

PW-ABB-099

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D.C. 20523

DATE: 10/14/88

MEMORANDUM

TO: AID/PPC/CDIE/DI, room 209 SA-18
FROM: AID/SCI, Victoria Ose *VO*
SUBJECT: Transmittal of AID/SCI Progress Report(s)

Attached for permanent retention/proper disposition is the following:

AID/SCI Progress Report No. 6. 150
PR - Report - 1988
~~Financial Status - 9/20/88~~

Attachment

MINISTERIO DA AGRICULTURA, PECUARIA E SUZANEAÇÃO
DIREÇÃO GERAL DA PECUÁRIA
LABORATÓRIO NACIONAL DE INVESTIGAÇÃO VETERINÁRIA

PROJETO DE PESQUISA

6.150

Project No.: 526-5542
Grant No.: DPE-5542-S-SS-7041-00
Project office: S&T/AGP
Obligation No.: 7361133

Date: September 20, 1988

1. INTRODUCTION

In this document we report the work that has been developed from February 87 to the present, to initiate the study of some objectives described on PHASE III and to pursue the research related to PHASE I and II of the " Technical work plan" contained in the above mentioned project.

During this period, we have developed experiments to

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evaluate the pathogenic behavior and immunogenic characteristics of ASFV/NH/P68 in vivo and also preliminary experiments aiming the study on the role of cell adoptive transfer immunity, in swine protection against ASFV, were conducted by Dr. Carlos Martins at Plum Island Animal Disease Center in collaboration with Drs. Joan Lunney and Charles Mebus.

During this period, by a generous offer from Dr. Vinuela at the Centro de Biologia Molecular, Universidade Autonoma de Madrid, and with the support from Dr. David Sachs at NIH and Dr. Joan Lunney at USDA (see document attached), we received 15 SLA inbred swine to initiate our own experimental animal unit. First litters are expected soon and these animals will hopefully be used in future research included on this project.

2. BRIEF REPORT ON WORK DEVELOPED

- i) Evaluation of pathogenic and immunogenic characteristics of ASFV/NH/P68 in conventional swine .

Experiments have been developed with slight modifications from the initial plan: for better understanding the viral pathogenesis, different viral doses have been used to inoculate animals:

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a) 3 groups of four pigs weighing 15-20 kg each, were inoculated by intramuscular route (IM) with ASF/NHV/P68 as follows:

Group I - four pigs inoculated with 2×10^6 CPE₅₀.

Group II - four pigs inoculated with 2×10^5 CPE₅₀.

Group III - four pigs inoculated with 2×10^3 CPE₅₀.

b) 1 group of four pigs as above was inoculated intra-nasally /orally (IN/IO) with 1×10^7 CPE₅₀ units of ASF/NHV/P68.

The effect of viral infection in the inoculated animals has been recorded as follows:

Daily - observation of clinical signs and body temperature.

Twice_a_week - blood sampling to study:

Hemogram,

Virus isolation and titration,

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Once a week - blood samples have been used to study:

Dynamics of anti - ASFV antibodies by ELISA;

Viral and lectin (PHA, Con A and PWM) induced blastogenesis

Animals showing development of lesions have been sacrificed.
Viral diagnosis and isolation has been attempted and
histopathological studies have been carried out.

Surviving animals have been challenged-inoculated with ASFV
Lisbon 60 (L60) and monitored as above.

3. PRELIMINARY RESULTS:

Although the collected data is still under analysis we have
been able so far, to identify some general topics:

- Swine inoculated by IM route develop ASF lesions described
previously as chronic-type in higher percentage as compared to
swine inoculated IN/IO.

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- Viral infection has been identified by Immunofluorescent antibody technique in all lesional material.
- Anti- ASF antibodies are present between days 10 and 17 in inoculated animals (see figures 1, 2, 3, 4 attached).
- Animals surviving inoculation with ASFV/NH/P68, with no evident lesions survive challenge inoculation with the virulent isolate ASFV/ L60.

4. GENERAL COMMENTS:

So far, the work developed during the second period related to the project execution, has been carried out within the timing previously planned.

Renewal of animal facilities for a better manipulation of experimentally inoculated animals in safety conditions, provided by LNIIV'S Director has greatly improved our work conditions.

