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BAB VI

SIMPULAN, SARAN, DAN LIMITASI

6.1 Simpulan

1. Pejantan sapi Bali memiliki kualitas semen segar dan semen beku yang baik dengan libido 40% rendah dan 60% libido tinggi dengan konsentrasi testosteron yang bervariasi antar individu. Pejantan sapi Bali juga memiliki potensi produksi semen beku rata-rata 261 *straw* per ejakulat.
2. Pita protein plasma semen hasil 1D-SDS-PAGE memiliki intensitas ketebalan pita yang berbeda pada rentang 15-245 kDa. Analisis 1D-SDS-PAGE dapat digunakan sebagai skrining protein penanda fertilitas pejantan yang berhubungan dengan kualitas spermatozoa. Penelitian ini memberikan informasi baru tentang kandungan protein dalam plasma semen pejantan sapi Bali.
3. Pendekatan proteomik menggunakan LC-MS/MS dapat digunakan sebagai biomarker fertilitas pada pejantan sapi Bali. Protein yang berasal dari plasma semen pejantan sapi yang berhubungan dengan fertilitas adalah protein SPADH1, NPPC, CLU, APOA2, ISYNA1, dan QSOX1.

6.2 Saran

Analisis lebih lanjut pada tingkat molekuler, khususnya pendekatan genomik diperlukan untuk mengkaji ekspresi gen dan protein yang dihasilkan, termasuk *sequencing*. Kajian terkait ekspresi gen menggunakan pejantan fertil, subfertil, dan infertil untuk membandingkan ekspresi gen dan mendapatkan keakuratan dalam penyeleksian pejantan sapi Bali unggul di Balai Inseminasi Buatan Indonesia.

6.3 Limitasi

Limitasi atau keterbatasan pada penelitian ini adalah hanya menggunakan sampel yang berasal dari BIBD Pucak, sehingga sapi yang digunakan homogen. Peneliti menyadari bahwa dalam suatu proses penelitian hendaknya meminimalisir bias data dengan antisipasi kendala yang dihadapi. Pada penelitian ini, penulis menghadapi beberapa limitasi atau kendala, yaitu:

1. Sampel darah untuk pengujian konsentrasi hormon testosteron hanya dilakukan satu kali.
2. Belum dilakukan analisis *Western Blotting* untuk mengonfirmasi protein spesifik pada plasma semen sapi Bali.
3. Belum membandingkan protein spesifik pada pejantan fertil dan infertil.

CURRICULUM VITAE

A. Identitas Diri

1	Nama Lengkap	Hikmayani Iskandar
2	Jenis Kelamin	Perempuan
3	Agama	Islam
4	Tempat dan Tanggal Lahir	Makassar, 25 Juni 1996
5	Alamat	Perumahan Bumi Berua Indah Blok A/No.1 A
6	E-mail	ihikmayani@gmail.com
7	Nomor Telepon	+62 85696722519

B. Riwayat Pendidikan

No	Strata	Institusi	Fakultas/ Jurusan	Tahun Lulus	Judul Penelitian	Supervisor
1	SMA	SMA Negeri 22 Makassar	IPA	2013	-	-
2	S1	Universitas Hasanuddin	Peternakan	2017	Pengaruh penambahan Insulin Transferrin Selenium (ITS) pada medium terhadap tingkat maturasi dan fertilisasi oosit sapi Bali secara in vitro	Prof. Dr. Ir. Herry Sonjaya, DES., DEA
3	S2	Universitas Hasanuddin dan Join Master Degree di Kagawa University	Sistem- sistem Pertanian/ Animal Cell Biology	2019	<ul style="list-style-type: none"> • Identifikasi protein plasma semen sebagai biomarker fertilitas dan produktifitas pada sapi Bali • Analysis of cholesterol synthesis-related genes in INS-1 cells 	<ul style="list-style-type: none"> • Prof. Dr. Ir. Herry Sonjaya, DES., DEA • Sugiyama Yasunori, Ph.D.
4	S3	Universitas Hasanuddin	Ilmu Pertanian	2022	Identifikasi protein plasma semen sebagai biomarker fertilitas dan produktifitas pada sapi	Prof. Dr. Ir. Herry Sonjaya, DES., DEA
5	Visiting Scholar	Swedish University of Agricultural Sciences	Faculty of Veterinary Medicine and Animal Science	2022	<ul style="list-style-type: none"> • Identification of seminal plasma protein as a biomarkers fertility and productivity in Bali cattle • Identification of whole promoter genome Bernese Mountain Dog (BMD) 	<ul style="list-style-type: none"> • Prof. Dr. Ir. Herry Sonjaya, DES., DEA • Prof. Göran Andersson

