

INDONESIAN RESEARCH CENTER FOR VETERINARY SCIENCE PROFILE



INDONESIAN AGENCY FOR AGRICULTURAL RESEARCH AND DEVELOPMENT
MINISTRY OF AGRICULTURE



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THE INDONESIAN RESEARCH CENTER FOR VETERINARY SCIENCE (IRCVS), which is a Technical Implementation Unit (TIU) of Indonesian Agency for Agricultural Research and Development, Ministry Agriculture, has the tasks to carry out veterinary research in order to produce technological innovations to support the strategic program of the Ministry of Agriculture in the animal husbandary sector in the aspects of animal health and veterinary public health.

Therefore, the veterinary research program of IRCVS is prepared by referring to the Ministry of Agriculture program of 2015-2019 that has the target of agricultural development in realizing food sovereignty through the acceleration of the production increase and diversification; the improvement of added values and competitiveness of food and agriculture products; the enhancement on the availability of bioindustry and bio-energy raw materials; as well as the improvement of the income and welfare of farmers.

The IRCVS Profile includes the history of the establishment of IRCVS, Institutional Accreditation, Organizational Structure, Public Services, IRCVS Laboratories and its supporting units, Publications and Innovation Products.

It is expected that the IRCVS Profile provides benefits for all interested parties related to the research and development of animal husbandary, especially in the veterinary aspect . To all parties who have actively participated in the preparation of this profile, we extend our appreciation and gratitude.



DR. DRH. NLP INDI DHARMAYANTI, M,SI
IRCVS DIRECTOR

TABLE OF CONTENTS

HISTORY	4	SERVICES	21
ACCREDITATION	9	PUBLICATIONS	26
ORGANIZATION	10	PRODUCTS	28
LABORATORIES	13		

4 HISTORY



**THE INDONESIA RESEARCH CENTER FOR V
VEEARTSENIJKUNDIG LABORATORIUM (V.
government o**

**“VEEARTSENIJKUNDIG SCHOOL”,
a school and training center for
prospective veterinarians, was
established in Cimanggu Kecil,
in 1908.**

**Both of these institutions were
headed by
PROF. DR. L. DE BLIECK
in 1908-1915**

**The Indonesian Research Center For Veterinary
Science underwent 10 times name changes,**

- | | |
|---|-------------|
| 1. Veeartsenijkundig Laboratorium (V.L.) | 1908 |
| 2. Veeartsenijkundig Instituut (V.I.) | 1927 |
| 3. Balai Penyidikan Penyakit Hewan (BPPH) | 1942 |
| 4. Veeartsenijkundig Instituut NICA | 1947 |
| 5. Lembaga Penyakit Hewan (LPH) | 1950 |
| 6. Lembaga Pusat Penyakit Hewan (LPPH) | 1955 |
| 7. Lembaga Penelitian Penyakit Hewan (LPPH) | 1962 |
| 8. Balai Penelitian Penyakit Hewan (BPPH) | 1980 |
| 9. Balai Penelitian Veteriner (Balitvet) | 1984 |
| 10. Balai Besar Penelitian Veteriner Bogor
(BBALITVET) | 2006 |



VETERINARY SCIENCE, formerly named L.), was established by Dutch colonial in June 1908



PROF. DR. L. DE BLIECK





IRCVS BUILDING



8 HISTORY

**Based on the Ministry of Agriculture Regulation
No. 15/Permentan/OT.140/3/2006 in 2006 and**

**The Ministry of Agriculture Regulation
No. 34/Permentan/OT.140/3/2006 in 2013**

"The IRCVS has the duty of conducting veterinary research and performing the function as reference laboratories of animal diseases"

VISION

The Indonesia Research Center for Veterinary Science becomes

"A leading research institute in producing veterinary science and technology for the improvement of livestock production in support of food sovereignty and farmer welfare "

MISI

- 1. Undertaking the exploration, characterization, conservation and utilization of potential veterinary germplasma resources for the development of veterinary Science and Technology**
- 2. Producing veterinary science and technology innovations (Vaccines, drugs, diagnostic technique) and veterinary policies in accordance with the dynamics of user needs in realizing sustainable bioindustry agriculture**
- 3. Disseminating technological innovations to users/stakeholders**
- 4. Implementing veterinary diagnostic services for animal health, veterinary public health and food safety of livestock originating food primarily in accordance with standards as a reference laboratory**
- 5. Improving the network of research collaboration and development of veterinary science and technology with other research and development institutes and technology, and both national and international related institutions**
- 6. Improving scientific publications in accredited journals both nationally and internationally in order to disseminate research results, as well as to obtain feedback from users**
- 7. Improving the quality, capacity, and capability of research resources to produce veterinary science and technology that has scientific and impact recognition**
- 8. Improving research managerial capabilities professionally.**



The IRCVS obtained ISO 9001: 2008 Certificate on the Quality Management System issued by Mutu Agung Lestari Quality Consulting Institute



General requirements of test and calibration laboratory competence are through laboratory accreditation based on SNI ISO/IEC 17025:2008