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J. Dias Viegas

Principal Investigator



ALGAE BLOOM DYNAMICS (ELISA)

SMALLER ASSOCIATED WITH AEF/ANHV/P68 (TAT)

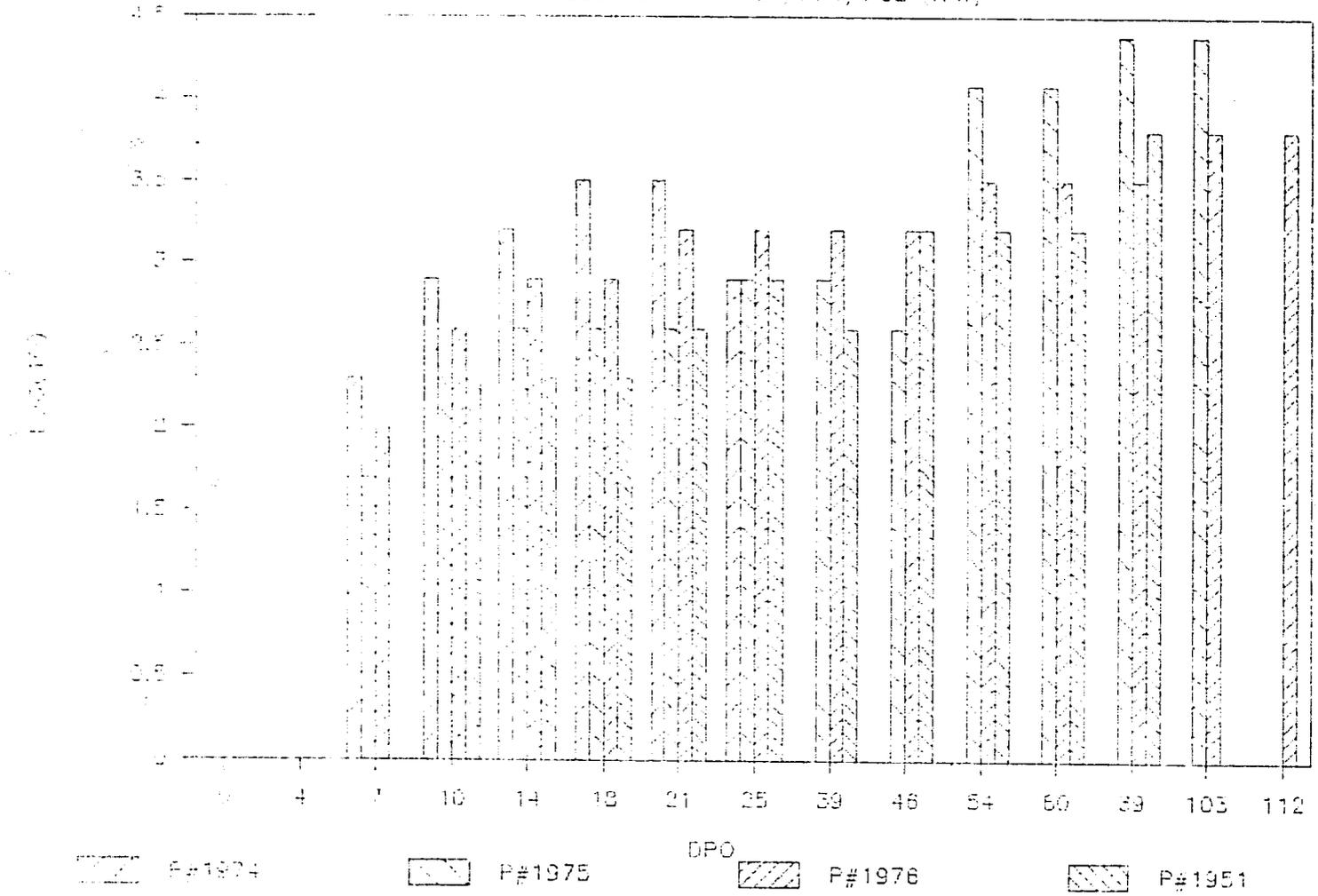


FIG. 1

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LIPOBODY DYNAMICS (ELISA)

RAWFC ACCUMULATED WITH ASF/ANRV/P88(10-1)