C. Pengalaman Penelitian dalam 5 tahun terakhir

No	Tahun	Judul Penelitian	Pendanaan	
			Sumber	Jumlah
1	2019	Identifikasi protein plasma semen sebagai biomarker fertilitas dan produktifitas pada sapi Bali	Hibah PMDSU-DIKTI	Rp 60.000.000
2	2020	Identifikasi protein plasma semen sebagai biomarker fertilitas dan produktifitas pada sapi Bali	Hibah PMDSU-DIKTI	Rp 60.000.000
3	2021	Identifikasi protein plasma semen sebagai biomarker fertilitas dan produktifitas pada sapi Bali	Hibah PMDSU-DIKTI	Rp 60.000.000
4	2021	Identifikasi protein plasma semen sebagai biomarker fertilitas dan produktifitas pada sapi Bali	PKPI PMDSU-DIKTI (Swedia)	€ 8.250
5	2022	Semen beku (<i>straw</i>) hasil seleksi pejantan sapi Bali tidak bertanduk (<i>polled</i>) unggul	DIKTI	Rp 25.000.000

D. Internasional Conference

No	Nama Kegiatan	Penyelenggara	Tahun	Judul artikel	Sebagai
1	The 3 rd International Conference of Animal Science and Technology (ICAST)	Fakultas Peternakan Universitas Hasanuddin	2020	Studies of protein from sperm bulls and relationship with fertility	Oral Presentation
2	The 4 th International Conference of Animal Science and Technology (ICAST)	Fakultas Peternakan Universitas Hasanuddin	2021	Effect of thawing temperature and duration on frozen semen quality of horned and polled cattle	Oral Presentation
3	The 2 nd International Joint Graduate Seminar on Animal Science	Faculty of Animal Science, Universitas Gadjah Mada	2021	Quality of frozen semen in Regional Artificial Insemination Center	Oral Presentation
4	RNA-seq Results Explained: what you can expect from the analysis	Novogene Europe	2022	-	Participant

E. Seminar Nasional

No	Nama Kegiatan	Penyelenggara	Tahun	Judul artikel	Sebagai
1	SEMINAR NASIONAL PERSEPSI IV	Perhimpunan Ilmuwan Sosial Ekonomi Peternakan Indonesia	2019	Teknik koleksi oosit dalam produksi embrio secara in vitro pada ternak ruminansia	Oral Presentation
2	Membangun Sumber Daya Peternakan di Era Industri 4.0	Ikatan Sarjana Peternakan Indonesia	2020	Tinjauan reklamasi lahan pasca tambang timah (Sn) melalui penanaman tumbuhan pakan	Poster Presentation
3	Membangun Sumber Daya Peternakan di Era Industri 4.0	Ikatan Sarjana Peternakan Indonesia	2020	Profil perkembangan program upsus siwab (Upaya khusus sapi induk wajib bunting) di Sulawesi Selatan	Poster Presentation

