

LABORATORY ANIMALS



FACULTY OF VETERINARY SCIENCES
NATIONAL UNIVERSITY OF LA PLATA

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LABORATORY ANIMALS DEPARTMENT

The Department of Laboratory Animals of the Faculty of Veterinary Sciences studies integrally all matters concerning experimental animals.

According to the international normatives which the ICLAS (International Council of Laboratory Animal Sciences) establishes, the animals which are used as a biological reactive for teaching, research, diagnostic and controls must execute the summons that allow obtaining reliable, reproducible and comparable results. This condition only assures the use of one defined animal from the genetic and biological view. These models allow the profit denominated as the three "R" which are the following: refinement, reduction and replacement in the use of these biological reactives.

The use of undefined animal models which do not correspond to an appropriate experimental design represents furthermore irresponsibility from the ethical point of view as we are working with living beings.

DEGREES AND TRAINING OF THE STAFF

Cecilia Carbone: Veterinarian

Postgraduate course: "Laboratory Animals Science and Technology. Laboratory Animal Centre, Carshalton, Surrey, UK. / 28 years

Daniel Moralejo: Veterinarian

Postgraduate course Genetic of Experimental Animals. Institute for Animal Experimentation. The University of Tokushima, School of Medicine.

PhD for the period of five years, about the same issue in the same institution.

Post-doc Course for the period of two years in the same institute. / 11 years

Miguel Ayala: Veterinarian

Postgraduate Course: "Management and Production of SPF Animals". National Institute of Health, Tokyo, Japan, 1 year. /11 years

Pilar Cagliada: Veterinarian

Postgraduate degree in Clinical and Industrial Bacteriology. Faculty of Veterinary Sciences, National University of La Plata. Argentina. / 10 years

Silvana Milocco: Veterinarian

Postgraduate Course: Genetic of Experimental Animals. Institute for Animal Experimentation. The University of Tokushima. School of Medicine, Japan.

Specialist in environment and environmental pathology. National University of La Plata- University of Siena (Italy).

Master in Science. International Master of Science Programme. Faculty of Veterinary Medicine. Swedish University of Agricultural Sciences- Sweden. / 8 years

Fabricio Maschi: Biologist

Postgraduate course: "Management, production and Control of Experimental Animals". CIEA, Kawasaki, Japan. / 7 years

Estela Rogers: Biologist

Postgraduate Course in Enviroment and Enviromental Pathology. Faculty of Veterinary Sciences, National University of La Plata, Argentina. / 8 years

The Animal Facility is located on a space which occupies the Faculty of Veterinary Sciences of The National University of La Plata. The building counts with a total surface of 450 m² in which the following activities are developed.

A) Educational activities of grade and post graduate.

B) SPF rats and mice production.

C) Research.

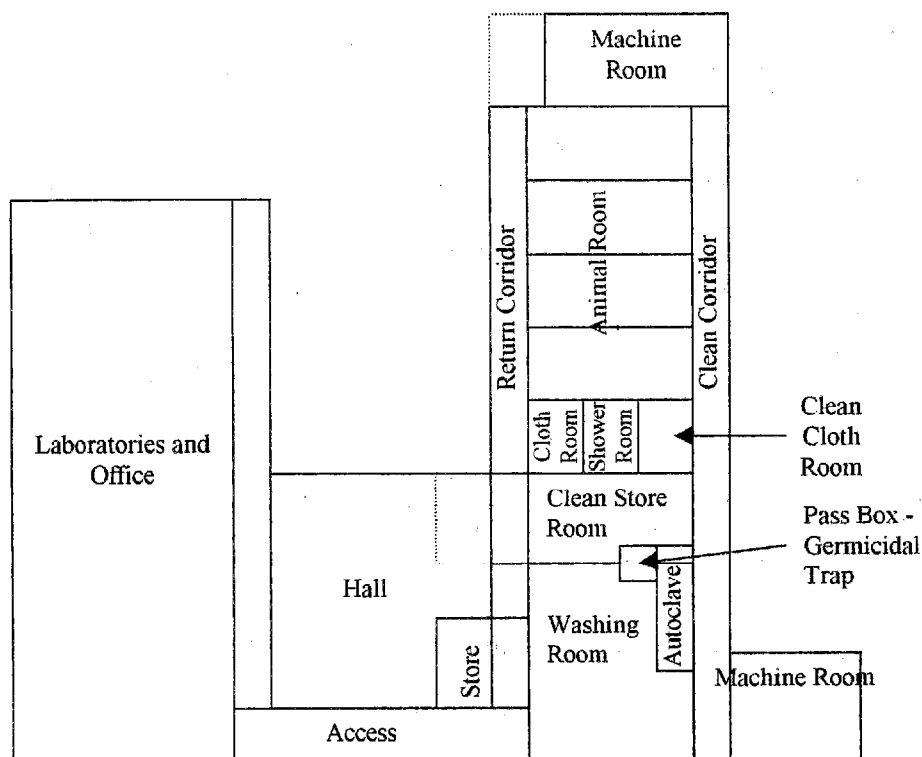
A) Educational activities of grade and post graduate:

- Annual course of experimental animals correspondent to the Clinical and Industrial Bacteriology Career.
- Graduate course about "Introduction to experimental animal science" destined to veterinary science students of the National University of La Plata.
- Individual training of professionals and technicians from national and international institutions.
- Postgraduate course about: "Microbiologic Monitoring of Experimental Animals".
- Postgraduate International course about: diagnosis and investigation of diseases in domestic animals.

- Postgraduate International course about: "Spanish-Latin-American Education on Animal Experimentation Network". March, 1998. 80 hours.
- Seminar on Diseases and Diagnostic exercises on Laboratory Rabbit, Guinea pig, mice and rats. December 14. Dictated by Dr. Ricardo Feinstein, Professor from The Swedish University of Agricultural Sciences (SLU) Sweden. Hours 10. Cátedra de Animales de Laboratorio y Bioterio. Universidad Nacional de La Plata.
- Intensive Course on Mice Genetics. December 15-17. Hours 40. Dictated by Dr. Fernando Benavides from The University of Texas. USA. Cátedra de Animales de Laboratorio y Bioterio. Universidad Nacional de La Plata.

B.-1) SPF rats and mice production.

SPF Animal Production Area



The 260 m² that correspond to the production area count with a hygienic-sanitary barrier system which allows making strict treatment to the tools used in this sector. A double-door autoclave, washing machine, germicide trap, pass box, absolute air filtration (HEPA filters) hundred percent exterior air, 20 air renovation per hour, positive environmental pressure and sanitary facilities for the staff are available.

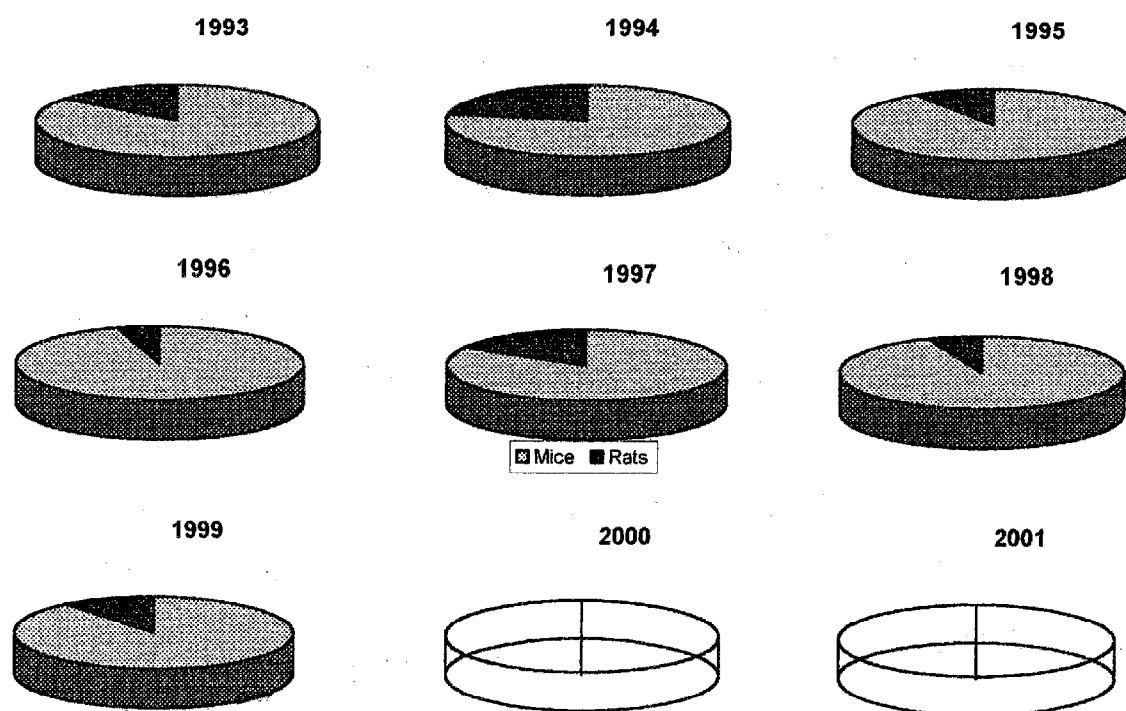
Produced and delivered animals to pharmaceutical laboratories,
national and private universities and other organisms of bounding countries.