PUI-VETERINER

Pusat Unggulan Iptek is an organization, both independent and consortium that carries out multi-level and interdisciplinary international research with high standards of results and is relevant to the needs of the latest scientific and technological developments



KNAPPP Accreditation (Komite Nasional Akreditasi Pranata Penelitian dan Pengembangan) is a formal recognition of Research & Development institutions for their ability to carry out research and development in accordance with the quality guidelines issued by KNAPPP



The IRCVS is a research institute that also has duties and functions as a national reference laboratory in the field of animal disease and veterinary community health. To support these tasks and functions, IRCVS has become an accredited proficiency test laboratory (PTP) that meets the requirements of SNI ISO/IEC 17043:2010

CWA 15793:2008
Biorisk Management System Standard

- International -
Laboratory Biorisk Management
Standard

ORGANIZATIO



IRCVS DI

Dr. Drh. NLP Indi



**PROGRAM AND EVALUATION
DIVISION**

Dr. Muharam Saepulloh, S.si., M.Sc



Program Section

Drh. Harimurti, Ph.D



Evaluation Section

Drh. Kusmiyati



FUNCTIONAL

GR

INTERNAL STRUCTURE

RECTOR

Dharmayanti, M.Si



ADMINISTRATION DIVISION

Ir. Chaerunisa Syafitrie, M.Si



**Personnel & Internal Affairs
Subdivision**

Arthaulu Siregar, S.E



**Financial and Supply
Subdivision**

Mimin Mindawati, S.E



**COLLABORATION & RESEARCH
RESULT UTILIZATION DIVISION**

Dr. Drh. Bambang Ngaji Utomo, M.Sc



Collaboration Section

Dr. Drh. Andriani, M.Si

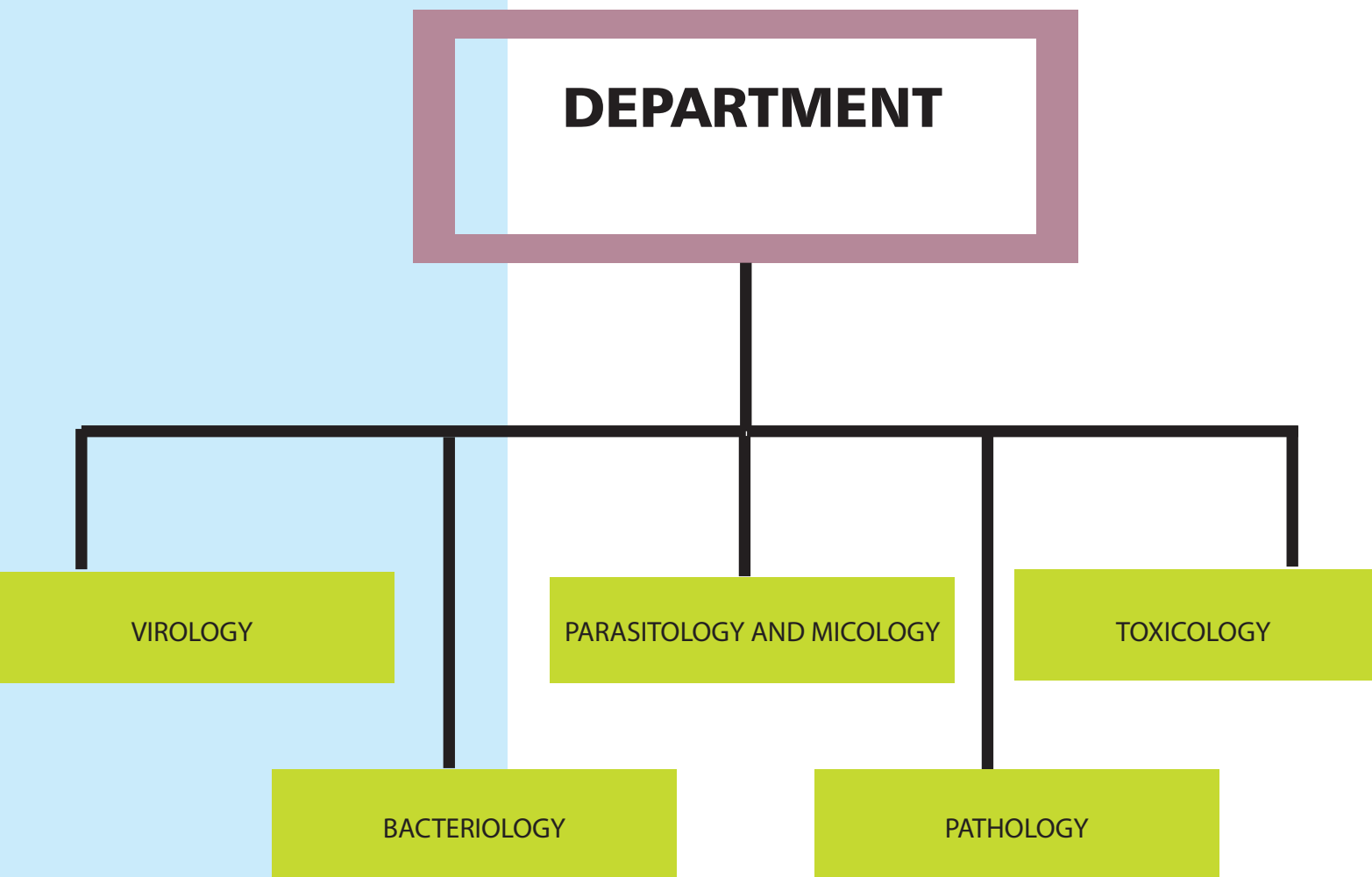


Research Result Utilization Section

Dr. Drh. Rahmat Setya Adji, M.Si

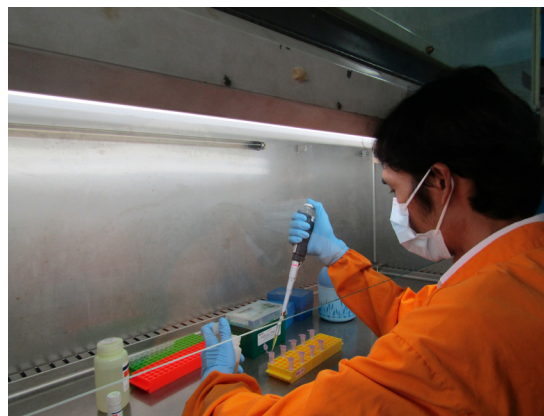
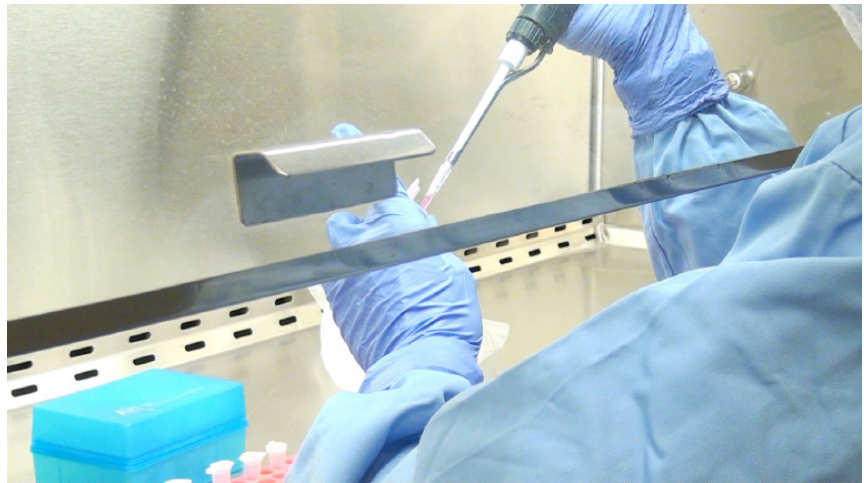
**PERSONNEL
GROUP**

DEPARTMENT



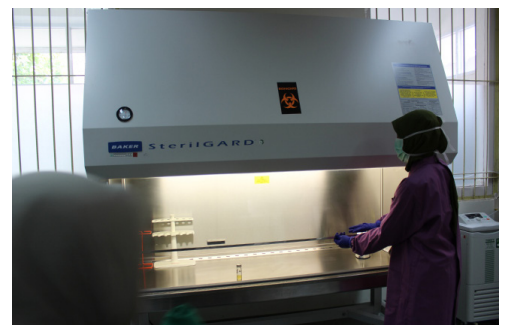
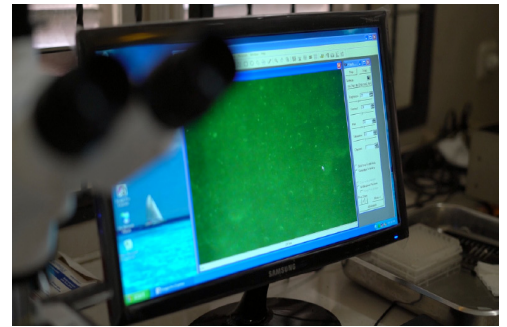
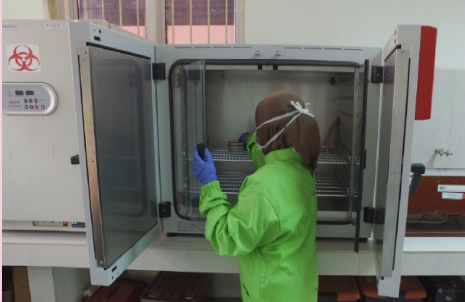
VIROLOGY LABORATORY

