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 | doseper 365 days,Gy | characteristics |
| experiment | α | 239Рu nitrate polymer | intravenous | single | 18.5kBq/kgof body mass | liver – 1.5skeleton– 1.0bone marrow – 1.0 | none | 67 | 1631 |
| α | 239Рu nitrate polymer | intravenous | single | 55.5kBq/kgof body mass | liver – 5,8skeleton – 3,0bone marrow – 2.1 | none | 70 | 1787 |
| α | 239Рu nitrate polymer | intravenous | single | 166.5kBq/kgof body mass | liver – 25.5skeleton – 4.2bone marrow – 6.3 | none | 70 | 1822 |
| control | none | none | none | none | none | none | Solution HNO3,pН 1,5intravenouslysingle0.35-0.45 ml | 66 | 1489 |

|  |  |  |
| --- | --- | --- |
| Group1а | 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 | 370kBq/grof 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 | 370kBq/gof 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 experimentLр | 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 for6 months successively | 370kBq/grof body massper 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