Stock and Strains Available

Rats	ACI/N	F344 Fisher	WKAH/Hok Wistar	SHR Wistar
Mice	CF1	C57BL/6J C57BL/6N	BALB/cJ BALB/cAnN	N:NIH(S)-nu

YEAR		1993	1994	1995	1996	1997	1998	1999	TOTAL
RATS	ACI/N	51	234	63	134	329	10	78	899
	F344/N	33	641	245	144	316	16	76	1.471
	WKAH/Hok	48	423	579	293	841	397	604	3.185
	SHR Wistar						128	70	198
TOTAL		132	1.298	887	571	1.486	551	828	5.753
MICE	BALB/cJ								
	BALB/cAnN	471	3.352	8.026	9.397	5.155	6.542	5.113	38.056
	C57BL/6J								
	C57BL/6N	293	1.189	406	677	502	61	546	3.674
	N:NIH(S)-nu			206	1.117	1.730	762	970	4.785
	CF1						220	103	323
TOTAL		764	4.541	8.638	11.191	7.387	7.909	6.738	47.270

Experimental animals commercialisation by the Laboratory Animal Department.



Financial Statement
from 990102 to 991230

1999: Income: \$ 62,500.-

Expenditures: Faculty of Veterinary Sciences \$ 12,500.- (20% out of 62,500.-)

Scholarships, animal feed, bedding, drugs and reagents, maintenance of equipment (autoclave and air conditioning system), others: \$50,000.-

Financial Statement
from 000105 to 001030

2000: Income: \$ 35,726.-

Expenditures: Faculty of Veterinary Sciences \$ 7,145.- (20% out of 35,726.-)

Scholarships, animal feed, bedding, drugs and reagents, maintenance of equipment (autoclave and air conditioning system), others: \$ 22,821

Current Amount: \$ 5,760.-

This area is complemented and supported with a quality and control programme which evaluates all the elements that can cause variations in the animals within what is included in the integral programme of monitoring the animal health status.

These activities are developed in laboratories that count with the latest equipment.

B.-2) Services

- Microbiological Monitoring of small Laboratory Rodents

Bacteriology

Culture test	Salmonella spp.
	Escherichia coli 0115 ^a .c:K(B)
	Corynebacterium kutscheri
	Pseudomonas aeruginosa
	Pasteurella pneumotropica
	Pasteurella multocida
	Bordetella bronchiseptica
	Mycoplasma spp.
	Streptococcus pneumoniae
	Staphylococcus aureus

Serology

IFA test	Virus Sendai (HVJ)
	Virus de Hepatitis Murina (MHV)
	Sialodacryoadenitis Virus (SDA)
	Clostridium piliformis (Tyzzer)
	Mycoplasma pulmonis
	Bordetella bronchiseptica
	Corynebacterium kutscheri

Parasitology

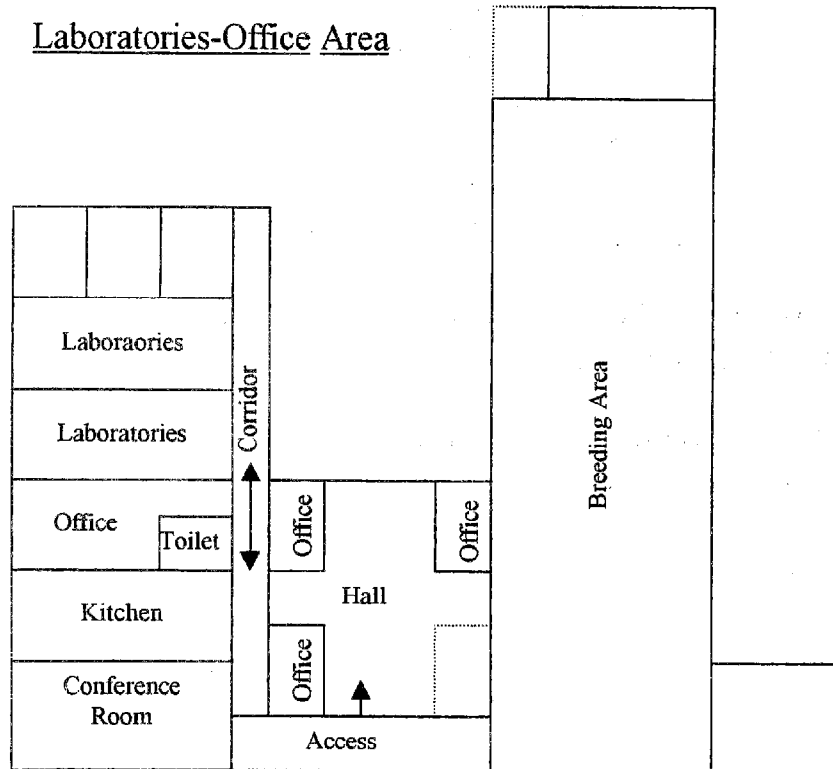
Eimeria spp.
Giardia muris
Spirotrichomonas muris
Syphacia obvelata
Syphacia muris
Trichomonas spp.
Myocoptes spp.
Myobia musculi
Cysticercus fasciolaris
Aspiculuris tetraptera