Drh. Atik Ratnawati, M. Biotech
HEAD OF DEPARTMENT



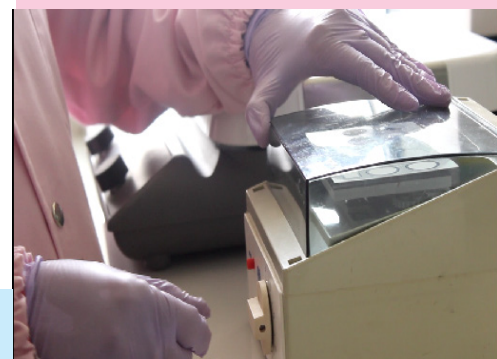
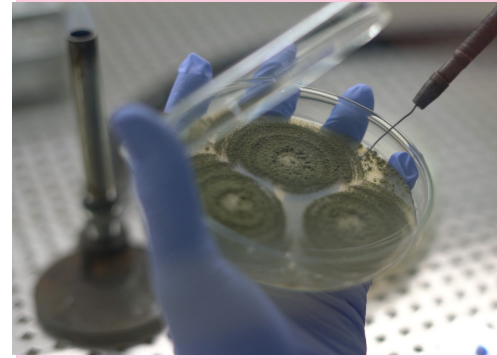
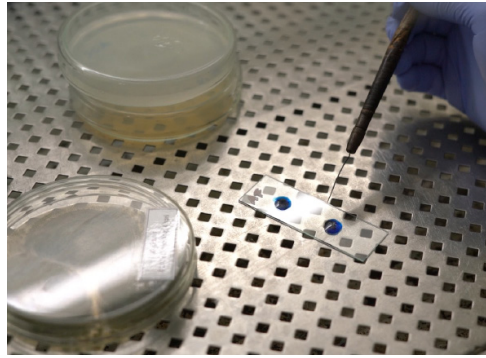
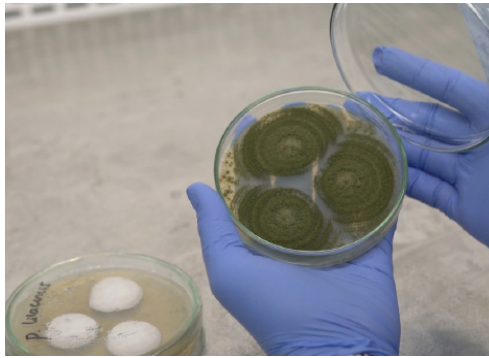
BACTERIOLOGY LABORATORY