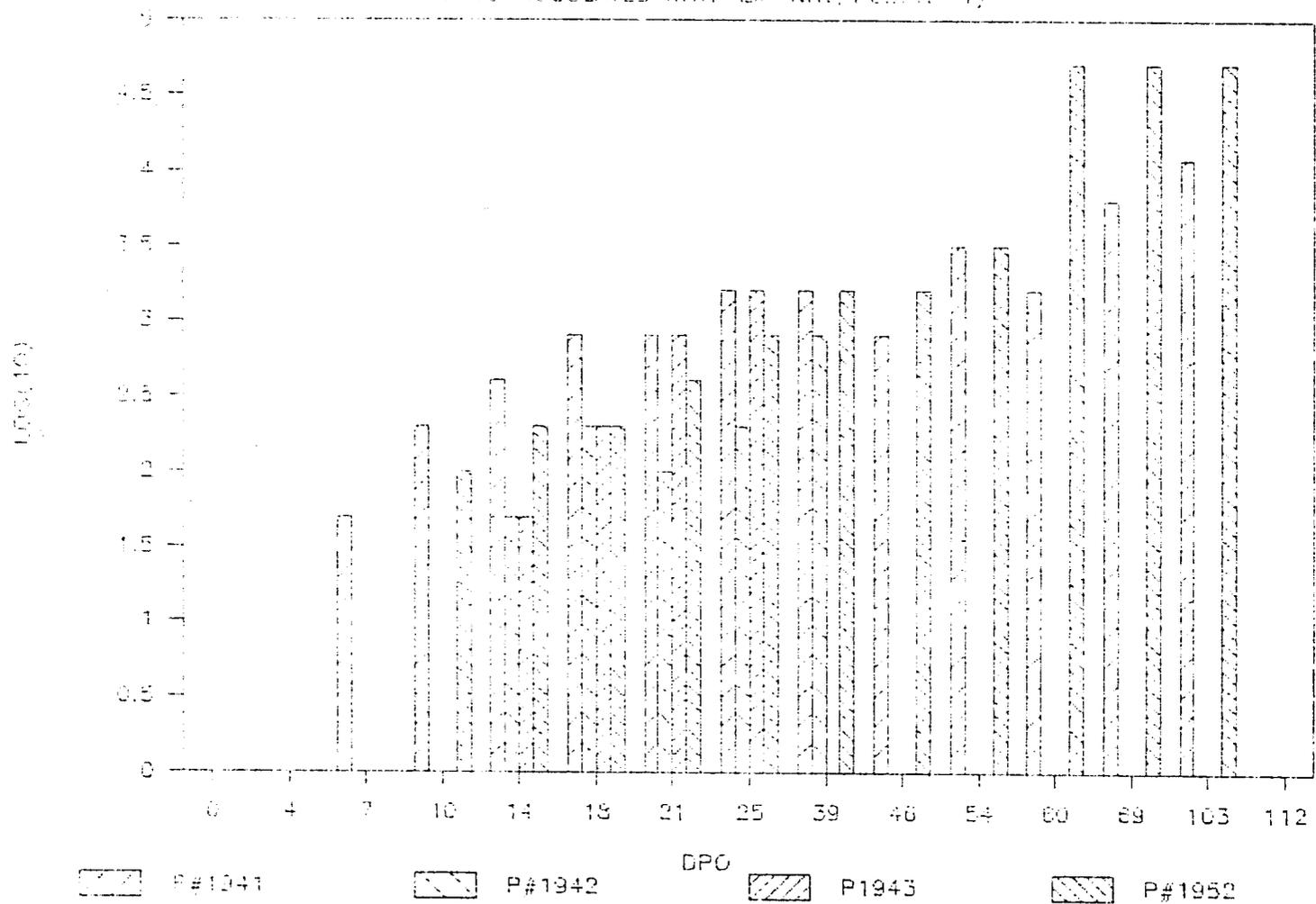


FIG. 2

ANTIBODY DYNAMICS (ELISA)

SAMPLE RELATED WITH ASF/NHV/P68(10-3)

