

The Abusive Use of Pregnant Mares in the PMSG Industry

This paper seeks to discuss critical concerns related to the current production and commercialisation of pregnant mare serum gonadotropin (PMSG). This biological product is commercialised all over the world by industrial animal breeding to increase the fertility and reproduction performance of farmed animals, mainly pigs, but also cattle, sheep, and goats. From 2016 to 2019, only in Germany, about 6.4 million doses of PMSG were administered to sows.¹ Investigations carried out, since 2015, by the Animal Welfare Foundation (AWF) and the Tierschutzbund Zürich (TSB), have alerted to the precarious and abusive management of pregnant mares in the production of the PMSG.

The extraction of the biological PMSG runs in industrial plants of private pharmaceutical companies installed in Argentina, Uruguay and Iceland. One of the largest producers of the hormone, the Syntex S.A. a big multinational in the sector, has exported the PMSG to more than 30 countries on five continents. In 2021, the amount of 770 grams of equine gonadotropic hormone produced by the Syntex Uruguay S.A. was exported to the European Union, totalling \$9 million.¹ In that country, laboratories was granted by a support programme to increase production to the exportation of PMSG financed by the Southern Common Market and by the Uruguayan Ministry for Industry, Energy and Mining.¹

On these 'blood farms', thousands of mares are turned into living sources of raw material. During a specific period

of pregnancy, the hormone is extracted by the hormone is extracted by withdrawing blood, through a production system entirely reliant on the equine organism. Up to 10 litres of blood are extracted from each mare during each pregnancy, through procedures that are repeated once or twice a week, over a period that goes up to 12 weeks. According to the AWF,² in Argentina and Uruguay, around 10.000 mares are kept in these 'blood farms'. For greater production efficiency, they are submitted to induced abortions at around the 100th day of gestation, in order to be newly impregnated. An estimated 20,000 abortions are induced annually. In 2016, an experiment conducted in Uruguay with approved protocol of the research committee of the Universidad de la República, Montevideo, described the procedures carried out for the interruption of pregnancy: after a "digital puncture of the fetal membranes with previous manual dilation of the cervix", fetus and membrane are expelled within the first 48 hours (1: 17).

Past and Current Equine Use Standard

Historically, equines have been used by stressing their limits of resistance and resilience. Under this hegemonic perspective, the meaning of the existence of these species gets mixed up with ingrained utilitarian standards and consolidated financial schemes. In current times, such criteria have prevailed with stubborn resilience, but the consequences of handling methods based on brutal submission are being gradually disclosed.^{3,4} Inherently dependent on pregnant mares' bodies, the 'blood farms' expose a brutal expression of subjugation, and abusive purposes that have undergirded our utilitarian connection to these beings. Even by demonstrating how



Image 1. Installations of Laboratory Biomega S.A., Uruguay. In this 'blood farm', around 1,000 mares are used to extract the PMSG. (photo: Animal Welfare Foundation & Tierschutzbund Zürich, 2021).



Image 2. An injured and emaciated mare in the pasture of a blood farm in Uruguay
(photo: Animal Welfare Foundation & Tierschutzbund Zürich, 2021).

fragile the boundaries between 'civilisation' and 'barbarism' can be.

Animality is an intrinsic unthinkable element of colonialism, but usually erased from the historical record.⁵ The current transnational business of PMSG production is evocative of a persistent biopower system erected on the pillars of colonialism.⁶ In their symbolic dimensions, these 'blood farms' illustrate the precarious legacy of a world so equivocally relegated to the periphery, in which 'other' living beings appear by chance, as mere commodity, muted by the modern perspective that stubbornly attributes passivity to nature.⁷ In this sense, colonisation, colonality and capitalism continue, according to Huarachi,⁸ in a crisis of overlapping values and systems of appreciating. The Eurocentric progress-oriented logic undergirded the patriarchal, speciesist, and colonialist transatlantic machine fuelled by power, capital, and nature.⁹

It is worth underlining that numerous synthetic alternatives for the biological PMSG are available for the same result, and are already on the market. The recombinant PMSG, called reCG, is commercialized in various Latin American countries. Only in Germany, there are 36 alternative of synthetic drugs available.¹