- **Environmental Microbiological Monitoring.**
Bacteria and fungi.
- **Food Microbiological Monitoring**
Bacteria and fungi.
- **Technical Advise.**

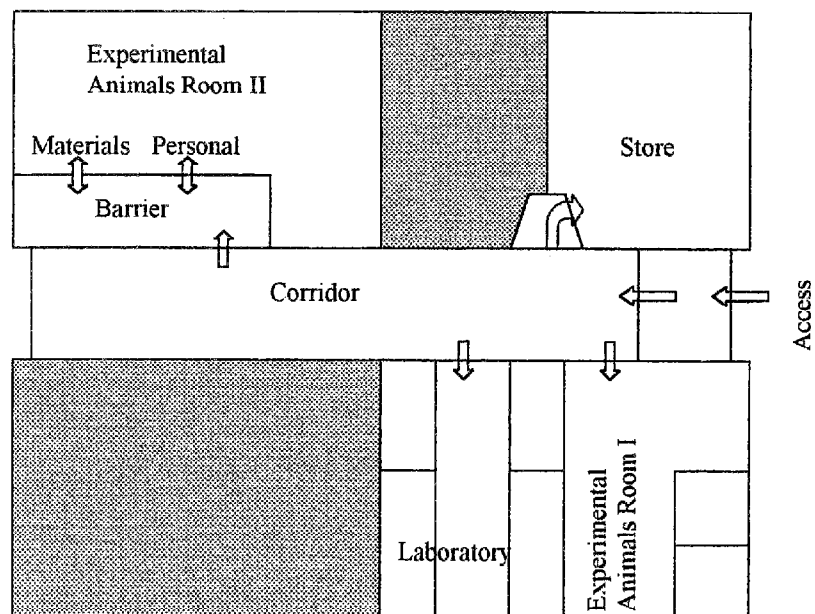
C) Investigation lines

- Studies of infectious diseases of laboratory rats and mice.
- Human tumour transplantation in nude mice.
- Genetical studies of laboratory rats as human diseases animal models.

Laboratories-Office Area



Animals under Experiment Unit



Publications

- **Biochemical Polymorphism in Long-Evans Cinnamon (LEC) Inbred Strain of Rat.** Takahisa Yamada, Daniel Moralejo, Takashi Agui, and Kozo Matsumoto. Journal Vet. Med. Sci. 55(3): 491-492, 1993.
- **Biochemical Polymorphism in Wild Rats (*rattus norvegicus*) Captured in Oita City, Japan.** Takahisa Yamada, Daniel Moralejo, Kimiyuki Tsuchiya,* Takashi Agui, and Kozo Matsumoto. Journal Vet. Med. Sci. 55(4): 673-675, 1993.
- **Genetic characterisation of inbred strains of the rat (*rattus norvegicus*).** K. Bender 1, P. Balogh, M. F. Bertrand, M. den Bieman, O. von Deimling, S. Eghtessadi, G. A. Gutman, H. J. Hedrich, S. V. Hunt, K. Matsumoto 2, D. Moralejo 2. Journal Experimental Animal Science.; 36: 151-16, 1994
- **Chromosome assignments of genes for rat ceruloplasmin (CP) and metallothionein (MT).** M. Miura; T. Yamada; D. Moralejo; T. Agui; J. Yamada; T. Serikawa and K. Matsumoto. Cytogenetics and Cell Genetics 65: 119-121. 1994.
- **Brote de *Pasteurella pneumotropica* en una colonia de ratas Lewis/CrL.** Cagliada, M.; Ayala, M.; Carbone, C.; Yamazaki, T.; Carriquiriborde, M. Revista de Experimentación Animal, Universidad de León. España. 1995.
- **"Control de *Pseudomona aeruginosa* en una Unidad Productora de Ratas y Ratones SPF (Specific Pathogen Free)".** Cagliada, M.; Ayala, M.; Carbone, C.; Yamazaki, T. Analecta Veterinaria. Vol. 1, 1995.