Dr. drh. Susan M. Noor, M.VSc
HEAD OF DEPARTMENT



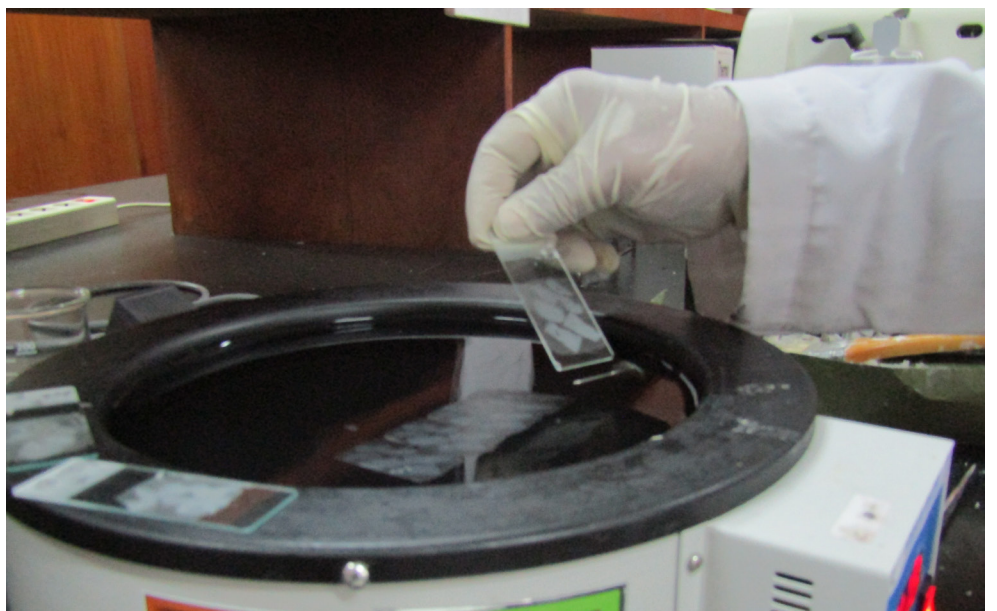
PARASITOLOGY AND MICOLOGY LABORATORY

Dr. drh. Riza Zainuddin Ahmad, M.Si
HEAD OF DEPARTMENT



PATHOLOGY LABORATORY

Dr. drh. Yulvian Sani
HEAD OF DEPARTMENT



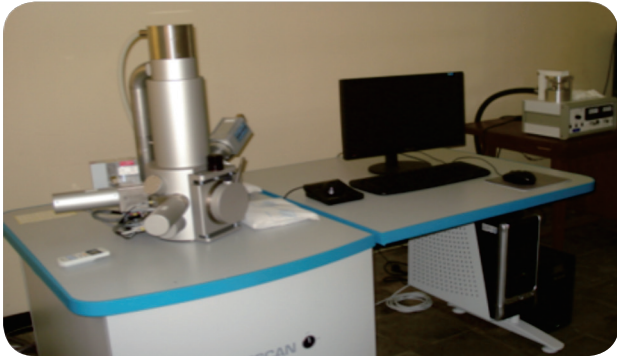
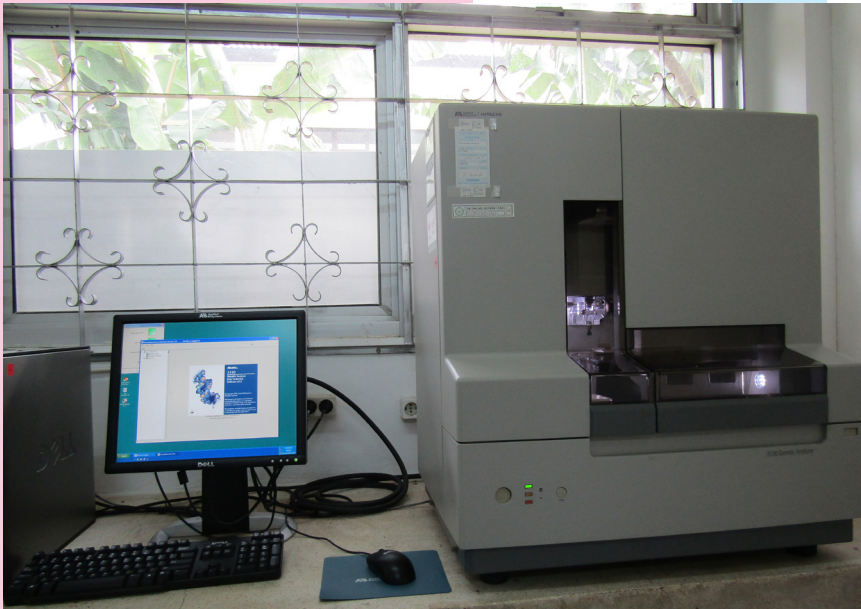
TOXICOLOGY LABORATORY

Dr. Raffaella Widiastuti, B.Sc
HEAD OF DEPARTMENT



BIOTECHNOLOGY LABORATORY

Dr. drh. Yulvian Sani
PERSON IN CHARGE



BSL-3 AND ZOOZOSES LABORATORY

Risa Indriani, S.Si
BSL-3 MANAGER

Drh. Indrawati Sendow, M.Sc
ZOOZOSES LAB MANAGER



SUPPORTING
UNITS
ANIMAL TRIAL
CAGES



Chicken Coop



Ruminants cage



Ruminants cage in KP Cimanglid



Rodents cage

PTP

THE IRCVS AS A PROVIDER AND ORGANIZER THE PROFICIENCY TEST (PROFICIENCY TEST PROVIDER)



The IRCVS is a research institute that also has duties and functions as a "National Reference Laboratory in the field of animal disease and veterinary community health".

TO SUPPORT THESE TASKS AND FUNCTIONS,

IRCVS HAS BECOME AN ACCREDITED LABORATORY FOR PROFICIENCY TEST PROVIDERS THAT MEETS THE REQUIREMENTS OF

SNI ISO/IEC 17043:2010

The IRCVS as an Organizer The Proficiency Test in 2015 - 2018

2015	2016	2017	2018
HI-Newcastle Disease (ND)	RBT-Brucellosis	TPC-Staph. aureus	Salmonella Detection
HI-Avian Influenza (AI)	CFT-Brucellosis	RBT-Brucellosis	E. coli Detection
		CFT-Brucellosis	TPC/ALT
		Detection of tetracycline residues	HI-Newcastle Disease (ND)
			HI-Avian Influenza (AI)

The IRCVS as a Provider The Proficiency Test

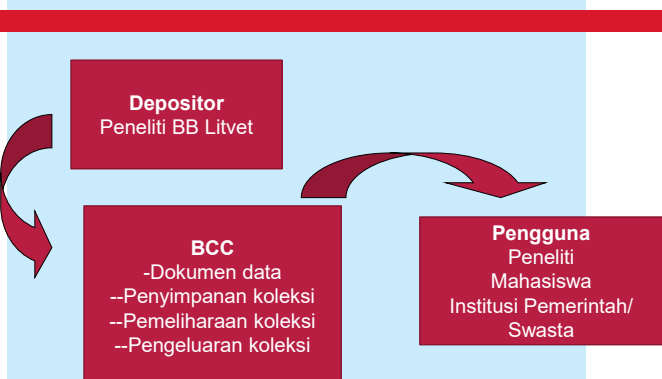
NO	YEAR	SCOPE	PARTICIPANTS
1	2008	TPC-E. coli, Salmonella detection	108 lab
2	2009	MPN-Coliform dan E.coli, Salmonella detection, RBT-Brucellosis, CFT-Brucellosis, HI-ND, HI-AI	134 lab
3	2010	MPN-Coliform dan E. coli, Salmonella Aspergillus flavus	162 lab 52 lab
4	2011	TPC-Staph. aureus	143 lab
5	2012	HI-ND, HI-AI, RBT-Brucellosis, CFT-Brucellosis	74 lab
6	2017	TPC-Staph. aureus	81 lab



BCC BBLITVET CULTURE COLLECTION

The BCC Unit is the microbial germplasm management unit for veterinary development and research activities. Most of the collection are derived from the research results, disease cases in livestock from various parts of Indonesia, while the rest used as reference material comes from abroad.