F. Publikasi artikel ilmiah dalam jurnal 5 tahun terakhir

No	Tahun	Judul Artikel Ilmiah	Nama Jurnal	Volume/Nomor/ Halaman	Keterangan
1	2019	Effect of adding Insulin Transferrin Selenium (ITS) in the Medium on Maturation and Fertilization rates of Bali cattle oocytes	Jurnal Ilmu Ternak dan Veteriner (Q2)	Vol 24(3): 95-102	First author
2	2022	Correlation between semen quality, libido, and testosterone concentration in bulls	Jurnal Ilmu Ternak dan Veteriner (Q2)	Vol 27(2): 57-64	First author
3	2022	The quality of fresh, frozen semen and its correlation with seminal plasma protein molecular weight in cattle	Tropical Animal Science Journal (Q3)	Vol 45(4): 405-412	First author
4	2022	Bull sperm and seminal plasma proteins and their relationship with fertility: A Review	Online Journal of Animal and Feed Research (Q4)	Vol 12(5): 292-301	First author
5	2022	Protein identification of seminal plasma in Bali bull (<i>Bos javanicus</i>)	Animals (Q1)	Review 1	First author

Semua data yang saya isikan dan tercantum dalam biodata ini adalah benar dan dapat dipertanggungjawabkan secara hukum. Apabila di kemudian hari ternyata dijumpai ketidaksesuaian dengan kenyataan, saya sanggup menerima sanksi.

