Contract № 86323. Experiment 1.1. Quantitative assessment of Wistar rats biological material to study the late effects of 239Pu polymer with low transportability after the animals’ natural death

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| Group | Different exposure factors | | | | | | | Number of rats, ♂ |  |
| Ionizing radiation (IR) | | | | | | other factors | Involved in the experiment,  Lp | samples  (paraffin) |
| type | source | delivery route | Dose approach | Administered amount | dose  per 365 days,  Gy | characteristics |
| experiment | α | 239Рu nitrate polymer | intravenous | single | 18.5  kBq/kg  of body mass | liver – 1.5  skeleton– 1.0  bone marrow – 1.0 | none | 67 | 1631 |
| α | 239Рu nitrate polymer | intravenous | single | 55.5  kBq/kg  of body mass | liver – 5,8  skeleton – 3,0  bone marrow – 2.1 | none | 70 | 1787 |
| α | 239Рu nitrate polymer | intravenous | single | 166.5  kBq/kg  of body mass | liver – 25.5  skeleton – 4.2  bone marrow – 6.3 | none | 70 | 1822 |
| control | none | none | none | none | none | none | Solution  HNO3,  pН 1,5  intravenously  single  0.35-0.45 ml | 66 | 1489 |

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| Group  1а | Different exposure factors | | | | | | | Number of male rats | |
| Ionizing radiation (IR) | | | | | | other factors | Used in test,  Lp | samples (paraffin) |
| type | source | delivery route | Dose approach | Administered amount | dose,  Gy | characteristic |  |  |
| experiment | β | 3НОН | intragastric | 5 days a week for 6 months successively | 370  kBq/gr  of body mass per day | 25.3 | none | 45 | 1239 |
| control | none | none | none | none | none | none | none | 97 | 1787 |
| experiment | β | 3НОН | intragastric | 5 days a week for 6 months successively | 370  kBq/g  of body mass per day | 25.3 | Pyrogenal (lipopolysaccharide) subdermal 1 time/a month for 9 months successively; 1.5-2.5 Minimal pyrogenal Dose (MPD) per 100 g of body mass for 1 administration; total dose 13.5-22.5 MPD per 100 g of body mass | 91 | 2646 |
| control | none | none | none | none | none | none | 65 | 2201 |

Contract 86323. Experiment 2. Quantitative estimation of paraffin-fixed biological material from male rats to study biological effects induced by tritium and modified by pyrogenal (lipopolysaccharide)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mice group | Different exposure factors | | | | | | | Period of examinationdays | | Number of rats | | | | | | | | | | |
| Ionizing radiation (IR) | | | | | | Other factors | Involved in the experiment  Lр | | | Information available | | | | | | | |
| type | source | delivery route | dose approach | administered amount | dose,  Gy | characteristic | ♂ | ♀ | total | ♂ | | ♀ | | ♂+♀ | | samples (paraffin) | |
| experiment | β | 3НОН | per os | 5 days a week for  6 months successively | 370  kBq/gr  of body mass  per day | 8.7 | none | 250 | 50 | | 62 | 112 | 47 (0)\* | 62 (7) | | 109 (7) | | 2049  (106) | |
| 350 | 52 | | 57 | 109 | 6 (2) | 35 (4) | | 41 (6) | | 750  (88) | |
| 450 | 48 | | 46 | 94 | 16 (16) | 29 (12) | | 45 (28) | | 879  (506) | |
| control | none | none | none | none | none | none | none | 250 | 50 | | 50 | 100 | 49 (0) | 50 (0) | | 99 (0) | | 1921  (0) | |
| 350 | 52 | | 47 | 99 | 2 (1) | 68 (4) | | 70 (5) | | 1270  (80) | |
| 450 | 50 | | 51 | 101 | 5 (5) | 53 (1) | | 58 (6) | | 1109  (111) | |
| **Total: 422 (52) mice, 7958 (891) samples (paraffin)**  Note: \* - in parentheses - number of mice and biomaterial samples from animals died from natural death prior to the term of test | | | | | | | | | | | | | | | | | | | |

Contract 8632 – Experiment 3: Quantitaty of CBA mice biological material to study the dynamics of leukemia onset in various time periods after the beginning of protracted tritium oxide administration