INFORMATION FLOW FOR MICROBIAL DATA / DISTRIBUTION AT BCC



Microbial Group	Number of Collections
Bacteria	1154
Virus	111
Coliphages	10
Mold/Yeast	208
Protozoa	296
	1779

The IRCVS is the only government-owned veterinary research institution that has a microbial collection unit, called BBLITVET/ IRCVS Culture Collection (BCC)



THE IRCVS LIBRARY

The IRCVS library has built a digital library that

can be accessed via:

<http://bbalitvet.libang.pertanian.go.id> dan

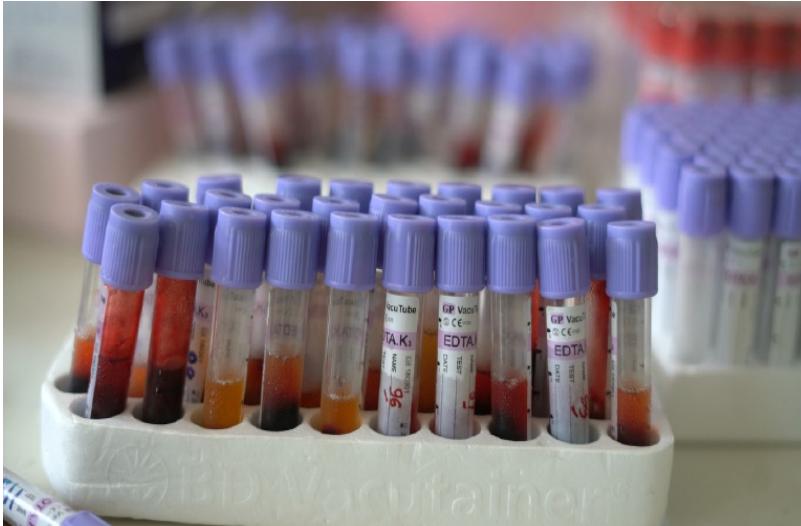
e-mail: pustakabbalitvet@gmail.com

The IRCVS library is a specialized library of animal diseases that always follow the development of science and technology in order to provide excellent service to researchers and the public.

It provides textbooks, journals and scientific magazines in physical and electronic forms

Total collections in the IRCVS Library : 13.522 Books, 557 E-Books and 1.013 Journals

Database collection of IRCVS Library in 2017 : 7.265 Libcat/Books, 1.013 Kimba/Magazines and 2.261 Veteriana/Researcher Articles



USD

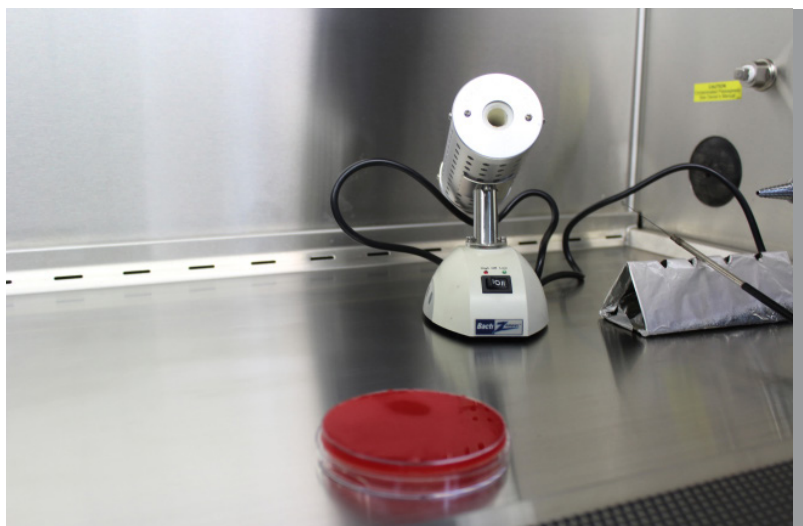
DIAGNOSTIC SERVICES UNIT

The Functional Unit that carries out the activities of Diagnosis, Testing and Confirmation of animal diseases and animal health

This Diagnostic Services Unit was accredited by the National Standardization Body-National Accreditation Committee (BSN-KAN) with an accreditation number of LP-121-IDN (ISO/IEC 17025: 2014) where all test activities refer to accredited quality system

**Implement veterinary diagnostic services as
"animal disease referrals"**

**The IRCVS as a Reference Laboratory for Animal Diseases,
In accordance with the Minister of Agriculture Regulation
No. 34 / Permentan / OT.140 / 3/2013**



In 2017, The IRCVS-DSU UP-BB provided veterinary diagnostic services for 201 test types and 39 types of veterinary products in the form of antigens and diagnostic kits.

