

P±PsPeCf C,P° PIPëPiCtjP°PIC-CHPIP°PSPëPj PePsCtjPiPsCtjP°C,PëPIPSPëPj P»PsPiPsC,PëPiPsPj P· C-PSCëPsPiPs.

PÿP°P±P»PµC,PePë, PIPECtjPëC,C- PïP»C-PIPEsPIPsCtj PsP±PsP»PsPSPePsCtj, PïPs 14 PjPi: P±P»C-PrPs-P±P»P°PePëC,PSC- PïBtj™ C¼C,PëPeCfC,PSC- C,P°P±P»PµC,PePë, PIPECtjPëC,C- PïP»C-PIPEsPIPsCtj PsP±PsP»PsPSPePsCtj, PrC-P°PjPµC,CtjPsPj 7,5 PjPj, P· PIC-PrC,PëCfPePsPj PIPjC-CfC,Cf PrC-CHC±PsC— CtjPµC±PsPIPëPSPë Cf PIPëPiP»C¼PrC- CtPëC„CtjPë B«14B» P· PsPrPSPsPiPs P±PsPeCf C,P° PIPëPiCtjP°PIC-CHPIP°PSPëPj PePsCtjPiPsCtjP°C,PëPIPSPëPj P»PsPiPsC,PëPiPsPj P· C-PSCëPsPiPs.

PαP°CtjPjP°PePsC,PµCtjP°PïPµPIC,PëC±PSP° PiCtjCfPïP°.

PtjPSC,PëPSPµPsPïP»P°CfC,PëC±PSC- C,P° C-PjCfPSPsPjPsPrCfP»CHCHC±C- P·P°CfPsP±Pë. P†PjCfPSPsCfCfPïCtjPµCfP°PSC,Pë. P†PSPiC-P±C-C,PsCtjPë PrPëPiC-PrCtjPsPsCtjPsC,P°C,PrPµPiC-PrCtjPsPiPµPSP°P·Pë (P°P°PhP°P°). PÿPµCtjPëC„P»CfPSPsPjC-Pr.

PлPsPr PtjPÿPΓ L04AK02.

PαP°CtjPjP°PePsP»PsPiC-C±PSC- PIP»P°CfC,PëPIPsCfC,C-.

PαP°CtjPjP°PePsPrPëPSP°PjC-PeP°.

PµPµC...P°PSC-P·Pj PrC-C—

PÿPµCtjPëC„P»CfPSPsPjC-Pr Btj° C-PjCfPSPsPjPsPrCfP»CHCHC±PëPNë P·P°CfC-P± P· PïCtjPsC,PëP·P°PïP°P»CHPSPëPjPë PIP»P°CfC,PëPIPsCfC,C¼PjPë, C%°Ps CfPµP»PµPeC,PëPIPSPs C,P° PsP±PsCtjPsC,PSPs C-PSPiC-P±CfC° PjC-C,PsC...PsPSPrCtjC-P°P»CHPSPëPNë C„PµCtjPjPµPSC, PrPëPiC-PrCtjPsPsCtjPsC,P°C,PrPµPiC-PrCtjPsPiPµPSP°P·Cf (P°P°Ph-P°P°), C„CfPSPeC†C-PsPSP°P»CHPSPs PïPsPïBtj™ C¼P·P°PSCf P· PrPëC...P°P»CHPSPëPj P»P°PSC†CHPiPsPj. P°PSP°CfP»C-PrPsPe C†CHPsPiPs C-PSPiC-P±CfPIP°PSPSC¼ C,PµCtjPëC„P»CfPSPsPjC-Pr P·P°PiP°P»PsPj P·PjPµPSCëCfC° PïCtjPsP»C-C„PµCtjP°C†C-CH PeP»C-C,PëPS, C¼PeC- CëPIPëPrPePs PrC-P»C¼C,CHCfC¼ C,P° PïPsC,CtjPµP±CfCHC,CH de novo CfPëPSC,PµP·Cf PïC-CtjPëPjC-PrPëPSCf PrP»C¼ CfPIPsPiPs CtjPsP·PIPëC,PeCf. PÿPsC±PSPëPNë PjPµC...P°PSC-P·Pj, P·P° CtjP°C...CfPSPsPe C¼PePsPiPs C,PµCtjPëC„P»CfPSPsPjC-Pr CtjPµP°P»C-P·CfC° CfPIC-PNë C,PµCtjP°PïPµPIC,PëC±PSPëPNë PµC„PµPeC, C%°PsPrPs CtjPsP·CfC-C¼PSPsPiPs CfPeP»PµCtjPsP·Cf (P Pÿ), PSPµ PrPs PeC-PSC†C¼ P·CtjPsP·CfPjC-P»PëPNë, P°P»Pµ PIC-PS PsPiPsCfPµCtjPµPrPePsPICfC°C,CHCfC¼ P·PjPµPSCëPµPSPSC¼Pj PeC-P»CHPePsCfC,C- P»C-PjC„PsC†PëC,C-PI.

PαP°CtjPjP°PePsPrPëPSP°PjC-C±PSC- PµC„PµPeC,Pë.

P†PjCzPSPSP° CfPëCfC,PµPjP°. P°PïP»PëPI PSP° PeC-P»CHPeC-CfC,CH C-PjCfPSPsPePsPjPïPµC,PµPSC,PSPëC... PeP»C-C,PëPS PI PeCtjPsPIC-: Cf PïP»P°C†PµP±Ps- PePsPSC,CtjPsP»CHPsPIP°PSPëC... PrPsCfP»C-PrP¶PµPSPSC¼C... C,PµCtjPëC„P»CfPSPsPjC-Pr Cf PrPsP·C- 14 PjPi PsPrPëPS CtjP°P· PSP° PrPsP±Cf PIPëPeP»PëPeP°PI P»PµPiPePµ P·PjPµPSCëPµPSPSC¼ PeC-P»CHPePsCfC,C- P»C-PjC„PsC†PëC,C-PI Btj° Cf CfPµCtjPµPrPSCHPsPjCf PjPµPSCë PSC-P¶ PSP° 0,3 × 10⁹/P» Btj° PïCtjPsC,C¼PiPsPj PïPµCtjCëPëC...B 3 PjC-CfC¼C†C-PI P»C-PeCfPIP°PSPSC¼, PïC-CfP»C¼ C±PsPiPs C†PµPNë

PJ PrPsCfP»C-PrP¶PµPSPSC- TEMSO P·P°PiP°P»PsPj 1088 PiP°C†C-C”PSC,C-PI P· P P PŸ
CĤP°PSPrPsPjC-P·CfPIP°P»Pë PrP»CĬ PiCĤPëPNëPsPjCf P°P±Ps C,PµCĤPëC,,P»CfPSPsPjC-PrCf
Cf PrPsP·P°C... 7 PjPi (n = 366) C‡Pë 14 PjPi (n = 359), P°P±Ps PiP»P°C†PµP±Ps (n = 363)
PiCĤPSc,CĬPiPsPj PiPµCĤC-PsPrCf C,CĤPëPIP°P»C-CfC,CĤ 108 C,PëP¶PSC-PI. PjCfC-
PiP°C†C-C”PSC,Pë P±CfP»Pë P· PiC-PrC,PIPµCĤPrP¶PµPSPëPj PrC-P°PiPSPsP·PsPj P PŸ (PSP°
PsCfPSPsPIC- PeCĤPëC,PµCĤC-C—PI PĤP°PeP”PsPSP°P»CHPrP°, 2001 CĤ.) P·
CĤPµC†PëPrPëPICfCĤC‡PëPj PeP»C-PSC-C‡PSPëPj PiPµCĤPµP±C-PiPsPj, P·
PiCĤPsPiCĤPµCfCfPIP°PSPSCĬPj P°P±Ps P±PµP· PSCĤPsPiPs, C,P° PjP°P»Pë
PiCĤPëPSP°PNëPjPSC- 1 CĤPµC†PëPrPëPI PiCĤPsC,CĬPiPsPj CĤPsPeCf, C°Ps
PiPµCĤPµPrCfPIP°PI PrPsCfP»C-PrP¶PµPSPSCĤ, P°P±Ps PiCĤPëPSP°PNëPjPSC- 2
CĤPµC†PëPrPëPIPë PiCĤPsC,CĬPiPsPj 2 CĤPsPeC-PI, C°Ps PiPµCĤPµPrCfPIP°P»Pë
PrPsCfP»C-PrP¶PµPSPSCĤ. PkP° PjPsPjPµPSC, PIPeP»CĤC‡PµPSPSCĬ Cf
PrPsCfP»C-PrP¶PµPSPSCĬ PiP°C†C-C”PSC,Pë PsC,CĤPëPiP°P»Pë ≤ 5,5 P±P°P»P° P·P°

P PsP·C€P€CĤPμPSPsCĤ C€PeP°P»PsCĤ PsC†C-PSPePë PIPëCĤP°P¶PμPSPsC†C,C-
C-PSPIP°P»C-PrPëP·P°C†C-C— (Expanded Disability Status Scale, EDSS). PŸPμCĤPμPrPSC-PNë
PIC-Pe C†C†P°C†PSPëPeC-PI PrPsC†P»C-PrP¶PμPSPSCĬ C†C,P°PSPsPIPëPI 37,9 CĤPsPeC†. PJ
P±C-P»CHC€PsC†C,C- PïP°C†C-C”PSC,C-PI P±C†PI PrC-P°PiPSPsC†C,PsPIP°PSPëPNë
CĤPsP·C†C-CĬPSPëPNë C†PeP»PμCĤPsP· CĤPμC†PëPrPëPIC†CĤC†Ps-CĤPμPjC-C,C†CĤC†PsPiPs
PïPμCĤPμP±C-PiC† (91,5 %), P°P»Pμ C† PSpμPIPμP»PëPePsC— PiC-PrPiCĤC†PiPë
PïP°C†C-C”PSC,C-PI P±C†PI PIC,PsCĤPëPSPSPs-PiCĤPsPiCĤPμC†C†CĤC†PëPNë (4,7 %) P°P±Ps
PiCĤPsPiCĤPμC†C†CĤC†PëPNë CĤPμC†PëPrPëPIC†CĤC†PëPNë CĤPsP·C†C-CĬPSPëPNë
C†PeP»PμCĤPsP· (3,9 %). PŸPμCĤPμPrPSCĬ PeC-P»CHPeC-C†C,CH CĤPμC†PëPrPëPIC-PI
PiCĤPsC,CĬPiPsPj CĤPsPeC† PrPs PIPeP»CĤC†PμPSPSCĬ PïP°C†C-C”PSC,C-PI C†
PrPsC†P»C-PrP¶PμPSPSCĬ C†C,P°PSPsPIPëP»P° 1,4, PiCĤPë C†CHPsPjC† C† 36,2 %
PïP°C†C-C”PSC,C-PI PSP° PiPsC†P°C,PePsPIPsPjC† CĤC-PIPSC- PIPëCĬPIIP»CĬP»PëC†CĬ
PePsPSC,CĤP°C†C,PsPIP°PSC- PiP°PrPsP»C-PSC-C”Pj PIPsPiPSPëC‰P° C†CĤP°P¶PμPSPSCĬ.
PĤPμPrC-P°PSP° PeC-P»CHPePsC†C,C- P±P°P»C-PI P·P° C€PeP°P»PsCĤ EDSS PSP°
PiPsC†P°C,PePsPIPsPjC† CĤC-PIPSC- C†C,P°PSPsPIPëP»P° 2,50, PiCĤPë C†CHPsPjC† C† 249
PïP°C†C-C”PSC,C-PI (22,9 %) PeC-P»CHPeC-C†C,CH P±P°P»C-PI P·P° C€PeP°P»PsCĤ EDSS
PSP° PiPsC†P°C,PePsPIPsPjC† CĤC-PIPSC- C†C,P°PSPsPIPëP»P° > 3,5. PŸPμCĤPμPrPSCĬ
C,CĤPëPIP°P»C-C†C,CH P·P°C...PIPsCĤCĤPIP°PSPSCĬ PIC-Pr C†P°C†C† PïPsCĬPIPë
PiPμCĤC€PëC... C†PëPjPiC,PsPjC-PI C†C,P°PSPsPIPëP»P° 8,7 CĤPsPeC†. P°C-P»CHC€C-C†C,CH
PïP°C†C-C”PSC,C-PI (73 %) PSPμ PsC,CĤPëPjC†PIP°P»Pë PiCĤPμPïP°CĤP°C,C-PI, C‰Ps
P·PjC-PSCHCĤC,CH PiPμCĤPμP±C-Pi CĤPsP·C†C-CĬPSPsPiPs C†PeP»PμCĤPsP·C†,
PiCĤPsC,CĬPiPsPj 2 CĤPsPeC-PI PrPs PIPeP»CĤC†PμPSPSCĬ C† PrPsC†P»C-PrP¶PμPSPSCĬ.
P PμP·C†P»CHC,P°C,Pë PrPsC†P»C-PrP¶PμPSPSCĬ PiPsPeP°P·P°PSPs PI C,P°P±P»PëC†C- 1.