- **Prevalencia del virus de la hepatitis murina en colonias de ratones en la Argentina.** Ayala M., Carbone C., Milocco S., Cagliada M. Revista de Medicina Veterinaria. 77 (5): 372-374, 1996

- **Tumor Cells Engineered to Express Interleukin 6 Exhibit a Reduce Tumorigenicity Depending on Tumor Cell Model.** Ledda F., Adris S., Bravo A., Bover L., Carbone C., Mordoh J., Paleolog E., Chernajovsky Y., Podhajcer O. Cellular and Molecular Biology, vol 42/5. 1996.

- **Aislamiento de *Clostridium piliformis* en colonias de ratones en Argentina.** Ayala M., Carbone C., Cagliada M., Nosetto E. Analecta Veterinaria Vol 2: 27-28, 1996.

- **First report of Criptosporidiosis in mice in Argentina.** Fernández P., Carbone C., Gimeno E. Laboratory Animals Science - The International Journal of Comparative and Experimental Medicine. 46 (6): 685- 686, 1996.

- **Brote de *Bordetella bronchiseptica* en una colonia de ratas long evans.** Milocco, S.N.; Ayala, M.A.; Carbone, C., Díaz, F.R. y Nosetto, E. Enviado para publicar en la revista Analecta Veterinaria. 1997.

- **Acute copper intoxication after a Cu-Ca edta injection in rats.** Giuliadori, M; Ramirez, C.; Ayala, M. Aceptado para su publicación en la revista Toxicology. 1997.

- **The Human Breast Cancer Cell Line IIB-BR-G Has Amplified C-MYC and C-FOS Oncogenes *in vitro* and is spontaneously Metastatic *in vivo*.** Bover L., Barrio M., Bravo A., Slavutsky I, Larripa I., Bolonde A. Ayala M., Mordoh J. Cellular and Molecular Biology 44 (3), 493-504. 1998.

- **A major quantitative trait locus co-localizing with cholecystokin type A receptor gene influences poor pancreatic proliferation in a spontaneously diabetogenic rat.** Moralejo D., Ogino T., Zhu M., Toide K., Wei S., Yamada T Matsumoto K. *Mammalian Genome* 9, 794-798. 1998
- **Identification of a quantitative Trait Locus Influencing Olasma Insulin Levels after 70% Pancreatectomy Using the OLETF Rat.** Moralejo D., Ogino T., Zhu M., Toide K., Wei S., Yamada T Matsumoto K. *Journal Veterinary Medical Science*. 60 (10):1157-1160. 1998
- **X-Linked Locus is Responsible for Non -Insulin -Dependent Diabetes Mellitus in the OLETF Rat.** Moralejo D., Ogino T., Zhu M., Toide K., Wei S., Yamada T Matsumoto K. *Journal Veterinary Medical Science*. 60(3):373-375. 1998
- **"Distensión duodenal con acumulación de líquido y gas, en ratones".** Carriquiriborde, M.; Cagliada, P.; Carbone, C; Nosetto, E. *Animales de Experimentación, La Revista Hispanoamericana*. Vol 4 (1): 18-22. 1998.
- **"Abortos en una colonia de cobayos".** Cagliada, P.; Carriquiriborde, M.; Carbone, C.; Reina, J. C. *Animales de Experimentación, La Revista Hispanoamericana*. Vol 4 (2): 15-17. 1998.
- **"3-hydroxy-3-methylglutaryl coenzyme a reductase activity in liver of athymic mice with or without an implanted human carcinoma".** Polo Mónica, Bravo Margarita, Carbone, Cecilia. *Comparative Biochemistry and Physiology*. Vol: 122, pag.: 433-437, 1999.
- **"Il-10 expression by ct26 colon carcinoma cells inhibits their malignant phenotype and induces a t cell-mediated tumor rejection in the context of a systemic th2 response".** Adris S. K., Klein S., Jasmis

M A., Chuluyan E., Ledda M F., Bravo A., Carbone, C., Chernajovsky Y., Podhajcer O. L. Gene Therapy. Vol: 6, pág.: 1705-1712, 1999.