Of the 201 types of tests, 50 types of tests (24,9%) were accredited in accordance with SNI/ISO IEC 17025:2008 and refer to the Government Regulation No. 35 of 2016 on Types and Tarrifs on Non-Tax State Revenues

52 out of 201 types of tests have been accredited by ISO/IEC 17025:2008

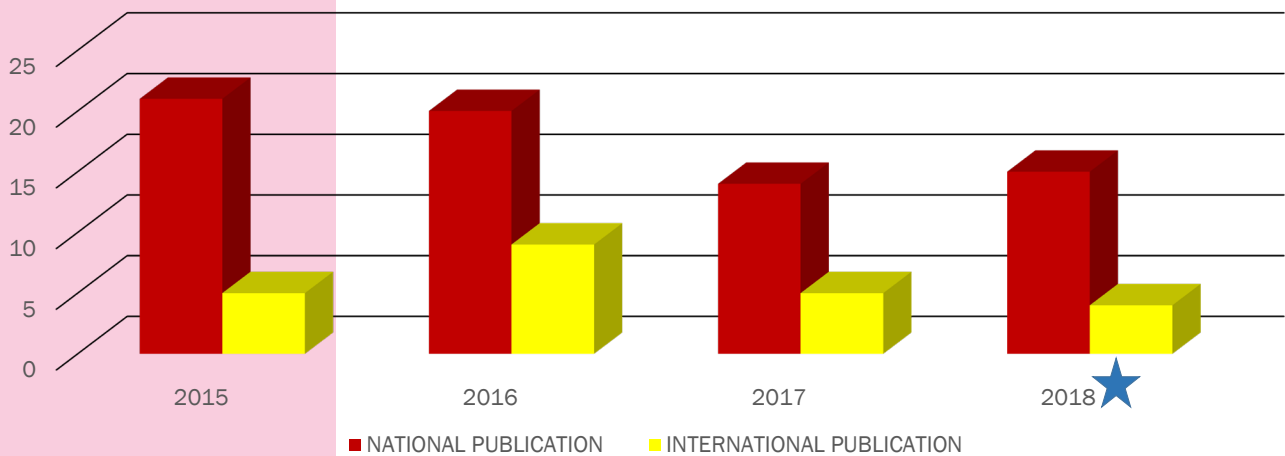
DISTRIBUTION OF DIAGNOSTIC SERVICE TYPES PER LABORATORY

NO	LABORATORY	TESTS	ACCREDITED	PRODUCTS
1	PATHOLOGY	12	4 (33.3%)	1
2	TOXICOLOGY	43	6 (14%)	1
3	VIROLOGY	27	8 (29.6%)	9
4	PARASITOLOGY	22	10 (45.5%)	9
5	MICOLOGY	11	2 (18.2%)	2
6	BACTERIOLOGY	86	20 (23.3%)	17

SCIENTIFIC

PUBLICATIONS

NATIONAL AND INTERNATIONAL PUBLICATION OF IRCVS RESEARCHER

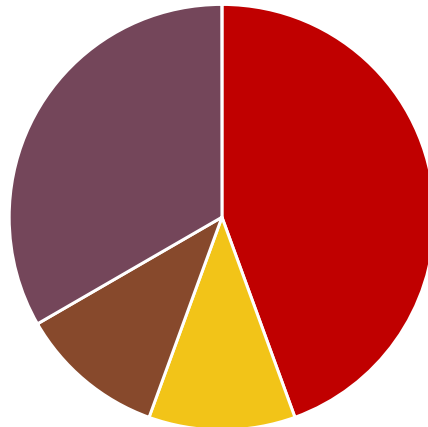


★ On progress

IPR AND LICENSE

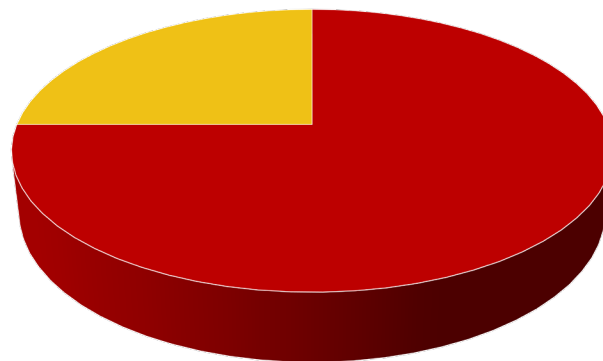


PATENT



■ 2015 ■ 2016 ■ 2017 ■ 2018

Comparison Between The Number of Patents and Patents Submission



■ Patent ■ Patent Submission

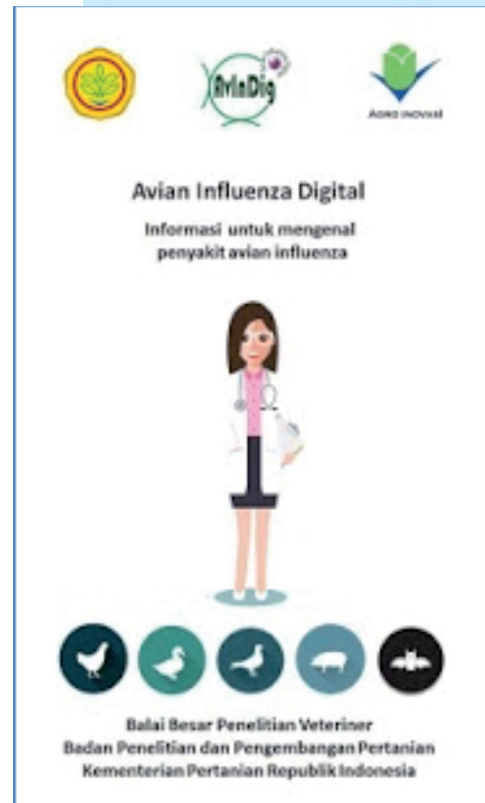
A number of patents have been licensed with national drug companies, following several veterinary technology innovation products that have obtained patent registration number and in the process of patents submission