P PμP·C†P»CHC,P°C,Pë C,CĤPëPIP°P»PsPiPs C†PiPsC†C,PμCĤPμP¶PμPSPSCĬ,
PsC,CĤPëPjP°PSC- C† C...PsPrC- PiPsPrPsPIP¶PμPSPsPiPs PIPëPIC†PμPSPSCĬ
PrPsPIPiPsC†C,CĤPsPePsPIPsC— PsC†C-PSPePë P±PμP·PiPμPePë PI C†C†P°C†PSPëPeC-PI
PrPsC†P»C-PrP¶PμPSPSCĬ TEMSO (PjPμPrC-P°PSP° P·P°PiP°P»CHPSPsC—
C,CĤPëPIP°P»PsC†C,C- P»C-PeC†PIP°PSPSCĬ C†C,P°PSPsPIPëP»P° PiCĤPëP±P»PëP·PSPs 5
CĤPsPeC-PI, P° PjP°PeC†PëPjP°P»CHPSP° C,CĤPëPIP°P»C-C†C,CH P»C-PeC†PIP°PSPSCĬ
C†C,P°PSPsPIPëP»P° PiCĤPëP±P»PëP·PSPs 8,5 CĤPsPeC†), PSPμ PIPëCĬPIIPëP»Pë P¶PsPrPSPëC...
PSPsPIPëC... P°P±Ps PSPμPsC†C-PeC†PIP°PSPëC... PrP°PSPëC... C‰PsPrPs P±PμP·PiPμPePë.

PJ PrPsC†P»C-PrP¶PμPSPSC- TOWER P·P°PiP°P»PsPj 1169 PïP°C†C-C”PSC,C-PI P· P P PŸ
CĤP°PSPPrPsPjC-P·C†PIP°P»Pë PrP»CĬ PiCĤPëPNëPsPjC† P°P±Ps C,PμCĤPëC„P»C†PSPsPjC-PrC†
C† PrPsP·P°C... 7 PjPi (n = 408) C†Pë 14 PjPi (n = 372), P°P±Ps PïP»P°C†PμP±Ps (n = 389)
PiCĤPsC,CĬPiPsPj PiPμCĤC-PsPrC-PI CĤC-P·PSPsC— C,CĤPëPIP°P»PsC†C,C-, CĬPeC-
P·P°PeC-PSC†PëP»PëC†CĬ C†PμCĤPμP· 48 C,PëP¶PSC-PI PiC-C†P»CĬ
CĤP°PSPPrPsPjC-P·P°C†C-C— PsC†C,P°PSPSCHPsPiPs PïP°C†C-C”PSC,P°. PJC†C-
PïP°C†C-C”PSC,Pë P±C†P»Pë P· PiC-PrC,PIPμCĤPrP¶PμPSPëPj PrC-P°PiPSPsP·PsPj P PŸ (PSP°
PsC†PSPsPIC- PeCĤPëC,PμCĤC-C—PI PĤP°PeP”PsPSP°P»CHPrP°, 2005 CĤ.) P·
CĤPμC†PëPrPëPIC†CĤC†PëPj PeP»C-PSC-C†PSPëPj PiPμCĤPμP±C-PiPsPj, P·
PiCĤPsPiCĤPμC†C†PIP°PSPSCĬPj P°P±Ps P±PμP· PSCHPsPiPs, C,P° PjP°P»Pë
PiCĤPëPSP°PNëPjPSC- 1B CĤPμC†PëPrPëPI PiCĤPsC,CĬPiPsPj CĤPsPeC†, C‰Ps
PiPμCĤPμPrC†PIP°PI PrPsC†P»C-PrP¶PμPSPSCĤ, P°P±Ps PiCĤPëPSP°PNëPjPSC- 2
CĤPμC†PëPrPëPIPë PiCĤPsC,CĬPiPsPjB 2 CĤPsPeC-PI, C‰Ps PiPμCĤPμPrC†PIP°P»Pë
PrPsC†P»C-PrP¶PμPSPSCĤ. PkP° PjPsPjPμPSC, PIPeP»CĤC†PμPSPSCĬ C†
PrPsC†P»C-PrP¶PμPSPSCĬ PïP°C†C-C”PSC,Pë PjP°P»PëB ≤ 5,5 P±P°P»P° P·P°
P PsP·C€P€CĤPμPSPsCĤ C€PeP°P»PsCĤ PsC†C-PSPePë C†C,C†PiPμPSCĬ
C-PSPIP°P»C-PrPëP·P°C†C-C— (Expanded Disability Status Scale, EDSS).

PŸPµCĤPµPrPSC-PNē PIC-Pē CŕC†P°CĴPSPēPeC-PI PrPsCĴP»C-PrP¶PµPSPSCĴ CĴC,P°PSPsPIPēPI
 37,9 CĤPsPePē. PJ P±C-P»CHCēPsCĴC,C- PiP°C†C-C" PSC,C-PI P±CŕPI CĤPsP·CĴC-CĴPSPēPNē
 CĴPeP»PµCĤPsP· CĤPµC†PēPrPēPICŕCĤC†Ps-CĤPµPjC-C,CŕCĤC†PsPiPs PiPµCĤPµP±C-PiCŕ (97,5
 %), P°P»Pµ Cŕ PSPµPIPµP»PēPePsC— PiC-PrPiCĤCŕPiPē PiP°C†C-C" PSC,C-PI P±CŕPI
 PIC,PsCĤPēPSPSPs-PiCĤPsPiCĤPµCĴCŕCĤC†PēPNē (0,8 %) P°P±Ps PiCĤPsPiCĤPµCĴCŕCĤC†PēPNē
 CĤPµC†PēPrPēPICŕCĤC†PēPNē CĤPsP·CĴC-CĴPSPēPNē
 CĴPeP»PµCĤPsP·B B B B B B B B B B B B (1,7 %). PŸPµCĤPµPrPSCĴ PeC-P»CHPeC-CĴC,CH
 CĤPµC†PēPrPēPIC-PI PiCĤPsC,CĴPiPsPj CĤPsPeCŕ PrPs PIPeP»CĤC†PµPSPSCĴ
 PiP°C†C-C" PSC,C-PI Cŕ PrPsCĴP»C-PrP¶PµPSPSCĴ CĴC,P°PSPsPIPēP»P° 1,4. P©PsPrPs
 PSP°CĴPIPSsCĴC,C- PePsPSC,CĤP°CĴC,PsPIP°PSPēC... PiP°PrPsP»C-PSC-C" Pj PIPsPiPSPēC%
 CŕCĤP°P¶PµPSPSCĴ PSP° PiPsC†P°C,PePsPIPsPjCŕ CĤC-PIPS- PrP°PSC- PIC-PrCĴCŕC,PSC-.
 PĤPµPrC-P°PSP° PeC-P»CHPePsCĴC,C- P±P°P»C-PI P·P° CēPeP°P»PsCĤ EDSS PSP°
 PiPsC†P°C,PePsPIPsPjCŕ CĤC-PIPS- CĴC,P°PSPsPIPēP»P° 2,50, PiCĤPē C†CHPsPjCŕ Cŕ 298
 PiP°C†C-C" PSC,C-PI (25,5 %) PeC-P»CHPeC-CĴC,CH P±P°P»C-PI P·P° CēPeP°P»PsCĤ EDSS
 PSP° PiPsC†P°C,PePsPIPsPjCŕ CĤC-PIPS- CĴC,P°PSPsPIPēP»P° > 3,5. PŸPµCĤPµPrPSCĴ
 C,CĤPēPIP°P»C-CĴC,CH P·P°C...PIPsCĤCĤPIP°PSPSCĴ PIC-Pr C†P°CĴCŕ PiPsCĴPIPē
 PiPµCĤCēPēC... CĴPēPjPiC,PsPjC-PI CĴC,P°PSPsPIPēP»P° 8 CĤPsPeC-PI. P' C-P»CHCēC-CĴC,CH
 PiP°C†C-C" PSC,C-PI (67,2 %) PSPµ PsC,CĤPēPjCŕPIP°P»Pē PiCĤPµPiP°CĤP°C,, C%Ps
 P·PjC-PSCHCĤC,CH PiPµCĤPµP±C-Pi CĤPsP·CĴC-CĴPSPsPiPs CĴPeP»PµCĤPsP·Cŕ,
 PiCĤPsC,CĴPiPsPj 2 CĤPsPeC-PI PrPs PIPeP»CĤC†PµPSPSCĴ Cŕ PrPsCĴP»C-PrP¶PµPSPSCĴ.
 P PµP·CŕP»CHC,P°C,Pē PrPsCĴP»C-PrP¶PµPSPSCĴ PiPsPeP°P·P°PSC- PI C,P°P±P»PēC†C- 1.