Concerning to the current blood farms' production, several other abuses were recorded in video footage obtained by the AWF's investigation team in the remote industrial installations in Argentina and Uruguay.¹ The images revealed pregnant mares terrified and stressed as a result of the virulent mistreatment on the part of the employees. In most interventions and interactions, handling is mediated by blows and whips. Strangulation, blows with metal rods and hooks, prodding and whipping on the head, eyes, nose and ears shape the management strategies adopted for handling mares during bleeding. A shocking image shows a man beating a paralysed mare from behind with an iron

bar. The man lifts the mare's tail and shoves the iron rod into her vagina. The mare is also punished by successive blows to her head, in order to be placed in the proper position to be bled until, by chance, to be driven to the desired place.¹⁰ The general management of these animals also takes into consideration the scientific argument that pregnant mares under light-to-poor food availability may present a higher level of PMSG production.¹³

The videos reveal where the hormone comes from, as well as its infamous production methods, to the general public, and to the authorities of the European Union and Member States. Almost immediately, in response to the publicised complaints, the Syntex S.A. increased the invisibilisation of its industrial installations in Latin America. The installations where the mares are bled were given walls that no longer allow visual access to the activities. The surveillance system of the farms was reinforced with cameras, night security guards, and also watchdogs. There are not any company identification signs at the farms' entrance gates, nor other internal visual corporate information. In 2017 and 2018, four out of five European pharmaceutical companies, namely MSD Animal Health/Intervet, Ceva Santé Animale, IDT Biologika and Zoetis, stopped the import of PMSG from South America.²

From 2019, new investigations carried out in Iceland, unveiled a new cluster of production and exportation of PMSG, run by the pharma company Isteka.¹¹ At the end of 2021, in the course of the ongoing awareness of the abusive use of pregnant mares on blood farms in South America, the film "Iceland – Land of the 5,000 Blood Mares", caused a new public scandal. Most of the Icelandic PMSG is exported to Germany. Conversations were started with some stakeholders, but Isteka, the pharmaceutical industry, the blood farmers, and the minister of agriculture did not take part in the dialogues.



Image 3. Handling the mares for bloodletting in the Syntex Uruguay S.A. (photo: Animal Welfare Foundation & Tierschutzbund Zürich, 2022).

The whole investigation presents undeniable evidences that the blood farms staff are unqualified to treat horses without using violence, and farmers and assistants have no training to bleed them, without causing pain and distress. The general conditions of mares in Iceland are basically the same as those identified in the animals kept in the blood farms of Argentina and Uruguay. There are no formal protocols for bleeding pregnant mares. The blood volume extracted at a frequency of eight times a year is excessive, around 15 to 20% of their total blood volume. The mares are semi-wild, not tamed, which explains the repeated and unjustified traumatisation of frightened animals over the multiple blood collections. The conditions of the installations are highly hazardous to the safety of the mares who might hurt themselves in boxes made of iron and wood, with sharp edges and protrusions. There are iron bars not padded placed above the horses' head, and they also risk getting their legs caught above the wooden board¹¹. A visual record of the blood farms in Iceland showed a mare with a large wound along the jugular vein, which appears to have been sewed. In spite of this condition, the animal was not excluded from blood collection. Based on the images, a German veterinarian examined this specific case:

"The course of the suture coincides exactly with the course of the jugular vein. In addition, a thickening about the size of a hen's egg can be seen towards the head. I suspect that the cause here was a severe inflammation of the jugular vein, probably in the sense of a septic or purulent vein inflammation. There is a high probability that bacteria will get into the vein through the punctures as a result of multiple blood collections. The sensitive vein wall becomes inflamed. The blood clots

that form contain clumped blood components and bacteria, which maintain and can aggravate this inflammation, so that the inflammation spreads. In order to prevent parts of the clot from detaching and leading to life-threatening complications, therapy can consist of surgically opening the vein and removing the inflammatory masses. The affected vein, if it has not been sclerosed anyway, usually remains permanently closed."^{11,18}

Obscenely Profitable Liaisons: Conclusive Considerations

The very fact that there are numerous synthetic alternatives for the biological PMSG available on the market underlines the grotesque circumstances surrounding the maintenance of this transnational 'blood business'. The regulatory statement on the use of animals for scientific purposes (EU Directive 2010/63) establishes that animal experiments must be replaced by alternative methods not relying on live animals. It should be noted that blood collections for the production of drugs are considered animal experiments.¹¹