TECHNOLOGY & INNOVATION

1. TECHNOLOGY TO DETECT AND CONTROL THE ANIMAL DISEASES
2. TECHNOLOGY TO DETECT FOOD SAFETY
3. TECHNOLOGY TO DETECT AND CONTROL ZONOTIC DISEASES



ANDROID - BASED INFORMATION TECHNOLOGY





**BALITBANGTAN
KEMENTERIAN PERTANIAN**

BALAI BESAR PENELITIAN VETERINER



VACCINE PRODUCTS



Inactive vaccine combination of avian influenza H5N1. The vaccine formulation contains the antigen mass of highly pathogenic avian influenza (HPAI) A / muscovy duck / Banten / Br7 / 2013 H5N1 clade 2.3.2 and A / chicken / West Java / Purwakarta / 2006 H5N1 clade 2.1.3



Inactive vaccine combination of avian influenza HPAI and LPAI. The vaccine formulation contains local isolates of highly pathogenic avian influenza (HPAI) A/muscovy duck/Banten/BR7/2013 H5N1 and low pathogenic avian influenza (LPAI) A/chicken/West Java/Bblitvet/2017 H9N2



Vaccine for preventing neonatal diarrhea in calves



Vaccine for preventing neonatal diarrhea in piglets



Inactive vaccine of ND G7. The vaccine formulation contains local isolates of Newcastle disease virus genotype 7 (G7)

32 PRODUCT INNOVATION



ANTIGEN DIAGNOSTIC KITS

- AI (Avian Influenza)
- ND (Newcastle Disease)
- Mycoplasma (MG dan MS) Pullorum
- Brucella (MRT, RB dan CFT)
- PPD Tuberculine
- Toxoplasma
- Fasciola



HERBAL PRODUCTS



Gamal Leaves extract for Goat Scabies (LEFT)

Bolus Nematofagus, biological control for helminthiasis (RIGHT)





Pregnancy Diagnostic Kits

KIT DETEKSI Ab AI DIVA M2e

(Differentiation of Infected from Vaccinated Animals)

Adalah : Teknik ELISA yang dipakai untuk mengidentifikasi unggas terinfeksi virus AI secara subklinis yang sering terjadi pada peternakan unggas yang menerapkan program vaksinasi.



KIT DETEKSI Ab AI DIVA M2e

Keunggulan Teknologi/Inovasi :

Tes yang dapat membedakan ayam yang terinfeksi diantara ayam yang sudah divaksin yang disebut tes DIVA (Differentiation of Infected from Vaccinated Animals) belum tersedia tetapi sangat vital dalam program surveilans penyakit AI di Indonesia. Elisa ini menggunakan peptida M2e bercabang yang terbukti lebih unggul dibandingkan ELISA yang menggunakan peptida biasa.



Manfaat Teknologi/Inovasi :

ELISA ini sangat praktis digunakan dengan akurasi yang memuaskan dan telah divalidasi dengan intensif (Targan et al 2015, Avian Pathology). ELISA ini telah siap diproduksi dalam bentuk kit dan telah dipakai oleh sejumlah laboratorium diagnostik pemerintah.

SCIENCE INNOVATION NETWORKS
www.litbang.pertanian.go.id

BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN
KEMENTERIAN PERTANIAN
Balai Besar Penelitian Virologi
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Website: <http://www.litbang.pertanian.go.id>
Email: litbang@litbang.pertanian.go.id



Field ELISA for multi diseases



Kit detection for Aflatoxin and Fumonisin



Kit Detection for Trypanosoma evansi

KIT DETEKSI DAN DIAGNOSIS

1. Kit detection for Aflatoksin and Fumonisin
2. Kit detection for Paratuberculosis and Anthrax
3. Kit detection for Trypanosoma and toxoplasma
4. ELISA for Toxocariasis and Fasciola
5. Field ELISA (FELISAVET) for multi Diseases
6. Field Elisa for Brucellosis
7. DIVA test for Avian Influenza (AI DIVA M2e)
8. PCR for Avian Influenza (H5N1)
9. ELISA Tetracycline
10. Nested RT-PCR Rabies
11. Direct rapid Immunohistochemistry Test (dRIT) (rapid diagnostic for rabies)
12. ELISA Eschericia coli enterohaemorrhagica
13. PCR for Swine Flu (H1N1)



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