PŸP°P±P»PēC†CĴ 1

PhCĴPSPsPIPS- CĤPµP·CŕP»CHC,P°C,Pē PrP»CĴ CĴC...PIP°P»PµPSPsC— PrPsP·Pē (PrP°PSC-
 PrP»CĴ PiPsPiCŕP»CĴC†C-C— PiP°C†C-C" PSC,C-PI, C%Ps P±CŕP»Pē
 CĤP°PSPŕPsPjC-P·PsPIP°PSC- C,P° PsC,CĤPēPjP°P»Pē PiCĤPēPSP°PNēPjPSC- PsPrPSCŕ PrPsP·Cŕ
 PiCĤPµPiP°CĤP°C,Cŕ [ITT])

PµPsPeP°P·PSPēPe	P"PsCĴP»C-PrP¶PµPSPSCĴ TEMSO PŸPµCĤPēC,,P»CŕPSPsPjC-Pr 14 PjPi	PµP»P°C†PµP±Ps	P"PsCĴP»C-PrP¶PµPSPSCĴ TOWER PŸPµCĤPēC,,P»CŕPSPsPjC-Pr 14 PjPi	PµP»P°C†PµP±Ps
N	358	363	370	388
PĤP»C-PSC-C†PSC- PeC-PSC†PµPIC- C,PsC†PePē				
P C-C†PSP° C†P°CĴC,PsC,P° CĤPµC†PēPrPēPIC-PI	0,37	0,54	0,32	0,50
P C-P·PSPēC†CĴ CĤPēP·PēPeC-PI (P"Pt 95 %)	-0,17 (-0,26, -0,08)***		-0,18 (-0,27, -0,09)****	
PĤC-P»CHPeC-CĴC,CH PiP°C†C-C" PSC,C-PI P±PµP· CĤPµC†PēPrPēPIC-PI PSP° C,PēP¶PrPµPSCĤ 108	56,5%	45,6 %	57,1 %	46,8 %
P' C-PrPSPsCēPµPSPSCĴ CĤPēP·PēPeC-PI (P"Pt 95 %)	0,72 (0,58, 0,89)**		0,63 (0,50, 0,79)****	
P C-PIPµPSCĤ CĴC,C-PNēPePsPiPs PiCĤPsPiCĤPµCĴCŕPIP°PSPSCĴ C-PSPIP°P»C-PrPēP·P°C†C-C— PiCĤPsC,CĴPiPsPj 3 PjC-CĴCĴC†C-PI PSP° C,PēP¶PrPµPSCĤ 108	20,2 %	27,3 %	15,8 %	19,7 %
P' C-PrPSPsCēPµPSPSCĴ CĤPēP·PēPeC-PI (P"Pt 95 %)	0,70 (0,51, 0,97)*		0,68 (0,47, 1,00)*	
P C-PIPµPSCĤ CĴC,C-PNēPePsPiPs PiCĤPsPiCĤPµCĴCŕPIP°PSPSCĴ C-PSPIP°P»C-PrPēP·P°C†C-C— PiCĤPsC,CĴPiPsPj 6 PjC-CĴCĴC†C-PI PSP° C,PēP¶PrPµPSCĤ 108	13,8 %	18,7 %	11,7 %	11,9 %
P' C-PrPSPsCēPµPSPSCĴ CĤPēP·PēPeC-PI (P"Pt 95 %)	0,75 (0,50, 1,11)		0,84 (0,53, 1,33)	

C†CHbPsPiPs P±C†P»Pë PïPsP±C-C†PSC- C‡PµP°PeC†C-C— (21,2 %), PIC-PrC†C†C,PSC-C†C,CH PµC,,PµPeC,PëPIPSsC†C,C- (1,9 %), C-PSC€C- PïC‡PëC†PëPSPë (4,8 %) C,P° PSPµP·P°PrPsPIC-P»CHbPSPµ PrPsC,C‡PëPjP°PSPSC‡ PïC‡PsC,PsPePsP»C† PrPsC†P»C-PrP¶PµPSPSC‡ (1 %). P—P° PïPµC‡PIPëPSPSPsC‡ PeC-PSC†PµPIPsC‡ C,PsC†PePsC‡ P·P°C†C,PsC†C†PIP°PSPSC‡ C,PµC‡PëC,,P»C†PSPsPjC-PrC† C† PrPsP·C- 14 PjPi/PrPsP±C† PSPµ PjP°P»Ps PïPµC‡PµPIP°Pi PïPµC‡PµPr P·P°C†C,PsC†C†PIP°PSPSC‡Pj P±PµC,P°-1P°-C-PSC,PµC‡C,,PµC‡PsPSC†: PIC-PrC†PsC,PsPe PïP°C†C-C”PSC,C-PI P· PSPµC†C†PïC-C€PSC-C†C,C‡ P»C-PeC†PIP°PSPSC‡ C†PµC‡PµP· 96 C,PëP¶PSC-PI, C‡PsP·C‡P°C...PsPIP°PSPëPµ PjPµC,PsPrPsPj PµP°PïP»P°PSP°-PµPµPµC”C‡P°, C†C,P°PSPsPIPëPI 41,1 % PïPsC‡C-PIPS‡PSPs P· 44,4 % (C† PïC‡C†PïC- PïC‡PëPµPsPjC† C,PµC‡PëC,,P»C†PSPsPjC-PrC† C† PrPsP·C- 14 PjPi PïPsC‡C-PIPS‡PSPs P· PïC‡C†PïPsC‡ PïC‡PëPµPsPjC† P±PµC,P°-1P°-C-PSC,PµC‡C,,PµC‡PsPSC†,B B p = 0,595).

PµPµPrC-P°C,C‡PëC†PSP° PïPsPïC†P»C‡C†C-C‡

P”C-C,Pë (PIC-PePsPj PIC-Pr 10 PrPs 17 C‡PsPeC-PI)

P”PsC†P»C-PrP¶PµPSPSC‡ EFC11759/TERIKIDS P±C†P»Ps PjC-P¶PSP°C‡PsPrPSPëPj PïPsPrPIC-PµPSPs C†P»C-PïPëPj PïP»P°C†PµP±Ps-PePsPSC,C‡PsP»CHbPsPIP°PSPëPj PrPsC†P»C-PrP¶PµPSPSC‡Pj P·P° C†C†P°C†C,C‡ PïP°C†C-C”PSC,C-PI PIC-PePsPj PIC-Pr 10 PrPs 17 C‡PsPeC-PI P· C‡PµC†PëPrPëPIC†C‡C†Ps-C‡PµPjC-C,C†C‡C†PëPj P PŸ, PI C‡PePsPjC† PsC†C-PSC‡PIP°P»PsC†C‡ P·P°C†C,PsC†C†PIP°PSPSC‡ C,PµC‡PëC,,P»C†PSPsPjC-PrC† PsPrPëPS C‡P°P· PSP° PrPsP±C† (PrPsP·Pë C†PePsC‡PëPiPsPIP°PSPs PrP»C‡ PrPsC†C‡PiPSPµPSPSC‡ PIPïP»PëPIC†, PµPePIC-PIP°P»PµPSC,PSPsPiPs C,P°PePsPjC† PïC‡Pë PrPsP·C- 14 PjPi C† PrPsC‡PsC†P»PëC...) PïC‡PsC,C‡PiPsPj 96 C,PëP¶PSC-PI P· PïPsPrP°P»CHbC€PëPj PIC-PrPeC‡PëC,PëPj C‡PsP·C€PëC‡PµPSPëPj PrPsC†P»C-PrP¶PµPSPSC‡Pj. Pj PIC†C-C... PïP°C†C-C”PSC,C-PI C†C,P°PIC†C‡ C°%PsPSP°PµPjPµPSC€Pµ 1 C‡PµC†PëPrPëPI PïC‡PsC,C‡PiPsPj 1 C‡PsPeC† P°P±Ps C°%PsPSP°PµPjPµPSC€Pµ 2 C‡PµC†PëPrPëPIPë P·P° 2 C‡PsPePë PrPs PrPsC†P»C-PrP¶PµPSPSC‡. PµPµPIC‡PsP»PsPiC-C†PSC- PsP±C†C,PµP¶PµPSPSC‡ PïC‡PsPIPsPrPëP»PëC†C‡ PïC‡Pë C†PeC‡PëPSC-PSPiC† C,P° PePsP¶PSC- 24 C,PëP¶PSC- PrPs P·P°PIPµC‡C€PµPSPSC‡ PrPsC†P»C-PrP¶PµPSPSC‡, P° C,P°PePsP¶ PïC-Pr C†P°C† PïPsP·P°PïP»P°PSPsPIPëC... PIC-P·PëC,C-PI C† C‡P°P·C- PïC-PrPsP·C‡Pë PSP° C‡PµC†PëPrPëPI. PµP°C†C-C”PSC,Pë P· PeP»C-PSC-C†PSPëPj C‡PµC†PëPrPëPIPsPj P°P±Ps PIPëC†PsPePsC‡ P°PeC,PëPIPS-C†C,C‡ P·P° PrP°PSPëPjPë PµP PŸ PïC‡PëPSP°PµPjPSC- 5 PSPsPIPëC... P°P±Ps PïC‡PsPiC‡PµC†C†PëC... PŸ2-P·PIP°P¶PµPSPëC... PIPsPiPSPëC° C†C‡P°P¶PµPSPSC‡ PSP° 2 PïPsC†P»C-PrPsPIPSPëC... C†PeP°PSC†PIP°PSPSC‡C... P±C†P»Pë PïPµC‡PµPIPµPrPµPSC- C† PIC-PrPeC‡PëC,Pµ C‡PsP·C€PëC‡PµPSPµ PrPsC†P»C-PrP¶PµPSPSC‡ PrPs 96 C,PëP¶PSC‡ PrP»C‡ P·P°P±PµP·PïPµC†PµPSPSC‡ P°PeC,PëPIPSsPiPs P»C-PeC†PIP°PSPSC‡. PµPµC‡PIPëPSPSPsC‡ PeC-PSC†PµPIPsC‡ C,PsC†PePsC‡ P±C†PI C†P°C† PrPs PïPµC‡C€PsPiPs PeP»C-PSC-C†PSPsPiPs C‡PµC†PëPrPëPIC† PïC-C†P»C‡ C‡P°PSPrPsPjC-P·P°C†C-C—. PŸP°C† PrPs PïPµC‡C€PsPiPs PïC-PrC,PIPµC‡PrP¶PµPSPSC‡ PeP»C-PSC-C†PSPsPiPs C‡PµC†PëPrPëPIC† P°P±Ps PIPëC†PsPePsC— P°PeC,PëPIPSsC†C,C- P·P° PrP°PSPëPjPë PµP PŸ, P·P°P»PµP¶PSPs PIC-Pr C,PsPiPs, C°%Ps C†C,P°P»PsC†C‡ C‡P°PSC-C€Pµ, P±C†PI PïPsPiPµC‡PµPrPSCbPs PIPëP·PSP°C†PµPSPëPµ C‡Pe P°PSP°P»C-P· C†C†C,P»PëPIPsC†C,C-, PsC†PeC-P»CHbPePë PIC-PS PIPeP»C‡C†P°C” C‡Pe PeP»C-PSC-C†PSC-, C,P°Pe C- PµP PŸ- C†PjPsPIPë, C‡PeC- PIC-PrPïPsPIC-PrP°C‡C,CH C†PjPsPIP°Pj PïPµC‡PµC...PsPrC† C† PIC-PrPeC‡PëC,Pµ C‡PsP·C€PëC‡PµPSPµ PrPsC†P»C-PrP¶PµPSPSC‡.