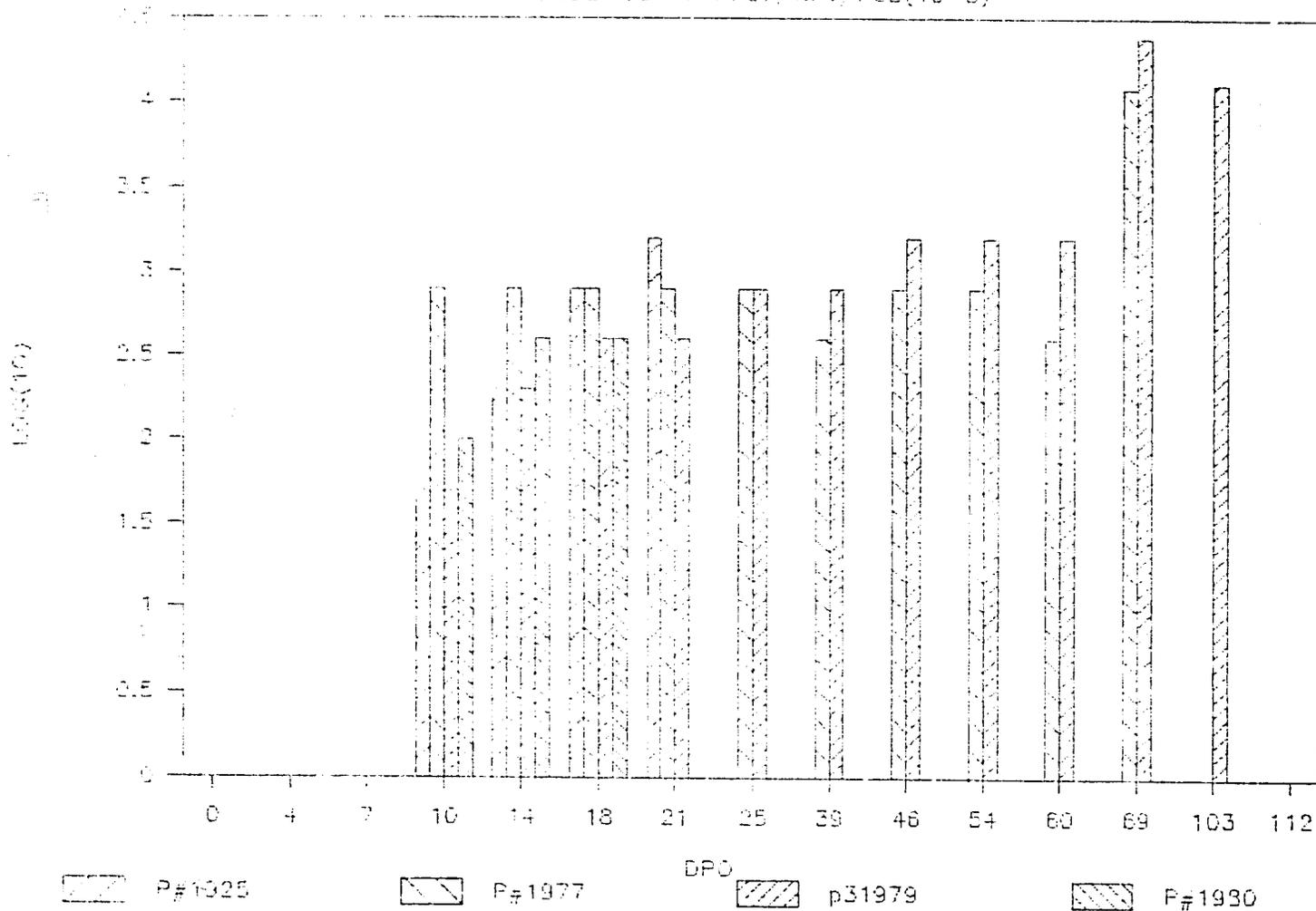


Fig. 3

ANTIBODY DYNAMICS (ELISA)