- **“Bioactividad de la bovericina (bea) producida por el hongo entomopatógeno Beauveria bassiana en ratas y ratones de laboratorio”.** Dal Bello, G.; Padín, S.; Cagliada, P.; Carbone, C.; Vasicek, A y Arcas, J. Revista de Toxicología-Asociación Española de Toxicología. Aceptado para su publicación el 25/11/99.
- **“Utilización de la técnica de histerectomía para la eliminación de patógenos en una colonia de ratones CF-1 destinados a la investigación biomédica.”** Ayala, M., Maschi, F., Milocco, S., Carbone, C., Noretto, E. Analecta Veterinaria. Accepted to published 10/09/1999.
- **“Erradicación del Virus de la Sialodacrioadenitis en una colonia de ratas Wistar”.** Maschi, F., Ayala, M., Moralejo, D., Milocco, S., Carbone, C., Noretto, E. Animales de Experimentación - La Revista Hispanoamericana. Vol. 5 (2): 24-26. 2000.
- **“A rat model to study bone regeneration”.** Luchetti, C.; Ayala, M.; Misinquevich, S. Journal of Dental Research. Vol 79 (5). 2000.
- **“Brote de *Pasteurella multocida* en una colonia de producción de conejos New Zealand White (*Oryctolagus cuniculus*)”.** Carriquiriborde, M., Ayala, M., Cagliada, P., Noretto, E. Revista de Medicina Veterinaria. Vol 81 (3): 195-196. 2000.

Research works Presented in Scientific Meetings

- **Relevamiento de nematodos, cestodos y ácaros en colonias de ratones.** Carbone, C., Flamini A., Ciancaglini C., Ayala M. IX Seminario Militar de Veterinaria. Octubre de 1990. Buenos Aires.

- **Electrocardiografía en Myocastor Coypus.** Carbone C., Moralejo D., Alonso C., Jurado S. 1 Reunión Internacional de Jardines Zoológicos. 5 de mayo de 1991. La Plata.
- **Monitoreo Microbiológico en colonias de ratones.** Cagliada M., Giacoboni G., Amor M., Carbone C. 1 Encuentro de Docentes e Investigadores de La Facultad de Ciencias Veterinarias UNLP. 13 de marzo de 1992. La Plata.
- **Aislamiento de *Corynebacterium kutscheri* en una colonia de ratones.** Ayala M., Cagliada M., Suzuki E., Carbone C. Reunión Anual de Asociación Argentina de Veterinarios de Laboratorio de Diagnóstico (AAVLD). 5 y 6 de noviembre de 1992. Corrientes.
- **Primera Exposición Industrial, Comercial Agrícola-ganadera, Cultural e Institucional. Expo La Plata 92.** Cátedra de Animales de Laboratorio y Bioterio, Fac. de Cs. Veterinarias, desarrollo y perspectivas futuras. 14 al 29 de noviembre de 1992. República de los Niños. La Plata.
- **II Encuentro de Docentes e Investigadores de La Facultad de Ciencias Veterinarias de la UNLP.** Presentación de Poster". Controles Microbiológicos en colonias de ratones libres de patógenos." 30 de marzo de 1993. La Plata.
- **Experimental Sublethal Infection with *Bacillus piliformis* (Tyzzer's disease).** Ayala M., Suzuki E., Noguchi A., Nakayama K., Naiki M. Japan Veterinary Congress Tokyo- Japan.
- **A serological survey of Laboratory Animal Pathogens in selected rearing mice and rat colonies in La Plata.** Carbone, C.; Ayala, M.;

Cagliada, M.; Suzuki, E.; Ikadai, N. Japan Laboratory Animals Congress. Sendai Japan. 4, 5 y 6 de junio de 1993.