P”P»C‡ PïC‡PëPµPsPjC† C,PµC‡PëC,,P»C†PSPsPjC-PrC† (n = 109) P°P±Ps PïP»P°C†PµP±Ps (n = 57) P·P°PïP°P»PsPj P±C†P»Ps C‡P°PSPrPsPjC-P·PsPIP°PSPs 166 PïP°C†C-C”PSC,C-PI C† C†PïC-PIPIC-PrPSPsC€PµPSPSC- 2 : 1. PµP° PjPsPjPµPSC, PIPeP»C‡C†PµPSPSC‡ C†

[illegible]

[illegible]

P„PICḡPsP̄PμPNḡCÍCH̄PePμ P°PiPμPSC,CÍC,PIPs P·P»C-PeP°CḡCÍCH̄PePēC... P·P°CÍPsP±C-PI
P·PIC-P»CH̄PSPēP»Ps PIPēCḡPsP±PSPēPeP° PIC-Pr P·PsP±PsPIbḡ™ C̄IP·P°PSPSC̄I
PSP°PrP°C,Pē CḡPμP·CfP»CH̄C,P°C,Pē PrPsCÍP»C-PrP̄PμPSCḡ P·P°CÍC,PsCÍCfPIP°PSPSC̄I
PīCḡPμP̄P°CḡP°C,Cf Ph̄P±P°PrP̄C-Ps^{B®} PrC-C,C̄IPj PIC-PePsPj PIC-Pr PSP°CḡPsPrP̄PμPSPSC̄I
PrPs PjPμPSCēPμ 10 CḡPsPeC-PI PrP»C̄I P»C-PeCfPIP°PSPSC̄I CḡPsP·CÍC-C̄IPSPsPiPs
CÍPeP»PμCḡPsP·Cf (C-PSC„PsCḡPjP°C†C-C̄I C%PsPrPs P·P°CÍC,PsCÍCfPIP°PSPSC̄I
PīCḡPμP̄P°CḡP°C,Cf PrC-C,C̄IPj PSP°PIPμPrPμPSP° PI CḡPsP·PrC-P»C- B«PŸP̄PsCÍC-P±
P·P°CÍC,PsCÍCfPIP°PSPSC̄I C,P° PrPsP·PēB»).

PαP°CḡPjP°PePsPeC-PSPμC,PēPeP°.

Ph̄P±CÍPsCḡP±C†C-C̄I.

PḡPμPrC-P°PSP° C†P°CÍCf PrPs PrPsCÍC̄IPiPSPμPSPSC̄I PjP°PeCÍPēPjP°P»CH̄PSPsC—
PePsPSC†PμPSC,CḡP°C†C-C— Cf P̄P»P·PjC- PeCḡPsPIC- PīC-CÍP»C̄I
P±P°PiP°C,PsPeCḡP°C,PSPsPiPs P̄PμCḡPsCḡP°P»CH̄PSPsPiPs PīCḡPēPNḡPsPjCf
C,PμCḡPēC„P»CfPSPsPjC-PrCf CÍC,P°PSPsPIPēC,CH̄ PIC-Pr 1 PrPs 4 PiPsPrPēPS PīC-CÍP»C̄I
P·P°CÍC,PsCÍCfPIP°PSPSC̄I PrPsP·Pē; P±C-PsPrPsCÍC,CfP̄PSC-CÍC,CH̄ PīCḡPμP̄P°CḡP°C,Cf
C” PIPēCÍPsPePsCḡ (P±P»PēP·CH̄PePs 100 %).

P†P̄P° PSPμ C†PēPSPēC,CH̄ PeP»C-PSC-C†PSPs P·PSP°C†CfC%PsPiPs PIP̄P»PēPICf PSP°
C„P°CḡPjP°PePsPeC-PSPμC,PēPeCf C,PμCḡPēC„P»CfPSPsPjC-PrCf.

PḡP° PsCÍPSPsPIC- CÍPμCḡPμPrPSC-C... PīCḡPsPiPSPsP·PsPIP°PSPēC...
C„P°CḡPjP°PePsPeC-PSPμC,PēC†PSPēC... P̄PsPeP°P·PSPēPeC-PI, PsP±C†PēCÍP»PμPSPēC... P·P°
CḡPμP·CfP»CH̄C,P°C,P°PjPē P̄PsPīCfP»C̄IC†C-PNḡPSPsPiPs
C„P°CḡPjP°PePsPeC-PSPμC,PēC†PSPsPiPs P°PSP°P»C-P·Cf (PμPsP̄PαPḡ) P·
PIPēPePsCḡPēCÍC,P°PSPSC̄IPj PrP°PSPēC... C%PsPrPs P·PrPsCḡPsPIPēC...
PrPsP±CḡPsPiPsP»CH̄C†C-PI C,P° P̄P°C†C-C”PSC,C-PI P· P PŸ, CḡC-PIPSPsPIP°P̄PSP°
PePsPSC†PμPSC,CḡP°C†C-C̄I PīCḡPμP̄P°CḡP°C,Cf PrPsCÍC̄IPiP°C”C,CH̄CÍC̄I
P̄PsPIC-P»CH̄PSPs (PīCḡPēP±P»PēP·PSPs PīCḡPsC,C̄IPiPsPj 100 PrPSC-PI, 3,5 PjC-CÍC̄IC†C̄I,
PrPs PrPsCÍC̄IPiPSPμPSPSC̄I 95 % CḡC-PIPSPsPIP°P̄PSPsC— PePsPSC†PμPSC,CḡP°C†C-C—),
P° CḡPsP·CḡP°C...PsPIP°PSPμ PIC-PrPSPsCēPμPSPSC̄I PeCfPjCfP»C̄IC†C-C— AUC
CÍC,P°PSPsPIPēC,CH̄ PīCḡPēP±P»PēP·PSPs 34.

P PsP·P̄PsPrC-P».

PŸPμCḡPēC„P»CfPSPsPjC-Pr P·PSP°C†PSPsCḡ PjC-CḡPsCḡ P·PIbḡ™ C̄IP·CfC”C,CH̄CÍC̄I P·
P±C-P»PeP°PjPē P̄P»P°P·PjPē PeCḡPsPIC- (> 99 %), C-PjPsPIC-CḡPSPs, P·
P°P»CH̄P±CfPjC-PSPsPj, C- CḡPsP·P̄PsPrC-P»C̄IC”C,CH̄CÍC̄I P̄PμCḡPμPIP°P̄PSPs Cf
P̄P»P°P·PjC-. Ph̄P±bḡ™ C”Pj CḡPsP·P̄PsPrC-P»Cf PīC-CÍP»C̄I PsPrPSPsPeCḡP°C,PSPsPiPs
PIPSCfC,CḡC-CēPSCḡPsPIPμPSPSPsPiPs PIPiPμPrPμPSPSC̄I PīCḡPμP̄P°CḡP°C,Cf
CÍC,P°PSPsPIPēC,CH̄ 11 P». PμCḡPsC,Pμ C†PμPNḡ CḡC-PIPμPSCḡ,
PSP°PNḡC-PjPsPIC-CḡPSC-CēPμ, C” P·P°PSPēP̄PμPSPēPj, PsCÍPeC-P»CH̄PePē Cf C%CfCḡC-PI
CÍP̄PsCÍC,PμCḡC-PiP°PICÍC̄I P·PSP°C†PSPēPNḡ CḡPsP·P̄PsPrC-P» PI PsCḡPiP°PSPē.

P’C-PsC,CḡP°PSCÍC„PsCḡPjP°C†C-C̄I

PŸPμCḡPēC„P»CfPSPsPjC-Pr P̄PsPjC-CḡPSPs PjPμC,P°P±PsP»C-P·CfC”C,CH̄CÍC̄I C- C”
C”PrPēPSPsCḡ CÍP̄PsP»CfPePsCḡ, C%Ps PIPēC̄IPiP»C̄IC”C,CH̄CÍC̄I Cf P̄P»P°P·PjC-
PeCḡPsPIC-. Ph̄CÍPSPsPIPSPēPj CēP»C̄IC...PsPj P±C-PsC,CḡP°PSCÍC„PsCḡPjP°C†C-C—
C,PμCḡPēC„P»CfPSPsPjC-PrCf C” PīC-PrCḡPsP»C-P.; PjPμPSCē P·PSP°C†CfC%PēPj

СѢР»СІІС...PsPj вѢ“ PsPePѢСІР»PμPSPSCІІ. Р”СѢСІРiPsСѢСІІРPSC- PjPμC,Р°Р±PsP»C-С±PSC-
СѢР»СІІС...PѢ PIPeP»СѢС±Р°СѢС,СѢ PsPePѢСІР»PμPSPSCІІ, N-Р°С†PμC,PѢP»СѢPIР°PSPSCІІ
C,Р° СІСІР»СѢС,,Р°C,PSPμ PePsPSвѢ™ СѢPiСІРIP°PSPSCІІ.

P•P»C-PjC-PSP°С†C-СІІ.

PŷPμСѢPѢC,,P»СІРPSPsPjC-Pr PμPeСІРPeСѢPμC,СІС”C,СѢСІСІІ СІ СѢР»СІРPSPePsPIPs-
PePѢСѢPePsPIPѢP№ C,СѢР°PeC, PiPμСѢPμPIР°P¶PSPs P· P¶PsPIC±СѢ СІ PIPѢPiP»СІІРC-
PSPμP·PjC-PSPμPSPsC— PrC-СѢС±PsC— СѢPμC±PsPIPѢPSPѢ, PSP°P№P±C-P»СѢСѢ
C-PjPsPIC-СѢPSPs, СѢР»СІІС...PsPj PiСѢСІІPjPsC— СІРμPeСѢPμC†C-С—.
PŷPμСѢPѢC,,P»СІРPSPsPjC-Pr C” СІСІР±СІС,СѢР°C,PsPj PμC,,P»СѢPeСІРPSPsPiPs
C,СѢР°PSCІРiPsСѢС,PμСѢР° P’CRP, C%oPs PjPsP¶Pμ P±СѢР°C,PѢ СІС±Р°СІС,СѢ СІ
PiСѢСІІPjC-P№ СІРμPeСѢPμC†C-С—. PμСѢPsC,СІPiPsPj 21-PiPs PrPSCІІ 60,1 %
PIPIРμPrPμPSPsC— PrPsP·PѢ PμPeСІРPeСѢPμC,СІС”C,СѢСІСІІ P· PeP°P»PsPj (37,5 %) C,Р°
СІРμC±PμСѢ (22,6 %). PμC-СІР»СІІ PiСѢPsC†PμPrСІСѢPѢ СѢPIPѢPrPePsPiPs
PIPѢPIРμPrPμPSPSCІІ P· PIPѢPePsСѢPѢСІС,Р°PSPSCІІPj C...PsP»PμСІС,PѢСѢР°PjC-PSCІ
PIPѢPIPsPrPѢC,СѢСІСІІ C%oPμ 23,1 % (PiPμСѢPμPIР°P¶PSPs P· PeP°P»PsPj). P—Р°
СѢPμP·СІР»СѢС,Р°C,Р°PjPѢ C-PSPPrPѢPIC-PrСІР°P»СѢPSPsPiPs PiСѢPsPiPSPsP·СІ
C,,Р°СѢPjP°PePsPeC-PSPμC,PѢС±PSPѢC... PiPsPeP°P·PSPѢPeC-PI P·
PIPѢPePsСѢPѢСІС,Р°PSPSCІІPj PμPsPiP¶Pъ PjPsPrPμP»C- C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ, СІ
P·PrPsСѢPsPIPѢC... PrPsP±СѢPsPIPsP»СѢС†C-PI C,Р° PiР°С†C-С”PSC,С-PI P· P Pŷ
PjPμPrC-P°PSP° C,PμСѢPjC-PSP°P»СѢPSPsPiPs PiPμСѢC-PsPrСІ
PSP°PiC-PIPIPѢPIРμPrPμPSPSCІІ (t_{1/2z}) СІС,Р°PSPsPIPѢP»P° PiСѢPѢP±P»PѢP·PSPs 19 PrPSC-PI
PiC-СІР»СІІ P±P°PiР°C,PsPeСѢР°C,PSPsPiPs PiСѢPѢP№PsPjСІ PiСѢPμPiР°СѢР°C,СІ СІ PrPsP·C-
14 PjPi. PμC-СІР»СІІ PsPrPSPsPeСѢР°C,PSPsPiPs PIPSCІC,СѢC-СѢPSCѢPsPIPμPSPSPsPiPs
PIPIРμPrPμPSPSCІІ P·Р°PiР°P»СѢPSPѢP№ PeP»C-СѢPμPSCІ C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ
СІС,Р°PSPsPIPѢC,СѢ 30,5 PjP»/PiPsPr.