The repercussion of AWF's denounces also demonstrates how persistent and achievable the non-compliance pathway on international animal welfare standards can be. The maintenance of 'blood farms' current practices into the global market reveals significant contemporary regulatory asymmetries which have prevailed in overseas 'exchanges'. In 2018, as a response to the publicised complaints, the Syntex lost all their European customers of the pure PMSG powder sold for further processing, named Novormon. The following year, in order to recover sales, Syntex started selling of a 'new' processed product under a different name, Fixplan. In March 2021, Ireland was the first country in Europe to have received



Image 4. Handling of emaciated mares in the Syntex Uruguay S.A. (photo: Animal Welfare Foundation & Tierschutzbund Zürich, 2022).

authorisation to trade the new drug. In sequence, as 'Concerned Member States' based on the Ireland's report to other countries, like Germany and France, also granted their marketing authorization to trade Fixplan. Following this, more European countries granted marketing authorisation in the context of a "decentralised procedure". To ensure the maintenance of the European market of Fixplan, its origin is not traceable as well as the country of production, Argentina. The name Syntex is not mentioned as manufacturer but rather Syn Vet-Pharma Ireland Limited, a new company founded by Syntex. In 2022, the German company Serumwerk Bernburg also started the commercialization of Fixplan.¹

Discussions on the extreme exploitation of mares to produce PMSG have taken place in the European Commission, but they declined to impose an import ban on the trade with Argentina and Uruguay. Dialogue and cooperation to promote the welfare conditions in the 'blood farms' have sounded better in the context of the European Green Deal and of the Food Policy Farm to Fork,² which aims to improve initiatives for plant-based diets, reduction of greenhouse gas emissions and improvement of animal welfare. It is also worth emphasising that whole food system is responsible for a range of impacts on human and animal health and welfare. In this regard, the Farm to Fork Strategy¹² predicts that consumers must be fully informed, and empowered to require a healthy food environment, which includes a high level of animal welfare. To achieve this, transparency is a vital asset to safeguard a comprehensible information on animal welfare and sustainability of all food products.

The current production and commercialization of pregnant mare serum gonadotropin (PMSG) exposes more than evident breaches of animal experiment regulation. It wouldn't even be necessary to mention the PMSG's negative effects on the health and welfare of pigs. Solving fertility problems in the poor husbandry conditions of intensive farming, the PMSG systematic application reduces production costs and boosts efficiency abbreviating "unproductive days" between pregnancies, promoting superovulation, and anticipating puberty. Its use in animal production induces and synchronise oestrous in sows to guarantee that all sows can be artificially inseminated at the same time and give birth on the same day.¹¹ One side effect of the use of hormone is to increase dead and weak piglets in large litters. Beyond this direct harm of the use of PMSG, the animal industry seems to be taking very comfortably the many severe violations of animal welfare approaches as a naturalised routine of 'blood farms' production system.

By opting for the biological product, currently marketed as Fixplan, rather than the synthetic ones, the European animal industry seems to be publicly acknowledging its unwillingness to agree with basic animal welfare standards that have already been established. The sector's disengagement with the critical situation of the pregnant mares turned into living sources of PMSG, that is an inextricably linked part of its production chain, more than justifies (and motivates) the growing, consistent and widespread campaign against the animal industry. The endeavours of international society to abolish the blood farms in the both Latin American and Iceland territories, introduces a relevant case study for a critical review of animal welfare outreach. The current PMSG market has shown that economic and political arguments have to power to neutralise the emergency measures that should be applied immediately to guarantee animal welfare within the industry.

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Note: the video documentation referred to in this article is available on YouTube from the following links:

- <https://www.youtube.com/watch?v=SkHP65O4RUg>
- <https://www.youtube.com/watch?v=8EwPv7fLUGg>
- <https://www.youtube.com/watch?v=WQLRaycU1oQ>
- <https://www.youtube.com/watch?v=Rc1rhfmVIO8>
- <https://www.youtube.com/watch?v=n2XoJizPTuc>
- <https://www.youtube.com/watch?v=3OX4quIzJzw>



Ana Lucia Camphora

Ana Lucia Camphora is a Brazilian senior research of the Center for Contemporary Equine Studies (CA, USA). She has a PhD in Social Sciences, a Master Degree in Psychosociology of Communities and Social Ecology, and is the author of the book *Animals and Society in Brazil of the 16th to 19th centuries* (The White Horse Press, UK, 2021). The author thanks the Animal Welfare Foundation for the inestimable data made available for this study.

Email: alcamphora@gmail.com