

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
імені В. Н. КАРАЗІНА

«БІОЛОГІЯ: ВІД МОЛЕКУЛИ ДО БІОСФЕРИ»

Тези доповідей XIII Міжнародної конференції молодих науковців
(28 – 30 листопада 2018)

Харків
2018

Реєстраційне посвідчення УкрІНТЕІ МОН № 757 від 20 грудня 2017

Рекомендовано до друку рішенням вченої ради біологічного факультету.
Протокол №11 від 06 листопада 2018

Організаційний комітет конференції:

Голова оргкомітету – Катрич В. О., докт. фіз-мат. наук, професор, проректор з наукової роботи

Заступник голови – Жмурко В. В., д.б.н., завідувач каф. фізіології та біохімії рослин та мікроорганізмів, декан біологічного факультету ХНУ імені В. Н. Каразіна,

Бараннік Т. В., к.б.н., доц.

Божков А. І., д.б.н., проф.

Гамуля Ю. Г., к.б.н., доц.

Шабанов Д. А., д.б.н., проф.

Шамрай С. М., к.б.н., доц.

Редакційна колегія:

Акулов О. Ю., Атемасова Т. А., Бараннік Т. В., Божков А. І., Волкова Н. Є., Віннікова О. І., Гамуля Ю. Г., Горенська О. В., Звягінцева К. О., Мартиненко В. В., Наглов О. В., Нікітченко І. В., Раєвська І. М., Тимошенко В. Ф., Шабанов Д. А.

Адреса оргкомітету

Харківський національний університет імені В. Н. Каразіна

Біологічний факультет, майдан Свободи, 4, м. Харків, Україна, 61022

e-mail: ntu_bio@karazin.ua

«Біологія: від молекули до біосфери». Тези доповідей XIII Міжнародної конференції молодих учених (28 – 30 листопада 2018 р., м. Харків, Україна). – Х.: Видавництво ХНУ імені В. Н. Каразіна, 2018. – 224 с.

Допомогу в організації конференції здійснювали члени студентського оргкомітету:

Пустовалова Е. С., Федорова А. О., Полонська А. В., Бондаренко Г. М., Андрєєв Д. О., Високосова А. О., Гарбуз Д. І., Дрогваленко М. О., Макарян Р. М., Рикова К. О., Сіра О. Є., Степаненко К. Р.

Збірник містить тези доповідей студентів, аспірантів, молодих науковців України, Польщі та Чехії. Розрахований на наукових працівників, викладачів, студентів, аспірантів, які працюють у галузі біології, медицини, екології, охорони природи, сільського господарства, лісового господарства, біологічної освіти.

За достовірність викладених матеріалів і текст відповідальність несуть автори.

© Харківський національний університет
імені В. Н. Каразіна, 2018

© Філоненко С. О., дизайн обкладинки, 2018

© Marjorie Тео, фото обкладинки, 2017

ISBN 978-966-285-538-8

Differences in reproductive behavior of women from Chernivtsi and Simferopol

Kozak N.

V. N. Karazin Kharkiv National University, department of genetic and cytology, 4 Svobody Sq., Kharkiv, Ukraine
e-mail: kozaknatali93@gmail.com

In the modern world due to improvement of the quality of medicine, as well as the socio-cultural aspects of everyday life, number of offspring decreases because individual survivability has been increased (Kurbatova et al. 2012; Atramentova, Meshherjakova and Filipcova 2013). Nevertheless, some nationalities retain a more ancient way, where the importance is assigned to the number of descendants (Mustafaeva and Kozak 2014, Antsupova, Kozak and Kuritsina 2017).

The reproductive behavior of women changes in different communities of people because of various factors, such as religion, education, material status, etc. (Altuhov 2004). Thus, the Crimean Tatars belongs to the Muslim religion, whose influence leads to a change in their reproductive behavior and corresponds to the extended type of reproduction, due to the large number of children in families. In Slavs, on the contrary, in modern society, there are global trends in reducing fertility, respectively, a small number of descendants in families (Atramentova, Fedchun and Povolockij 1993).

Anonymous questioning of women in post-productive age (from 45 to 90 years) was conducted. Totally 262 Crimean Tatar women from Simferopol were surveyed, from which 44 were attributed to the first generation and 218 to the second one. 216 questionnaires were collected from Chernivtsi, 49 of which were attributed to the first generation, 167 for the second. The first generation includes older women; the second generation has younger ones. The division into generations approximately corresponds to the length of the human generation.

Data were collected in 2013 in the women's clinic of the Crimean Republican Institution "Medical Center for Serving the Deported Peoples", Simferopol. And also, in 2016 in the gynecological department of the City Clinical Maternity Hospital No. 2, Chernivtsi. The questionnaire included questions about the year of the birth of a woman, her nationality, as well as the nationality of her parents. Ethnicity, recorded by self-identification, was checked by the pedigree. The number of pregnancies and their outcomes was taken into account: medical and spontaneous abortions, ectopic pregnancies, number of stillbirths and live births.