PμСѢPsC†PμPrСІСѢР° PiСѢPѢСІРPePsСѢPμPSPsPiPs PIPѢPIРμPrPμPSPSCІІ:
C...PsP»PμСІС,PѢСѢР°PjC-PS C,Р° P°PeC,PѢPIPsPIР°PSPμ PICІPiC-P»P»СІІ.

P’PѢPIРμPrPμPSPSCІІ C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ P· PeСѢPsPIPsPsP±C-PiСІ PjPsP¶PSP°
PiСѢPѢСІРPePsСѢPѢC,PѢ, P·Р°СІС,PsСІСІРIP°PICѢPѢ C...PsP»PμСІС,PѢСѢР°PjC-PS P°P±Ps
P°PeC,PѢPIPsPIР°PSPμ PICІPiC-P»P»СІІ, СІPeC-, СІPe PIPIР°P¶P°C”C,СѢСІСІІ,
P±P»PsPeСІСѢС,СѢ PiСѢPsC†PμСІРѢ СѢPμP°P±СІРPsСѢP±С†C-С— PI PePѢСѢPμC±PSPѢPeСІ.
PъPsPSC†PμPSC,СѢР°С†C-С— C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ, СІPeC-
PIPѢP·PSP°С±Р°P»PѢСІСІІ PiC-Pr C±Р°СІ 11-PrPμPSPSPsC— PiСѢPsC†PμPrСІСѢPѢ
PiСѢPѢСІРPePsСѢPμPSPSCІІ PIPѢPIРμPrPμPSPSCІІ C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ P·
PiСѢPѢP№PsPjPsPj 8 Pi C...PsP»PμСІС,PѢСѢР°PjC-PSCІ C,СѢPѢС±C- PSP° PrPsP±СІ, 4 Pi
C...PsP»PμСІС,PѢСѢР°PjC-PSCІ C,СѢPѢС±C- PSP° PrPsP±СІ P°P±Ps 50 Pi
P°PeC,PѢPIPsPIР°PSPsPiPs PICІPiC-P»P»СІІ PrPIC-С±C- PSP° PrPsP±СІ PiC-СІР»СІІ
PiСѢPѢPiPѢPSPμPSPSCІІ P»C-PeСІРIP°PSPSCІІ C,PμСѢPѢC,,P»СІРPSPsPjC-PrPsPj,
PiСѢPsPrPμPjPsPSCІC,СѢСІРIP°P»PѢ PμC,,PμPeC,PѢPIPSC-СІС,СѢ С†PѢC... СѢPμP¶PѢPjC-PI
PrP»СІІ PiСѢPѢСІРPePsСѢPμPSPSCІІ PIPѢPIРμPrPμPSPSCІІ C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ,
C%oPs P·Р°P±PμP·PiPμC±СІРIP°P»PѢ P·PjPμPSCѢPμPSPSCІІ PePsPSC†PμPSC,СѢР°С†C-С—
C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ СІ PiP»P°P·PjC- PeСѢPsPIC- P±C-P»СѢСѢ PSC-P¶ PSP° 98 %;
PiСѢPѢ С†СѢPsPjСІ C...PsP»PμСІС,PѢСѢР°PjC-PS PrC-СІPI СѢPIPѢPrСѢPμ, PSC-P¶
P°PeC,PѢPIPsPIР°PSPμ PICІPiC-P»P»СІІ. PμC-СІР»СІІ PIC-PrPjC-PSPѢ
C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ C,Р° PiСѢPѢP·PSP°С±PμPSPSCІІ C...PsP»PμСІС,PѢСѢР°PjC-PSCІ
СІ PrPsP·C- 8 Pi C,СѢPѢС±C- PSP° PrPsP±СІ PePsPSC†PμPSC,СѢР°С†C-С—
C,PμСѢPѢC,,P»СІРPSPsPjC-PrСІ PI PiP»P°P·PjC- PeСѢPsPIC- P·PjPμPSCѢPѢP»PѢСІСІІ PSP° 52 %
PSP° PeC-PSPμC†СѢ PrPSCІІ 1, PSP° 91 % PSP° PeC-PSPμC†СѢ PrPSCІІ 3, PSP° 99,2 % PSP°

PeC-PSPμC†CH PrPSCЦ 7 C- PSP°B 99,9 % PSP° PeC-PSPμC†CH PrPSCЦ 11. P'PēP±C-CH PsPrPSC-C"С— P· C†PēC... C,CHCHPsC... PīCHPsC†PμPrCrCH PīCHPēC†PePsCHPμPSPSCЦ PIPēPIPμPrPμPSPSCЦ PīCHPμPīP°CHP°C,Cr PIPēP·PSP°C†P°C"С,CHC†CЦ PīPμCHPμPSPsC†PēPjC-C†C,CH PīP°C†C-C"PS C,P°. PīPeC%Ps C...PsP»PμC†C,PēCHP°PjC-PS Cr PrPsP·C- 8 Pi C,CHPēC†C- PSP° PrPsP±Cr PīPμCHPμPSPsC†PēC,CHC†CЦ PīPsPīP°PSPs, PjPsP¶PSP° PīCHPēP·PSP°C†PēC,Pē C...PsP»PμC†C,PēCHP°PjC-PS Cr PrPsP·C- 4 Pi C,CHPēC†C- PSP° PrPsP±Cr. PīPe P°P»CHC,PμCHPSP°C,PēPIP° PjPsP¶Pμ C,P°PePsP¶ PIPēPePsCHPēC†C,PsPIC†PIP°C,PēC†CH P°PeC,PēPIPsPīP°PSPμ PIC†PiC-P»P»CЦ (C†C- 11 PrPSC-PI PSPμ PsP±PsPIb¶™ CЦP·PePsPIPs PjP°CHC,CH P±CrC,Pē PīPsC†P»C-PrPsPIPSPēPjPē, CЦPeC%Ps PSPμPjP°C" PīPsC,CHPμP±Pē Cr CēPIPēPrPePsPjCr P·PSPēP¶PμPSPSC- PePsPSC†PμPSC,CHP°C†C-С— C,PμCHPēC,,P»CrPSPsPjC-PrCr Cr PīP»P°P·PjC- PeCHPsPIC-).

P»C-PSC-PN₂PSC-C†C,CH/PSPPμP»C-PSC-PN₂PSC-C†C,CH.

PŸPēC†C,PμPjPSP° PμPeC†PīPsP·PēC†C-Ц PīC-C†P»CЦ PīPμCHPsCHP°P»CHPSPsPiPs PīCHPēPN₂PsPjCr C,PμCHPēC,,P»CrPSPsPjC-PrCr PI PrPsP·P°C... PIC-Pr 7 PrPs 14 PjPi P·CHPsC†C,P°C" PīCHPsPīPsCHC†C-PN₂PSPs PrPs PrPsP·Pē.

PIP°CHP°PeC,PμCHPēC†C,PēPePē PI PsPeCHPμPjPēC... PīCHCrPīP°C... PīP°C†C-C"PS C,C-PI.

PμP°C†C-C"PS C,Pē C†PsP»PsPIC-C†PsC—/P¶C-PSPsC†PsC— C†C,P°C,C-, PīP°C†C-C"PS C,Pē P»C-C,PSCHPsPiPs PIC-PeCž. P—P° CHPμP·C†P»CHC,P°C,P°PjPē PμPsPīPαP¶ P°PSP°P»C-P·Cr Cr P·PrPsCHPsPīPēC... PrPsP±CHPsPIPsP»CHC†C-PI C,P° PīP°C†C-C"PS C,C-PI P· P PŸ PIPēCЦPIP»PμPSPs PrPμPeC-P»CHPeP° C-PSPPrPēPIC-PrCrP°P»CHPSPēC... C,,P°PeC,PsCHC-PI PIP°CHC-P°P±PμP»CHPSPsC†C,C- C,,P°CHPjP°PePsPeC-PSPμC,PēPePē PīCHPμPīP°CHP°C,Cr: PIC-Pe, PjP°C†P° C,C-P»P°, C†C,P°C,CH, CHP°C†PsPīP° PīCHPēPSP°P»PμP¶PSC-C†C,CH C,P° CHC-PIPS C-P»P»CHP±CrPjC-PS Cr C- P±C-P»C-CHCrP±C-PS Cr. PμCHPsC,Pμ PIPiP»PēPI C†PēC... C,,P°PeC,PsCHC-PI PSP° C,,P°CHPjP°PePsPeC-PSPμC,PēPeCr PīCHPμPīP°CHP°C,Cr P·P°P»PēCēP°C"С,CHC†CЦ PsP±PjPμP¶PμPSPēPj (≤ 31 %).

PμPμC†C-PSPePsPīP° PSPμPrPsC†C,P°C,PS C-C†C,CH. P»PμPiPePμ C,P° PīPsPjC-CHPSPμ PīPsCHCrCēPμPSPSCЦ C,,CrPSPeC†C-С— PīPμC†C-PSPePē PSPμ PIPiP»PēPIP°C" PSP° C,,P°CHPjP°PePsPeC-PSPμC,PēPeCr C,PμCHPēC,,P»CrPSPsPjC-PrCr. PJ P·PIb¶™ CЦP·PeCr P· C†PēPj PePsCHPμPeC†C-Ц PrPsP·Pē PrP»CЦ PīP°C†C-C"PS C,C-PI P· P»PμPiPePēPj C,P° PīPsPjC-CHPSPēPj PīPsCHCrCēPμPSPSCЦPj C,,CrPSPeC†C-С— PīPμC†C-PSPePē PSPμ PīPμCHPμPrP±P°C†PμPSP°. PμCHPsC,Pμ C,PμCHPēC,,P»CrPSPsPjC-Pr PīCHPsC,PēPīPsPeP°P·P°PSPēPN₂ PīP°C†C-C"PS C,P°Pj P· C,CЦP¶PePsCH PīPμC†C-PSPePsPIPsCH PrPēC†C,,CrPSPeC†C-C"CH (PrPēPI. CHPsP·PrC-P»Pē B«PŸPīPsC†C-P± P·P°C†C,PsC†CrPīP°PSPSCЦ C,P° PrPsP·PēB» C,P° B«PμCHPsC,PēPīPsPeP°P·P°PSPSCЦB»).

