, 7-9 November 2017. Pages: 164-170. ISBN: 978-602-51437-0-0 eISBN: 978-602-51437-1-7 |
| 36. | Study of Local Herb Potency As Rumen Modifier: The Effect of Red Ginger Addition In Diet on In Vitro Ruminal Nutrien Digestibility (Penulis ke-1 dari 4) | 2017 | Present at The 5th International Seminar of Animal Nutrition & Feed Science (ISAINI), Mataram-Indonesia, 7-9 November 2017 |
| 37. | Effect of lemongrass (<i>Cymbopogon citratus</i>) litter supplementation as essential oil source on in vitro ruminal nutrient digestibility (Penulis ke-2 dari 4) | 2017 | Proceedings of The 5th International Seminar of Animal Nutrition & Feed Science (ISAINI), Mataram-Indonesia, 7-9 November 2017. Pages: 197-206. ISBN: 978-602-51437-0-0 eISBN: 978-602-51437-1-7 |
| 38. | Effect of <i>Kaempferia galanga</i> L. on in Vitro Nutrients Digestibility, Ruminal Fermentation and Methane Production (Penulis ke-1 dari 4) | 2016 | The 17 th Asian-Australasian Association of Animal Production Societies Animal Science Congress, 22-25 August 2016, Fukuoka Japan |
| 39. | The Effect of Different Long-Term Storage with Rice Bran- CaCO_3 as Carrier of Aerobic Thermolignocellulolytic Inoculums as Starter on Fiber Compound Content of Fermented Rice Straw (Penulis ke-4 dari 4) | 2016 | Proceedings of The 17 th Asian-Australasian Association of Animal Production Societies Animal Science Congress, 22-25 August 2016, Fukuoka Japan |
| 40. | Improvement of Nutritional Value of Soybean Meal Fermented by Phytase-Producing Bacteria from Tofu-Industry Waste Soil (Penulis ke-2 dari 3) | 2016 | Proceedings of the 1 st UGM International Conference on Tropical Agriculture (ICTA), 25-26 October, 2016. Yogyakarta, Indonesia |
| 41. | Effects of Four Essential Oils on Nutrients Digestibility of in Vitro Fermentation with Ongole Crossbreed Cattle Rumen Liquor | 2016 | Proceedings of the 1 st UGM International Conference on Tropical Agriculture (ICTA), |

| No. | Judul Publikasi <i>Publication Title</i> | Tahun <i>Year</i> | Penerbit <i>Publisher</i> |
|-----|---|----------------------|---|
| | (Penulis ke-1 dari 4) | | 25-26 October, 2016. Yogyakarta, Indonesia |
| 42. | Effect Supplementation of Multi-Nutrient Feed Supplement or Urea Multi-Nutrient Molasses Block in Diet of Dairy Cattle (Penulis ke-1 dari 3) | 2016 | Proceeding The 3 rd APIS and 3rd ARCAP in Batu October 19-21, 2016 |

Courses

1. Pengantar Bioteknologi
2. Biokimia Dasar
3. Enzimologi dan Teknologi Fermentasi
4. Toksikologi Pakan
5. Seminar
6. Mikrobiologi Ternak
7. Teknologi Fermentasi dan Enzim
8. Pengolahan Hasil Ternak Tropis Mutakhir

Achievements/Awards

| No. | Prestasi/Penghargaan <i>Achievements/Awards</i> | Tahun <i>Year</i> |
|-----|--|----------------------|
| 1. | - | - |