SOME INOCULATED WITH ASF/IGHV/P68, IN/0

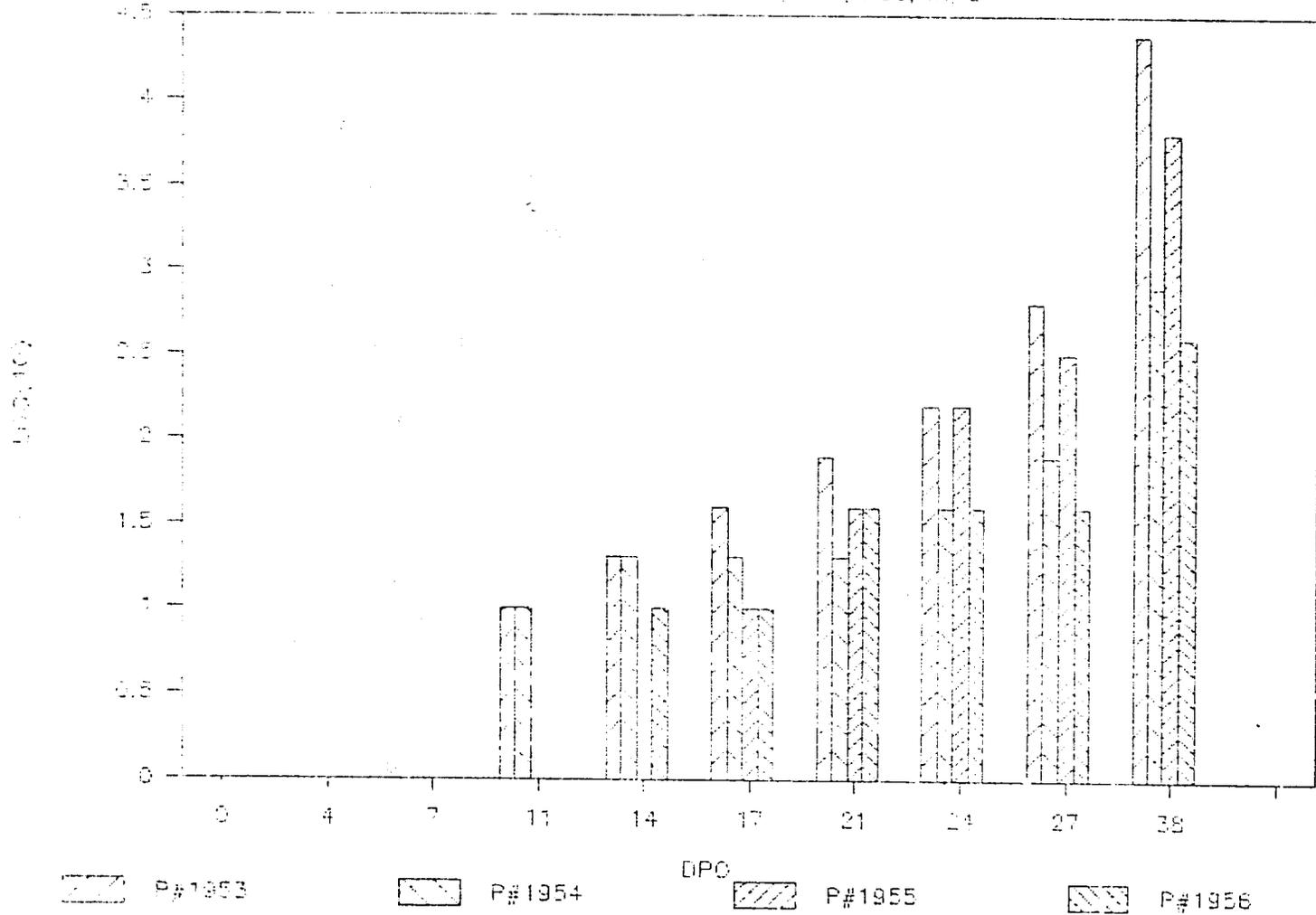


Fig. 4

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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Martin

National Institutes of Health
National Cancer Institute
Bethesda, Maryland 20892

April 27, 1988

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Dr. Eladio Vinuela
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Universidad Autonoma
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Dear Eladio:

This letter confirms that we support your generous decision to provide extra SLA inbred NIH minipigs from your herd in Madrid to Drs. Carlos Martins and Jose Vigarío for their African swine fever virus studies in Lisbon, Portugal. You may send as many pigs of each SLA haplotype as you have available.

We appreciate your confirming with us that a new breeding herd will be established in Portugal. We hope your own research using the NIH minipigs is progressing well.

Sincerely,

Joan K. Lunney, Ph.D.
Research Immunologist
Helminth Disease Laboratory
Animal Parasitology Institute
U. S. Department of Agriculture

David H. Sachs, M.D.
Chief, Immunology Branch
National Cancer Institute

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