PkPēCHPePsPīP° PSPμPrPsC†C,P°C,PS C-C†C,CH. PŸCЦP¶PePμ PīPsCHCrCēPμPSPSCЦ C,,CrPSPeC†C-С— PSPēCHPsPe PSPμ PIPiP»PēPIP°C" PSP° C,,P°CHPjP°PePsPeC-PSPμC,PēPeCr C,PμCHPēC,,P»CrPSPsPjC-PrCr. PJ P·PIb¶™ CЦP·PeCr P· C†PēPj PePsCHPμPeC†C-Ц PrPsP·Pē PrP»CЦ PīP°C†C-C"PS C,C-PI P· P»PμPiPePēPj, PīPsPjC-CHPSPēPj C,P° C,CЦP¶PePēPj PīPsCHCrCēPμPSPSCЦPj C,,CrPSPeC†C-С— PSPēCHPsPe PSPμ PīPμCHPμPrP±P°C†PμPSP°.

P"С-C,Pē

PJ PrC-C,PμPN₂ P· PjP°C†PsCH C,C-P»P° PīPsPSP°Pr 40 PePi, CЦPeC- PsC,CHPēPjCrPīP°P»Pē 14 PjPi PSP° PrPsP±Cr, CHC-PIPS PīP°P¶PSP° PePsPSC†PμPSC,CHP°C†C-Ц P·PSP°C...PsPrPēP»P°C†CЦ Cr PrC-P°PīP°P·PsPSC-, CЦPePēPN₂ C†PīPsC†C,PμCHC-PiP°PIC†CЦ Cr PrPsCHPsC†P»PēC... PīP°C†C-C"PS C,C-PI, C%Ps PsC,CHPēPjCrPīP°P»Pē C,P°PePēPN₂

[illegible]

PhP·PSP°Pe PeP°PSC†PμCḡPsPiPμPSPSPsCÍC,C- PíCḡPμPíP°CḡP°C,Cr Cr C%oCrCḡC-PI C,P°
PjPëC€PμPN₂ PSPμ PIPëCḤPIP»PμPSPs.

P P_uPiC₇PsPrC₇PeC,PëPIPSP° C,PsPeC₇PëC₇PSC-C₇C,CH

PæPµCḤC,PëP»CHÞPSC-CŦC,CḤ Cř C%oCrĈḤC-PI PSPµ P·P·PSP°PIP°P»P° P·PjC-PS,
PSPµP·PIP°P¶P°CḤC±Pë PSP° PSPµP±P°P¶P°PSPëPNē PIPiP»PëPI C,PµCḤPëC,,P»CřPSPsPjC-PrCř
PSP° CḤPµPiCḤPsPrCřPeC,PëPIPSC- PsCḤPiP°PSPë CŦP°PjC†C-PI, Cř C,PsPjCř C±PëCŦP»C-
P·PjPµPSC€PµPSPSCŬ PeC-P»CHÞPePsCŦC,C- CŦPiPµCḤPjP°C,PsP·PsC—PrC-PI. Pj
PiPsC,PsPjCŦC,PIP° CŦP°PjC†C-PI C%oCrĈḤC-PI, CŬPePëPj C,PµCḤPëC,,P»CřPSPsPjC-Pr
PIPIPsPrPëP»Pë PrPs CŦPiP°CḤCḤPIP°PSPSCŬ P· C-PSC,P°PeC,PSPëPjPë CŦP°PjPeP°PjPë, PSPµ
CŦPiPsCŦC,PµCḤC-PiP°P»PsCŦCḤ P·PsPIPSC-C€PSC-C... PIP°Pr CḤPsP·PIPëC,PeCř.
PyPµCḤPëC,,P»CřPSPsPjC-Pr P±CřPI PµPjP±CḤC-PsC,PsPeCŦPëC±PSPëPj Cř C%oCrĈḤC-PI C,P°
PeCḤPsP»C-PI PiCḤPë P·P°CŦC,PsCŦCřPIP°PSPSC- Cř PrPsP·P°C..., C%oPs
P·PSP°C...PsPrCŬC,CḤCŦCŬ PI PjPµP¶P°C... C,PµCḤP°PiPµPIC,PëC±PSPsPiPs
PrC-P°PiP°P·PsPSCř PrP»CŬ P·P°CŦC,PsCŦCřPIP°PSPSCŬ P»CḤPrPëPSC-. PµCḤPë
PrPIPµPrPµPSPSC- C,PµCḤPëC,,P»CřPSPsPjC-PrCř PIP°PiC-C,PSPëPj CŦP°PjPeP°Pj C%oCrĈḤC-PI
PIPiCḤPsPrPsPIP¶ PiPµCŦC,P°C†C-C— C,P° PiC-Pr C±P°CŦ P»P°PeC,P°C†C-C— C,P°PePsP¶
CŦPiPsCŦC,PµCḤC-PiP°PICŦCŬ PSPµP±P°P¶P°PSPëPNē PIPiP»PëPI PSP° PiPsC,PsPjCŦC,PIPs.
P PëP·PëPe PµPjP±CḤC-PsC,,PµC,P°P»CHÞPSPsC— C,PsPeCŦPëC±PSPsCŦC,C- Cř
CḤPµP·CřP»CHÞC,P°C,C- PiCḤPëPNēPsPjCř C,PµCḤPëC,,P»CřPSPsPjC-PrCř P±P°C,CHÞPePsPj
PrPëC,PëPSPë PIPIP°P¶P°C”C,CḤCŦCŬ PSPëP·CHÞPePëPj. ÞḤC±C-PeCřC”C,CḤCŦCŬ, C%oPs
CḤPsP·CḤP°C...PsPIP°PSP° PiP»P°P·PjPsPIP° PµPeCŦPiPsP·PëC†C-CŬ Cř P¶C-PSPsPe PI
CḤPµP·CřP»CHÞC,P°C,C- PiPµCḤPµPrP°C±C- PiCḤPµPiP°CḤP°C,Cř C±PµCḤPµP· CŦC-PjBḤ™ CŬ
PiP°C†C-C”PSC,P°, CŬPePëPNē PsC,CḤPëPjCřC” P»C-PeCřPIP°PSPSCŬ PiCḤPµPiP°CḤP°C,PsPj,
P±CřPrPµ CřB 100 CḤP°P·C-PI PSPëP¶C±PsCḤ, PSC-P¶ PiP»P°P·PjPsPIP° PµPeCŦPiPsP·PëC†C-CŬ
PiC-CŦP»CŬ PiPµCḤPsCḤP°P»CHÞPSPsPiPs PiCḤPëPNēPsPjCř 14 PjPi
C,PµCḤPëC,,P»CřPSPsPjC-PrCř.

P®PIPμPSC-P»CHbPSP° C,PsPeCfPëC±PSC-CfC,CHb

PJ PjPsP»PsPrPëC... C‰CřCĤC-PI, CĹPeC- PsC,CĤPëPjCřPIP°P»Pë C,PµCĤPëC„P»CřPSPsPjC-Pr PiPµCĤPsCĤP°P»CHPSPs PiCĤPsC,CĹPiPsPj 7 C,PëP¶PSC-PI P· PjPsPjPµPSC,Cř PIC-PrP»CřC‡PµPSPSCĹ PIC-Pr PiCĤCřPrPSPsPiPs PIPëPiPsPrPsPICřPIP°PSPSCĹ C,P° PrPs PrPsCřCĹPiPSPµPSPSCĹ P·CĤC-P»PsPiPs PIC-PeCř, PSPµ PIPëCĹPIPëP»Pë PSPµCřPiCĤPëCĹC,P»PëPIPsPiPs PIPiP»PëPICř PSP° P·CĤPsCřC,P°PSPSCĹ, C„C-P·PëC‡PSPëPNë P°P±Ps PSPµPICĤPsP»PsPiC-C‡PSPëPNë CĤPsP·PIPëC,PsPe, P·PrP°C,PSC-CřC,CH PrPs PSP°PIC‡P°PSPSCĹ C,P° PiP°PjBĤ™ CĹC,CH, CĤCřC...PsPICř P°PeC,PëPIPSC-CřC,CH, CřC,P°C,PµPIPëPNë CĤPsP·PIPëC,PsPe P°P±Ps C„PµCĤC,PëP»CHPSC-CřC,CH. PkPµP±P°P¶P°PSC- CĹPIPëC‰P° PIPeP»CĤC‡P°P»Pë P°PSPµPjC-CĤ, P·PSPëP¶PµPSPSCĹ P»C-PjC„PsC—PrPSPsC— C‡CřC,P»PëPIPsCřC,C-, PrPsP·PsP·P°P»PµP¶PSPµ P·PSPëP¶PµPSPSCĹ Pÿ-PeP»C-C,PëPSPsP·P°P»PµP¶PSPsC— PIC-PrPiPsPIC-PrC- P°PSC,PëC,C-P» C,P° P·PSP°C‡PSPµ P·PSPëP¶PµPSPSCĹ PePsPSC‡PµPSC,CĤP°C‡C-PNë IgM C- IgG, C‰Ps P·P°PiP°P»PsPj P·P±C-PiP°P»PsCřCĹ P·C- CřPiPsCřC,PµCĤPµP¶PµPSPSCĹPjPë Pi PrPsCřP»C-PrP¶PµPSPSCĹC... C,PsPeCřPëC‡PSPsCřC,C- P·P°CřC,PsCřCřPIP°PSPSCĹPj PiPsPIC,PsCĤPSPëC... PrPsP· Cř PrPsCĤPsCřP»PëC... C‰CřCĤC-PI. PhPrPSP°Pe P·P±C-P»CHC€PµPSPSCĹ PeC-P»CHPePsCřC,C- P'-PeP»C-C,PëPS, CĹPePµ CřPiPsCřC,PµCĤC-PiP°P»PsCřCĹ Cř PjPsP»PsPrPëC... C‰CřCĤC-PI, Cř PrPsCĤPsCřP»PëC...

C%oCfC7C-PI P±CfP»Ps PIC-PrCfCfC,PSC". P—PSP°C±CfC%oC-CfC,CH C†C-C"C—
C7C-P·PSPëC†C- PSPµPIC-PrPsPjP°, P°P»Pµ P±CfP»P° PiC7PsPrPµPjPsPSCfC,C7PsPIP°PSP°
PiPsPIPSP° C—C— PsP±PsC7PsC,PSC-CfC,CH, C¶Pe C- PrP»C¶ P±C-P»CHCëPsCfC,C-
C-PSCëPëC... PIPëCfPSPsPIPeC-PI. P§PµC7PµP· PIPëCfPsPeCf C±CfC,P»PëPIC-CfC,CH
C,PIP°C7PëPS PrPs C,PµC7PëC„P»CfPSPsPjC-PrCf PjPsP»PsPrC- C%oCfC7Pë
P·P°P·PSP°PIP°P»Pë PIPiP»PëPICf PSPëP¶C±PëC... C7C-PIPS-PI, PSC-P¶ PrC-C,Pë PiC7Pë
PjP°PeCfPëPjP°P»CHPSC-PNë C7PµPePsPjPµPSPPrPsPIP°PSC-PNë PrPsP·C- PrP»C¶ P»C7PrPëPSPë
(P7P P"P»).