Makassar, 7 Desember 2022

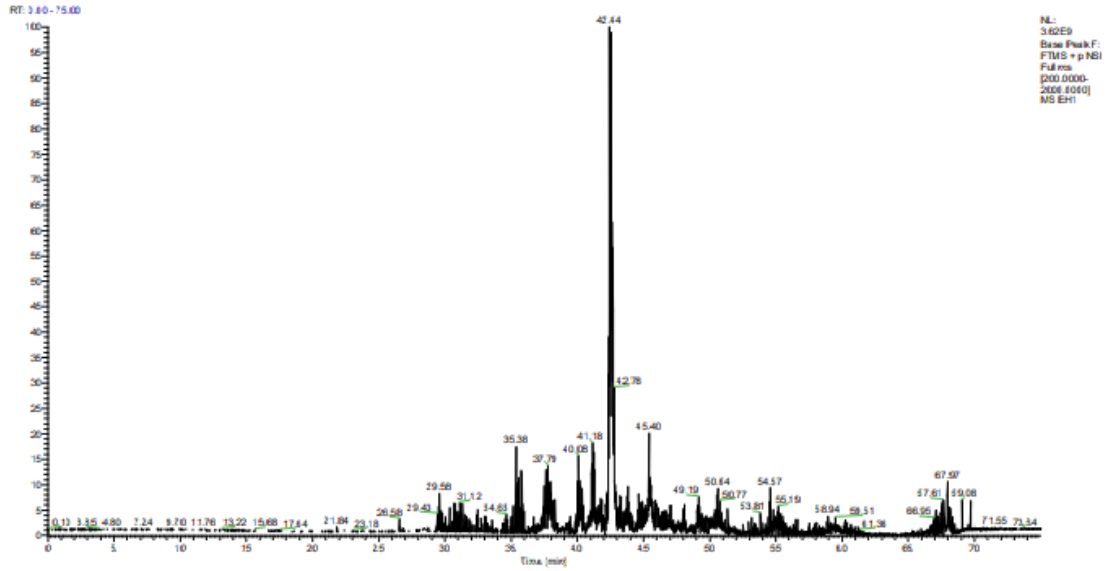


Hikmayani Iskandar

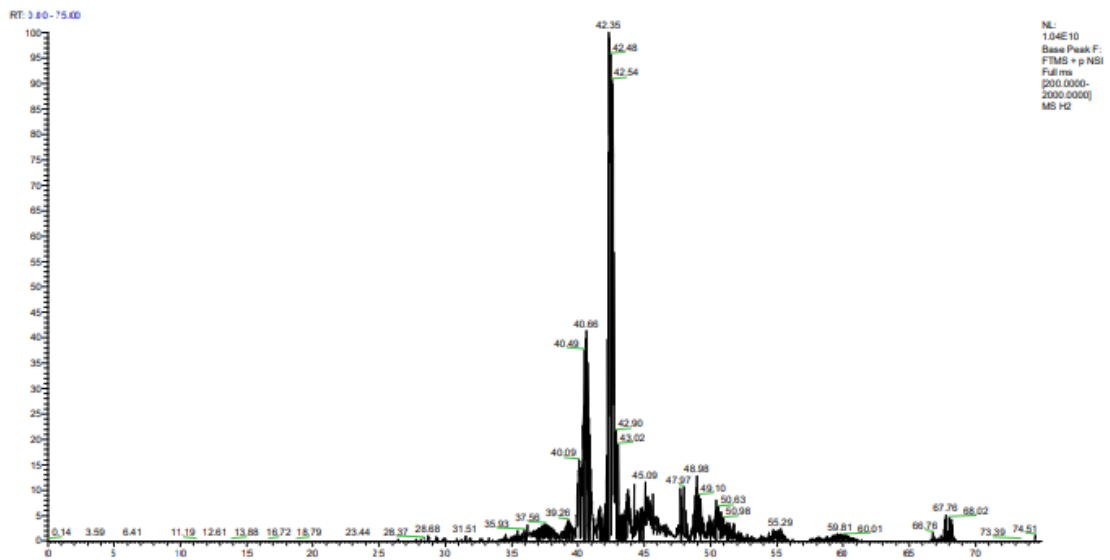
LAMPIRAN

HASIL ANALISIS

Sampel H1

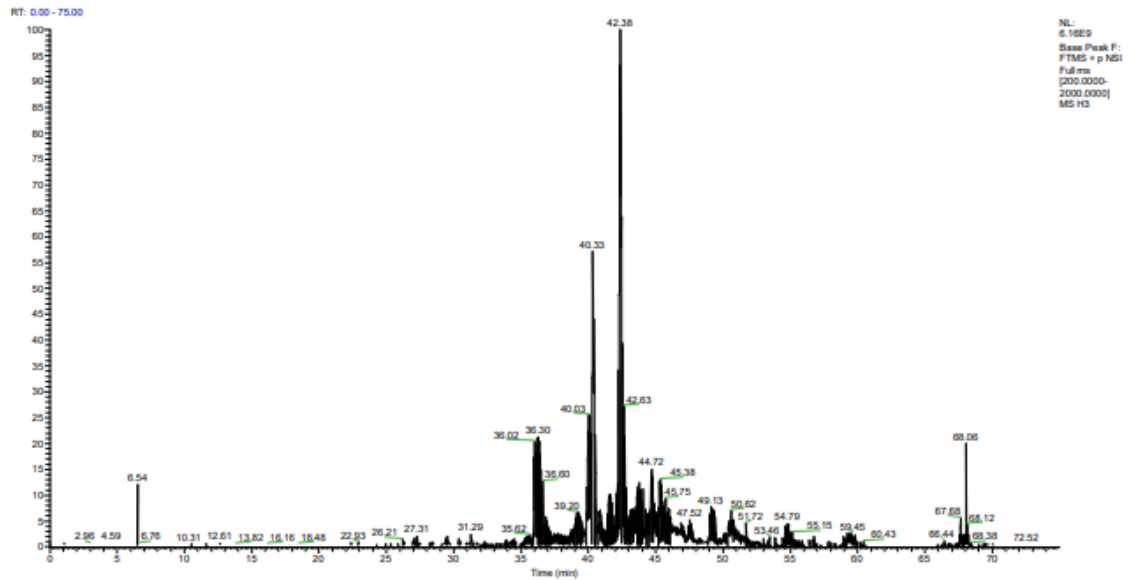