Women of the first generation from given cities have almost the same average number of pregnancies – 4.7 for Chernivtsi and 4.2 for Simferopol; births (2.0 and 2.9, respectively) and live births (2.0 Chernivtsi and 2.8 Simferopol). But the women of Chernivtsi resorted to medical abortions three times more often than the Crimean Tatars (0.8 and 2.4 abortions respectively). On the contrary spontaneous abortions occurred 2.5 times more often among Crimea residents (0.5 miscarriages per woman on average) compared to Chernivtsi residents (0.2 miscarriages, $p > 0.05$). Ectopic pregnancies were indicated only by one woman from these samples, which for Chernivtsi was 0.08, and for Simferopol 0.02. Stillbirths were indicated by two Crimean Tatar women, whereas Chernivtsi women with this problem, apparently, did not get into the sample.

The proportion of women who did not have pregnancies and did not give birth was not significantly different in the first generation and averaged 4.3 %. Among second generation, the residents of Chernivtsi invested more in the gene pool of the population than the inhabitants of Simferopol. The percentage of women who did not give birth was 1.5 times higher for Crimean Tatars (5.5 %) than for Chernivtsi women (3.6 %). The percentage of women in the first and second generation for medical abortion has no statistically difference. Chernivtsi women of the first generation did abortions 2.5 times more often (83.7 %) than Simferopol Crimean Tatars (34.1 %, $p < 0.05$). In the second generation this figure declined in the Chernivtsi, while in the Tatars it increased, but nevertheless, Chernivtsi women make abortions more often in 1.5 times (69.5 % and 45.4 %, $p < 0.05$). The share of spontaneous abortions is 2.2 times higher among female

residents of Simferopol of the first generation (31.8 %) than in Chernivtsi (14.3 %, $p < 0.05$). For the second generation, the difference is almost one and a half times, for Crimean Tatars 33.5 % and 23.4 % for Chernivtsi women. A big genetic burden in Crimean Tatar families can be connected with the spread of consanguineous marriages among Muslims, which is reflected in embryonic losses (Mustafaeva and Kozak 2014, Antsupova, Kozak and Kuritsina 2017).

Comparison of the reproductive characteristics of Chernivtsi residents and Crimean Tatars from Simferopol from two adjacent generations on the whole showed their dynamics is in line with the global trends, manifested in a decrease of the birth rate due to its artificial regulation. Comparison of the reproductive characteristics of the representatives living in Chernivtsi with the data obtained for the Crimean Tatars from Simferopol a number of statistically significant differences were revealed. Most of them can be explained by cultural traditions and religious prohibitions in the sphere of posterity in representatives of different religious groups and nationalities. The main difference is that the narrowed type of reproduction is typical for Chernivtsi, and extended for the Crimean Tatars. These differences can affect the ethnic composition of Ukraine.

The authors are grateful to prof. L. A. Atamentova for assistance in the development of the study. V. V. Antsupova, S.A. Kuritsina for organizing and collecting material in Chernivtsi. L. A. Mustafaeva for organizing and collecting material in Simferopol.

- Antsupova, V. V., Kozak, N. O., Kuritsina, S. A., Ushko, Ya. A. and Anokhina, S. I 2017. "Innovative technology in medicine: experience of Poland and Ukraine." International research and practice conference. Lublin. Lublin Science and Technology Park S.A., April 28–29
- Алтухов, Ю.П. 2004. "Динамика популяционных генофондов при антропогенных воздействиях." *Вестник ВОГиС*. 8 (2) 40–59.
- Атраментова, Л. А., Мещерякова, И. П. и Филипцова, О. В. 2013. "Репродуктивные характеристики и индекс Кроу в различных группах населения Евпатории." *Генетика* 49 (12). 1398–1406.
- Курбатова, О. Л., Победоносцева, Е. Ю., Гургенова, Ф. Р. и Булаева, К. Б. 2012. "Изменчивость параметров естественного воспроизводства и индекса Кроу в этнических группах Дагестана." *Генетика* 48 (10). 1221–1227.
- Мустафаева, Л. А. и Козак, Н. А. 2014. "Витальные характеристики репродукции крымскотатарских женщин". *Генетика человека и патология. Проблемы эволюционной медицины* 10. 57–59.

Heterologous AdpA activate cryptic lucensomycin biosynthetic gene cluster in *S. cyanogenus* S136.

Vlasiuk I., Yushchuk O.

Ivan Franko National University of Lviv, Faculty of Biology, 4 Hrushevskoho st., Lviv, Ukraine
e-mail: arnikamontana2015@gmail.com

Streptomyces cyanogenus S136 is a natural overproducer of potent anticancer drug landomycin A. Landomycin A biosynthetic pathway was studied in great detail as well as pathway-specific regulation of the biosynthesis (Rebets at al. 2008). Nevertheless, there was no information about global regulation of landomycin A production until very recently. AdpA is perhaps the most important positive global regulator of morphogenesis and secondary metabolism in streptomycetes (Higo at al. 2012). In our previous works, we have shown that landomycin A biosynthesis is AdpA regulated. However, we were able to detect such regulation only using heterologous *adpA* genes (Yushchuk at al. 2018). Further analysis has revealed, that native AdpA is nonfunctional in *S.*