- **Situación de la ciencia del animal de laboratorio en Argentina. Incidencia de los avances en la especialidad y expectativas futuras en la región.** Carbone C. III Congreso Nacional de la Sociedad Española para la Ciencias del Animal de Laboratorio (SECAL), Granada, España. 23, 24 y 25 de Noviembre de 1994.
- **The development of laboratory animal science in Argentina: past, review, present and future prospects.** Carbone C. XI ICLAS General Assembly and Joint Conference of ICLAS, Scand-LAS, and FinLAS. July 2-6, 1995. Helsinki. Finland.
- **A new congenic strain WKAH.C-hts/Tj rat which is inserted hepatitis gene (*hts*) of LEC rat develops hepatitis but no hepatic tumors.** Matsumoto K., Sakai T., Yamada T., Milocco S., Moralejo D., Wei K., Suzuki Y. The 43rd Congress of Japanese Laboratory Science. Niigata, Japan 4-6 Junio de 1996.
- **Chromosomal mapping of 5 loci causing non-insulin dependent Mellitus in OLETF rat.** Moralejo D., Wei K., Yamada T., Matsumoto K. The 43rd Congress of Japanese Laboratory Science. Niigata, Japan 4-6 Junio de 1996.
- **Genetic mapping of 5 loci causing NIDDM in OLETF rat. The American Diabetes.** Moralejo D., Wei K., Yamada T., Jacob H., Matsumoto K Association 56th Annual Meeting and Scientific Sessions. San Francisco, California USA. 8-11-junio de 1996.

- **Study of the bactericidal effect of U.V. light.** Carriquiriborde M., Carbone C., Yamazaki T. Second Word Congress on Laboratory Animals Science. 22-27 septiembre de 1996. Río de Janeiro. Brasil.
- **Construcción de una trampa germicida combinada con pass-box en un bioterio de ratas y ratones SPF.** Carbone C., Toue J., Ayala M., Cagliada M., Yamazaki T. IV Congreso Nacional de la Sociedad Española para el Animal de Laboratorio. 23/25 de octubre de 1996. Bizkaia. España.
- **Characterization of HMG-CoA reductasa activity in nude mice liver in human lung mucoepidermoid carcinoma grown in nude mice and host liver.** Bravo M., Polo M., Carbone C. III The Pan American Association for Biochemistry and Molecular Biology. November 11 - 21 1996. Pucon Chile.
- **Estudio de la prevalencia de agentes patógenos específicos que infectan las colonias de ratas y ratones en Argentina.** Carbone, C.; Cagliada, M.; Carriquiriborde, M.; Nosetto, E. II Curso sobre biomodelos de experimentación. Universidad de San José de Costa Rica, 17-21 de febrero 97.
- **Programa del monitoreo genético en ratas SPF producidas en el Bioterio de la Facultad de Ciencias Veterinarias de la Universidad Nacional de La Plata.** Milocco, S.; Ayala, M.; Carbone, C.; Nosetto, E. II Curso sobre biomodelos de experimentación. Universidad de San José de Costa Rica, 17-21 de febrero 97.
- **Aislamiento de *Citrobacter freundii* en una colonia de ratones convencionales CF1.** Cagliada, P; Carriquiriborde, M; Laborde, J M, Carbone, C. Primeras Jornadas Internacionales de Enfermedades Transmisibles. 24 al 27 de marzo de 1997, Corrientes, Rep. Argentina

- **Relevamiento de *Spiroplasma muris* en colonias de ratones convencionales en la Provincia de Buenos Aires.** Carriquiriborde, M.; Cagliada, P.; Rogers, E.; Carbone, C. Primeras Jornadas Internacionales de Enfermedades Transmisibles. 24 al 27 de marzo de 1997, Corrientes, Rep. Argentina
- **Estudio de la prevalencia del virus de la Hepatitis murina en colonias de ratones controladas durante el año 1996 en el Bioterio de la Facultad de Ciencias Veterinarias de la Universidad Nacional de La Plata.** Milocco, S.; Ayala, M.; Maschi, F.; Carbone, C. Primeras Jornadas Internacionales de Enfermedades Transmisibles. 24 al 27 de marzo de 1997, Corrientes, Rep. Argentina
- **Curva de producción de anticuerpos luego de una infección experimental con *Clostridium piliformis* en ratones de la cepa BALB/cAnN.** Ayala, M.; Milocco, S.; Diaz, F.; Carbone, C.; Nosetto, E. Primeras Jornadas Internacionales de Enfermedades Transmisibles. 24 al 27 de marzo de 1997, Corrientes, Rep. Argentina.
- **Inmunodeficiencia de los ratones *nack* frente al virus de la hepatitis murina (mhv).** Benavides, F.; Giordano, M.; Vanzulli, S.; Ayala, M.; Milocco, S.; Guénet, J. L. Congreso de la Sociedad Argentina de Inmunología. Villa Giardino, Córdoba. Octubre de 1997. Con referato.
- **Efecto del Simvastatin sobre la actividad desaturante en el hígado de ratón nude portador y no portador de un tumor mucoepidermoide de pulmón humano (HLMC).** Polo M., Bravo M., Carbone, C. XXXII Reunion Anual de la Sociedad Argentina de Investigación en Bioquímica y Biología Molecular. Villa Giardino, Cordoba, 11 al 14 de noviembre de 1997.

