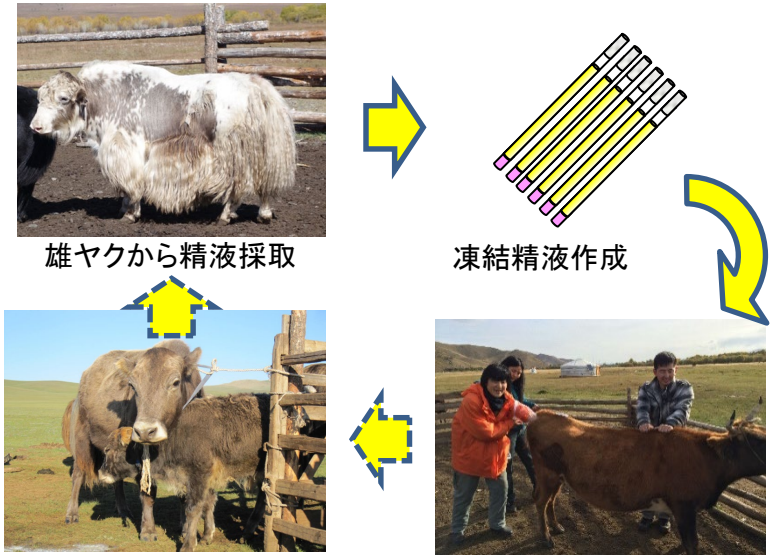
FACULTY OF BIOSCIENCE & BIOINDUSTRY TOKUSHIMA UNIVERSITY

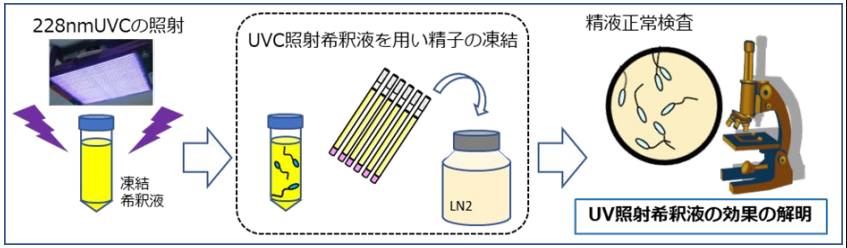
希少動物の精液凍結保存法の開発

[キーワード:精子, 畜産]　助教　長原　恵

ヤクの精液凍結保存技術による繁殖効率化



短波長紫外線を用いた卵黄含有希釈液の殺菌方法の研究



卵黄希釈液への短波長紫外線照射による殺菌効果の解明

内容:

ヤクなどの希少動物は、生物多様性の観点からその種の保存は重要な課題であります。これまで、モンゴル遊牧民における家畜繁殖率向上のため、ヤクの精液を採取し凍結保存する手法について研究を行ってきました。精液採取方法には、人工膣を用いた横取り法や、去勢で得られる精巣の精巣上体から得る手法があります。ヤクから得られたこれらの精子を現地で凍結保存し、添加剤により凍結融解後の精子活力を上げることを確認しました。これらの研究が、希少な野生動物、優良種畜の保全に役立つと考えられます。

また、近年COVID-19蔓延のため、ウィルス等の除去に注目が集まっています。人体に害が少ないとされる222nmの短波長紫外線による病原微生物除去が、人の医療現場や空港検疫等で活用されつつあります。今後の研究として、これまで殺菌が難しかった、牛精液の凍結に使われる卵黄含有希釈液の短波長紫外線照射による殺菌方法について研究を計画しています。

分野:獣医学・畜産学

専門:動物繁殖科学

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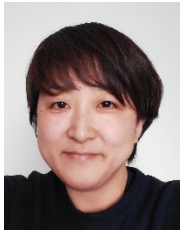

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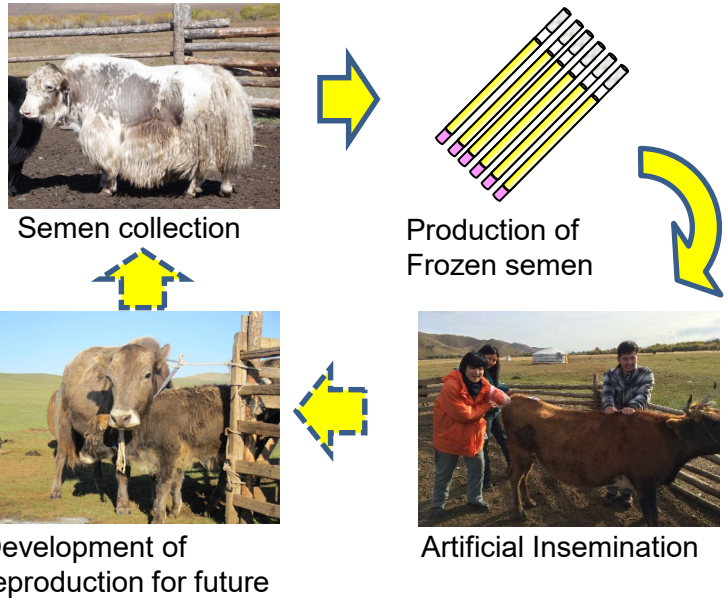
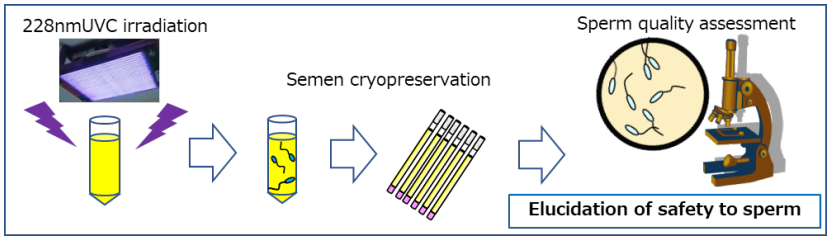
Development of semen cryopreservation method for rare animals

Assistant Professor　Nagahara Megumi

Semen Cryopreservation Technology to Improve Reproduction of Yak



Study of sterilization method of egg yolk extender using UV-C



内容：

The preservation of rare animals, such as yaks, is an important issue from the viewpoint of biodiversity. We have been studying methods for yak semen collection and cryopreservation in Mongolian nomadic herds to improve the reproductive capabilities of livestock. Semen collection methods include using an artificial vagina and obtaining it from the epididymis of the testes through castration. We have cryopreserved the sperm obtained from yaks in the field and have confirmed that additives can increase sperm quality after freezing and thawing. We believe that these studies will be useful for the conservation of rare wild animals and superior livestock species.

In recent years, due to the COVID-19 pandemic, attention has also been focused on methods of sterilization. The sterilization of pathogenic microorganisms using short-wavelength ultraviolet rays of 222 nm, which are considered less harmful to the human body, is now being used in human medical facilities and airport quarantines. As part of our future research, we plan to study a method of sterilization by irradiation of short-wavelength ultraviolet rays on a diluted solution containing egg yolk used for freezing bovine semen. This method has been difficult to sterilize so far.

Keywords : sperm, animal husbandry

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