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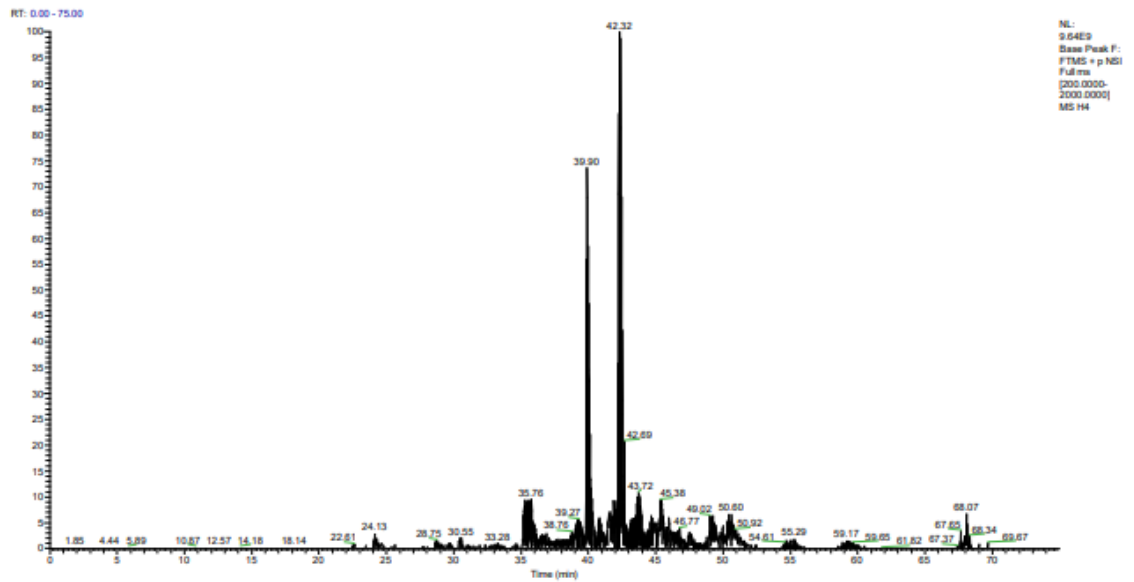


HASIL ANALISIS

Sampel H3

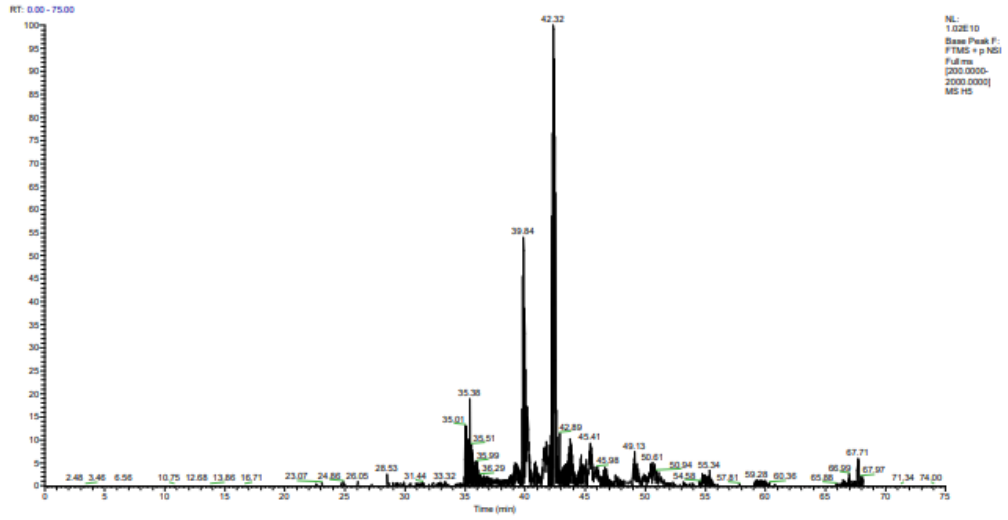


Sampel H4



HASIL ANALISIS

Sampel H5



Sampel H6