P7P»C-PSC-C±PSC- C...P°C7P°PeC,PµC7PëCfC,PëPePë.

PµPsPeP°P·P°PSPSC¶.

PµC7PµPiP°C7P°C, PhP±P°PrP¶C-Ps^{B®} PiPsPeP°P·P°PSPëPNë PrP»C¶ P»C-PeCfPIP°PSPSC¶
PrPsC7PsCfP»PëC... PiP°C†C-C"PSC,C-PI C,P° PrC-C,PµPNë PIC-PePsPj PIC-Pr 10 C7PsPeC-PI P·
C7PµC†PëPrPëPICfC7C±Ps-C7PµPjC-C,CfC7C±PëPj C7PsP·CfC-C¶PSPëPj CfPeP»PµC7PsP·PsPj
(P PŸ) (Cf C7PsP·PrC-P»C- B«PαP°C7PjP°PePsPrPëPSP°PjC-PeP°B» PSP°PIPµPrPµPSP°
PIP°P¶P»PëPIP° C-PSC„PsC7PjP°C†C-C¶ PiC7Ps PiPsPiCfP»C¶C†C-C7 PiP°C†C-C"PSC,C-PI,
PrP»C¶ C¶PePsC— P±CfP»P° PIPëP·PSP°C±PµPSP° PµC„PµPeC,PëPIPS-CfC,CH
P»C-PeCfPIP°PSPSC¶).

PµC7PsC,PëPiPsPeP°P·P°PSPSC¶.

P"C-PiPµC7C±CfC,P»PëPIC-CfC,CH PrPs PrC-C7C±PsC— C7PµC±PsPIPëPSPë P°P±Ps PrPs
P±CfPrCH-C¶PePsC— P· PrPsPiPsPjC-P¶PSPëC... C7PµC±PsPIPëPS, PiPµC7PµP»C-Pe C¶PePëC...
PSP°PIPµPrPµPSPs Cf C7PsP·PrC-P»C- B«PŸPeP»P°PrB».

PŸC¶P¶PePµ PiPsC7CfCëPµPSPSC¶ C„CfPSPeC†C-C— PiPµC±C-PSPëPë (PeP»P°Cf PŸ P·P° P·
PeP»P°CfPëC„C-PeP°C†C-C"C7 P§P°PNëP»PrP°-PµB7™ C7).

P'P°PiC-C,PSC-CfC,CH. P-C-PSPëPë C7PµPiC7PsPrCfPeC,PëPIPSsPiPs PIC-PeCf
PiPsPIPëPSPSC- PIPëPePsC7PëCfC,PsPICfPIP°C,Pë PSP°PrC-PNëPSC- PjPµC,PsPrPë
PePsPSC,C7P°C†PµPiC†C-C— PiC-Pr C±P°Cf P»C-PeCfPIP°PSPSC¶
C,PµC7PëC„P»CfPSPsPjC-PrPsPj C- PiC-CfP»C¶ PNëPsPiPs P·P°PeC-PSC±PµPSPSC¶, PiPsPePë
C7C-PIPµPSC7 PiC7PµPiP°C7P°C,Cf Cf PiP»P°P·PjC- PeC7PsPIC- P·P°P»PëCëP°C"C,CHCfC¶
PIPëC%oPµ 0,02 PjPi/P» (PrPëPI. C7PsP·PrC-P» B«P—P°CfC,PsCfCfPIP°PSPSC¶ Cf PiPµC7C-PsPr
PIP°PiC-C,PSPsCfC,C- P°P±Ps PiPsPrCfPIP°PSPSC¶ PiC7CfPrPrC7B»). PkPµPsP±C...C-PrPSPs
PIPëPeP»C7C±PëC,Pë PIP°PiC-C,PSC-CfC,CH PrPs PiPsC±P°C,PeCf P»C-PeCfPIP°PSPSC¶
PiC7PµPiP°C7P°C,PsPj (PrPëPI. C7PsP·PrC-P» B«P—P°CfC,PsCfCfPIP°PSPSC¶ Cf PiPµC7C-PsPr
PIP°PiC-C,PSPsCfC,C- P°P±Ps PiPsPrCfPIP°PSPSC¶ PiC7CfPrPrC7B»).

PµPµC7C-PsPr PiPsPrCfPIP°PSPSC¶ PiC7CfPrPrC7 (PrPëPI. C7PsP·PrC-P»
B«P—P°CfC,PsCfCfPIP°PSPSC¶ Cf PiPµC7C-PsPr PIP°PiC-C,PSPsCfC,C- P°P±Ps
PiPsPrCfPIP°PSPSC¶ PiC7CfPrPrC7B»).

PŸC¶P¶PeC- C-PjCfPSPsPrPµC„C-C†PëC,PSC- CfC,P°PSPë, PSP°PiC7PëPeP»P°Pr
CfPëPSPPrC7PsPj PSP°P±CfC,PsPiPs C-PjCfPSPsPrPµC„C-C†PëC,Cf (PŸPkP†P").

P—PSP°C±CfC%oC- PiPsC7CfCëPµPSPSC¶ C„CfPSPeC†C-C— C±PµC7PIPSPsPiPs

PeC-CrC,PePsPIPsPiPs PjPsP·PeCr P°P±Ps P·PSP°C±CrC%°P° P°PSPµPjC-CI, P»PµPNεPePsPiPµPSC-CI, PSPµPNεC,CḡPsPiPµPSC-CI P°P±Ps C,CḡPsPjP±PsC†PëC,PsPiPµPSC-CI.

PÿCIP¶PeP° P°PeC,PëPIPSP° C-PSC,,PµPeC†C-CI, PrPs PsPrCrP¶P°PSPSCII (PrPëPI. CḡPsP·PrC-P» B«PhCrPsP±P»PëPIPsCrC,C- P·P°CrC,PsCrCrPIP°PSPSCII»).

PÿCIP¶PePµ PiPsCḡCrC€PµPSPSCII C,,CrPSPeC†C-C— PSPëCḡPsPe, C%°Ps PiPsC,CḡPµP±CrC” PrC-P°P»C-P·Cr, PsCrPeC-P»CHPePë PrPsCrPIC-Pr PeP»C-PSC-C±PSPsPiPs P·P°CrC,PsCrCrPIP°PSPSCII PiCḡPµPiP°CḡP°C,Cr P·P° C,P°PePëC... PsP±CrC,P°PIPëPS PSP°CḡP°P·C- PSPµPrPsCrC,P°C,PSC-PNε.

PÿCIP¶PeP° PiC-PiPsPiCḡPsC,PµC—PSPµPjC-CI, PSP°PiCḡPëPeP»P°Pr, PiCḡPë PSPµC,,CḡPsC,PëC±PSPsPjCr CrPëPSPPrCḡPsPjC-.

P·P·P°C”PjPsPrC-CI P· C-PSC€PëPjPë P»C-PeP°CḡCrCHPePëPjPë P·P°CrPsP±P°PjPë C,P° C-PSC€C- PIPëPrPë PIP·P°C”PjPsPrC-PNε.

P—CrPjPsPIP»PµPSPëPNε C,,P°CḡPjP°PePsPeC-PSPµC,PëC±PSPsCḡ PIP·P°C”PjPsPrC-C”Cḡ PIPiP»PëPI C-PSC€PëC... CḡPµC±PsPIPëPS PSP° C,PµCḡPëC,,P»CrPSPsPjC-Pr.

PhCrPSPsPIPSPëPj C€P»CII C...PsPj P±C-PsC,CḡP°PSCrC,,PsCḡPjP°C†C-C— C,PµCḡPëC,,P»CrPSPsPjC-PrCr C” PiC-PrCḡPsP»C-P·, PjPµPSC€ P·PSP°C±CrC%°PëPj C€P»CII C...PsPj бḡ” PsPePëCrP»PµPSPSCII.

PµPsC,C¿P¶PSC- C-PSPrC¿PeC,PsCḡPë C†PëC,PsC...CḡPsPjC¿ P 450 (CYP) C- C,CḡP°PSCrPiPsCḡC,PµCḡC-PI. PµCḡPë PsPrPSPsC±P°CrPSPsPjCr P±P°PiP°C,PsPeCḡP°C,PSPsPjCr PIPiPµPrPµPSPSC- (600 PjPi PsPrPëPS CḡP°P· PSP° PrPsP±Cr PiCḡPsC,CII PiPsPj 22 PrPSC-PI) CḡPëC,,P°PjPiC-C†PëPSCr (C-PSPrCrPeC,PsCḡ CYP2B6, 2C8, 2C9, 2C19, 3A), C%°Ps C,P°PePsP¶ C” C-PSPrCrPeC,PsCḡPsPj PµC,,P»CHPeCrPSPëC... C,CḡP°PSCrPiPsCḡC,PµCḡC-PIB P - PiP»C-PePsPiCḡPsC,PµC—PSCr [P-gp] C,P° P±C-P»PeP° CḡPµP·PëCrC,PµPSC,PSPsCrC,C- CḡP°PeCr PjPsP»PsC±PSPsC— P·P°P»PsP·Pë [breast cancer resistant protein, BCRP], C- P·P°CrC,PsCrCrPIP°PSPSC- C,PµCḡPëC,,P»CrPSPsPjC-PrCr (PsPrPSPsPeCḡP°C,PSPëPNε PiCḡPëPNεPsPj Cr PrPsP·C- 70 PjPi) CrPiPsCrC,PµCḡC-PiP°P»PsCrCH P·PjPµPSC€PµPSPSCII PµPeCrPiPsP·PëC†C-C— C,PµCḡPëC,,P»CrPSPsPjC-PrCr PiCḡPëP±P»PëP·PSPsB PSP° 40 %. P PëC,,P°PjPiC-C†PëPS C,P° C-PSC€C- PIC-PrPsPjC- PiPsC,CrP¶PSC- C-PSPrCrPeC,PsCḡPë CYP C- C,CḡP°PSCrPiPsCḡC,PµCḡC-PI, C,P°PeC- CII Pe PeP°CḡP±P°PjP°P·PµPiC-PS, C,,PµPSPsP±P°CḡP±C-C,P°P», C,,PµPSC-C,PsC—PS C,P° P·PIC-CḡPsP±C-PNε, PSPµPsP±C...C-PrPSPs P· PsP±PµCḡPµP¶PSC-CrC,Cḡ PIPëPePsCḡPëCrC,PsPICrPIP°C,Pë PiC-Pr C±P°Cr P»C-PeCrPIP°PSPSCII C,PµCḡPëC,,P»CrPSPsPjC-PrPsPj.