- **Aislamiento de *Citrobacter freundii* en ratones destinados a la experimentación científica.** Cagliada, P.; Carriquiriborde, M.; Carbone, C.; Noretto, E. VIII Congreso Argentino de Microbiología. Buenos Aires, Argentina, 6 al 9 de septiembre de 1998.
- **“Eliminación del Virus Sendai de una colonia de ratones convencionales utilizando la técnica de histerectomía”.** Ayala, M.; Cagliada, P.; Milocco, S.; Carbone, C.; Noretto, E. VI Congreso Brasileiro de la Ciencia de Animales de Laboratorio. Iº Encuentro de Investigadores del Mercosur. Porto Alegre, Brasil, 8 al 11 de noviembre de 1998.
- **"AADEAL: Asociacion Argentina de Experimentadores con Animales de Laboratorio".** Ayala, M.; Cagliada, P.; Milocco, S.; Carbone, C.; Noretto, E. VI Congreso Brasileiro de la Ciencia de Animales de Laboratorio. Iº Encuentro de Investigadores del Mercosur. Porto Alegre, Brasil, 8 al 11 de noviembre de 1998.
- **“ALFEBEA: a network to harmonize laboratory animal science education and training between europe and america”.** Carbone, C., Cosme, K., De Jesus, R. et al. International joint meeting. XII ICLAS General Assembly & Conference 7th FELASA symposium. Actas: Proceeding. Palma de Mallorca, España. Vol 1; Page: 78; 05/26/1999.
- **“Studies on the diagnosis of Tyzzer’s disease in laboratory mice colonie”** Cagliada, P. Ayala, M., Carbone C.; Noretto E. International joint meeting. XII ICLAS General Assembly & Conference 7th FELASA symposium. Palma de Mallorca, España; Vol. 1; Page: 138; 05/26/1999.
- **“RETELDEA, a Spanish-Latinamerican educative program on animal experimentation network”.** Jesus Martin, Josep Tur, Carbone Cecilia et al. International joint meeting. XII ICLAS General Assembly

& Conference 7th FELASA Symposium. Palma de Mallorca, España; Vol. 1; Page: 241; 05/26/1999.

- **“Mouse Antibody Production (MAP) test to detect Mouse Hepatitis Virus in cell culture lines”**. Milocco S; Ayala M; Carbone C; Nosetto E; Galosi C. International joint meeting. XII ICLAS General Assembly & Conference 7th FELASA symposium. Palma de Mallorca, España; Vol. 1; Page: 249; 05/26/1999.
- **“Modelo experimental sobre ratas para el estudio de la regeneracion osea”**. Luchetti,C.; Ayala, M.; Misinquevich,S. XXXII Reunion anual de la Sociedad Argentina de Investigacion Odontologica. International Association for Tental Research-division Argentina. Mar del Plata, Argentina. 11/11-13/1999.
- **“Isolation of cellular subpopulations from a human lung adenocarcinoma cell line (a549)”**. Croce M; Colussi A; Price M; Carbone C; Segal-Eiras A. V Congreso De La Asociacion Latinoamericana De Inmunologia, Punta del Este, Uruguay. 12/12/1999

Cooperative projects with national institutions

- CIOP (Optical Research Centre).CIC Comisión de Investigaciones Científicas de la Provincia de Buenos Aires.
- CEB (Center of Biological Studies).
- Fundación Campomar.
- Hospital General de Niños Ricardo Gutiérrez. Capital Federal.
- Ministry of Foreign Affairs. Educational Cooperative Project.

Cooperative projects with international institutions

- JICA (Japan International Cooperation Agency).
- Member of ALFA:ALFEBEA (Latin America Educative Information on Welfare and Animal Experimentation Network) A cooperative project between The European Union and Latin America
- RETELDEA (Spanish-Latin American Education on Animal Experimentation Network). Cooperative project between Spanish and Latin American Universities, supported by The Spanish International Cooperation Agency (ICI).

Associations Membership

- ICLAS (International Council for Laboratory Animals).
- AADEAL (Asociación Argentina de Especialistas de Animales de Laboratorio).
- UFAW (University Federation for Animal Welfare).
- SECAL (Sociedad Española para la Ciencia de los Animales de Laboratorio).
- COBEA (Colegio Brasileiro de Experimentación Animal). Brazilian Association.