P¶PsP»PµCrC,PëCḡP°PjC-PS P°P±Ps P°PeC,PëPIPsPIP°PSPµ PIC¿PiC-P»P»CII. P PµPePsPjPµPSPrCrC”C,CHCrCI, C%°PsP± PiP°C†C-C”PSC,P°Pj, CII PeC- PsC,CḡPëPjCrCHC,CH C,PµCḡPëC,,P»CrPSPsPjC-Pr, PSPµ PiCḡPëP·PSP°C±PICrCI C...PsP»PµCrC,PëCḡP°PjC-PS P°P±Ps P°PeC,PëPIPsPIP°PSPµ PICrPiC-P»P»CII, PsCrPeC-P»CHPePë C†Pµ PiCḡPëP·PIPsPrPëC,CH PrPs C€PIPëPrPePsPiPs C,P°

CfCfC,C,C"PIPsPiPs P·PSPëP¶PµPSPSC¶ PePsPSC†PµPSC,C¶P°C†C-C—
C,PµC¶PëC,,P»CfPSPsPjC-PrCf Cf PiP»P°P·PjC- PeC¶PsPIC-, P·P° PIPëPSC¶C,PePsPj
PIPëPiP°PrPeC-PI, PePsP»Pë PiC¶PëCfPePsC¶PµPSPµ PIPëPIPµPrPµPSPSC¶
PiC¶PµPiP°C¶P°C,Cf P· PsC¶PiP°PSC-P·PjCf C" P±P°P¶P°PSPëPj. P'PIP°P¶P°C"C,CHCfC¶C¶,
C%Ps PjPµC...P°PSC-P·Pj C†CHPsPiPs PµC,,PµPeC,Cf P·CfPjPsPIP»PµPSPëPNë
PiC¶PëPiPëPSPµPSPSC¶Pj PµPSC,PµC¶PsPiPµPiP°C,PëC†PSPsC—
C¶PµC†PëC¶PeCfP»C¶C†C-C— C,PµC¶PëC,,P»CfPSPsPjC-PrCf C,P°/P°P±Ps CëP»CfPSPePsPIPs-
PePëCëPePsPIPëPj PrC-P°P»C-P·PsPj C,PµC¶PëC,,P»CfPSPsPjC-PrCf.

P—CfPjPsPIP»PµPSPëPNë C,,P°C¶PjP°PePsPeC-PSPµC,PëC†PSPsC¶ PIP·P°C"PjPsPrC-C"C¶
PIPiP»PëPI C,PµC¶PëC,,P»CfPSPsPjC-PrCf PSP° C-PSCëC- C¶PµC†PsPIPëPSPë.

P'PiP»PëPI C,PµC¶PëC,,P»CfPSPsPjC-PrCf PSP° CfCfP±CfC,C¶P°C,Pë CYP2C8:
C¶PµPiP°PiP»C-PSC-Pr. PµC-CfP»C¶ P±P°PiP°C,PsPeC¶P°C,PSPsPiPs PiC¶PëPNëPsPjCf
C,PµC¶PëC,,P»CfPSPsPjC-PrCf CfPiPsCfC,PµC¶C-PiP°P»PsCfC¶
P·P±C-P»CHCëPµPSPSC¶ CfPµC¶PµPrPSC-C... C¶C-PIPSC-PI C_{max} C- AUC
C¶PµPiP°PiP»C-PSC-PrCf (PI 1,7 C,P° 2,4 C¶P°P·P° PIC-PrPiPsPIC-PrPSPs), C%Ps
CfPIC-PrC†PëC,CH PiC¶Ps C-PSPiC-P±CfC¶PëPNë PIPiP»PëPI
C,PµC¶PëC,,P»CfPSPsPjC-PrCf PSP° CYP2C8 *in vivo*. Pj P·PIb¶™ C¶P·PeCf P· C†PëPj
P»C-PeP°C¶CfCHPeC- P·P°CfPsP±Pë, PjPµC,P°P±PsP»C-P·Pj C¶PePëC...
PsPiPsCfPµC¶PµPrPePsPICfC"C,CHCfC¶C,,PµC¶PjPµPSC,PsPj CYP2C8, C,P°PeC- C¶Pe
C¶PµPiP°PiP»C-PSC-Pr, PiP°PeP»C-C,P°PeCfPµP», PiC-PsPiP»C-C,P°P·PsPS P°P±Ps
C¶PsP·PëPiP»C-C,P°P·PsPS, PSPµPsP±C...C-PrPSPs P·P°CfC,PsCfPsPICfPIP°C,Pë P·
PsP±PµC¶PµP¶PSC-CfC,C¶ PiC-Pr C†P°Cf P»C-PeCfPIP°PSPSC¶
C,PµC¶PëC,,P»CfPSPsPjC-PrPsPj.

P'PiP»PëPI C,PµC¶PëC,,P»CfPSPsPjC-PrCf PSP° PiPµC¶PsC¶P°P»CHPSC-
PePsPSC,C¶P°C†PµPiC,PëPIPë: 0,03 PjPi PµC,PëPSC-P»PµCfC,C¶P°PrC-PsP»Cf C,P° 0,15 PjPi
P»PµPIPsPSPsC¶PiPµCfC,C¶PµP»Cf. PµC-CfP»C¶ P±P°PiP°C,PsPeC¶P°C,PSPsPiPs
PiC¶PëPNëPsPjCf C,PµC¶PëC,,P»CfPSPsPjC-PrCf CfPiPsCfC,PµC¶C-PiP°P»PsCfC¶
P·C¶PsCfC,P°PSPSC¶ CfPµC¶PµPrPSC-C... P·PSP°C†PµPSC¶ C_{max} C- AUC₀₋₂₄
PµC,PëPSC-P»PµCfC,C¶P°PrC-PsP»Cf (Cf 1,58 C,P° 1,54 C¶P°P·P° PIC-PrPiPsPIC-PrPSPs) C,P°
C_{max} C- AUC₀₋₂₄ P»PµPIPsPSPsC¶PiPµCfC,C¶PµP»Cf (PI 1,33 C,P° 1,41 C¶P°P·P°
PIC-PrPiPsPIC-PrPSPs). P¶PsC†P° PSPµP±P°P¶P°PSPsPiPs PIPiP»PëPICf C†C-C"C—
PIP·P°C"PjPsPrC-C— P· C,PµC¶PëC,,P»CfPSPsPjC-PrPsPj PSP° PµC,,PµPeC,PëPIPSC-CfC,CH
PiPµC¶PsC¶P°P»CHPSPëC... PePsPSC,C¶P°C†PµPiC,PëPIC-PI PSPµ PsC†C-PeCfC"C,CHCfC¶C¶,
PNëPsPiPs CfP»C-Pr PiC¶P°C...PsPICfPIP°C,Pë PiC¶Pë PIPëP±PsC¶C-
PiPµC¶PsC¶P°P»CHPSPsPiPs PePsPSC,C¶P°C†PµPiC,PëPICf P°P±Ps PiC-PrP±PsC¶C- PNëPsPiPs
PrPsP·Pë PiC¶Pë P·P°CfC,PsCfCfPIP°PSPSC- PI PePsPjP±C-PSP°C†C-C— P·
C,PµC¶PëC,,P»CfPSPsPjC-PrPsPj.

P'PiP»PëPI C,PµC¶PëC,,P»CfPSPsPjC-PrCf PSP° CfCfP±CfC,C¶P°C, CYP1A2: PePsC,,PµC—PS.
PµC-CfP»C¶ P±P°PiP°C,PsPeC¶P°C,PSPsPiPs PiC¶PëPNëPsPjCf C,PµC¶PëC,,P»CfPSPsPjC-PrCf
CfPiPsCfC,PµC¶C-PiP°P»PsCfC¶ P·PSPëP¶PµPSPSC¶ CfPµC¶PµPrPSC-C... P·PSP°C†PµPSC¶
C_{max} C,P° AUC PePsC,,PµC—PSCf (CfCfP±CfC,C¶P°C,Cf CYP1A2) PSP° 18 % C,P° 55 %
PIC-PrPiPsPIC-PrPSPs, C%Ps CfPIC-PrC†PëC,CH PiC¶Ps C,Pµ, C%Ps
C,PµC¶PëC,,P»CfPSPsPjC-Pr PjPsP¶Pµ P±CfC,Pë CfP»P°P±PePëPj C-PSPPrCfPeC,PsC¶PsPj
CYP1A2 *in vivo*. Pj P·PIb¶™ C¶P·PeCf P· C†PëPj P»C-PeP°C¶CfCHPeC- P·P°CfPsP±Pë,
PjPµC,P°P±PsP»C-P·Pj C¶PePëC... PsPiPsCfPµC¶PµPrPePsPICfC"C,CHCfC¶C¶
C,,PµC¶PjPµPSC,PsPj CYP1A2 (C,P°PeC- C¶Pe PrCfP»PsPeCfPµC,PëPS, P°P»PsCfPµC,C¶PsPs,

C, P_μPsC,, C-P»C-PS C, P° C, PëP·P°PSC-PrPëPS), CÍP»C-Pr P·P°CÍC, PsCÍPsPICrPIP°C, Pë P·
PsP±P_μC₇P_μP¶PSC-CÍC, C₇ PiC-Pr C‡P°CÍ P»C-PeCÍPIP°PSPSCÍ
C, P_μC₇PëC,, P»CÍPSPsPjC-PrPsPj, PsCÍPeC-P»CHPePë PIC-PS PjPsP¶P_μ P·CÍPjPsPIPëC, Pë
P·PSPëP¶P_μPSPSCÍ P_μC,, P_μPeC, PëPIPSPsCÍC, C- C‡PëC... PiC₇P_μPiP°C₇P°C, C-PI.

P'PiP»PëPI C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ PSP° PIP°C₇C,, P°C₇PëPS. P_μC-CÍP»CÍ
P±P°PiP°C, PsPeC₇P°C, PSPsPiPs PiC₇PëPM₂PsPjCÍ C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ PSP_μ
CÍPiPsCÍC, P_μC₇C-PiP°P»PsCÍCÍ PIPiP»PëPICr PSP° C,, P°C₇PjP°PePsPeC-PSP_μC, PëPeCÍ S-
PIP°C₇C,, P°C₇PëPSCr, C%₀Ps CÍPIC-PrC‡PëC, CH PiC₇Ps C, P_μ, C%₀Ps
C, P_μC₇PëC,, P»CÍPSPsPjC-Pr PSP_μ C" P°PSC- C-PSPiC-P±C-C, PsC₇PsPj, P°PSC-
C-PSPrCÍPeC, PsC₇PsPj CYP2C9. P_μC₇PsC, P_μ PiC₇Pë PsPrPSPsC‡P°CÍPSPsPjCÍ
P·P°CÍC, PsCÍCÍPIP°PSPSC- C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ C- PIP°C₇C,, P°C₇PëPSCr
PIC-PrP·PSP°C‡P°P»PsCÍCÍ P·PSPëP¶P_μPSPSCÍ PjP°PeCÍPëPjP°P»CHPSPsPiPs
PjC-P¶PSP°C₇PsPrPSPsPiPs PSPsC₇PjP°P»C-P·PsPIP°PSPsPiPs PIC-PrPSPsC€P_μPSPSCÍ (P_hP_kP')
PSP° 25 % PiPsC₇C-PIPSCÍPSPs P· C, P°PePëPj PSP° C,, PsPSC- PjPsPSPsC, P_μC₇P°PiC-C—
PIP°C₇C,, P°C₇PëPSPsPj. Pj P·PiB₇TM CÍP·PeCÍ P· C‡PëPj PiC₇Pë PsPrPSPsC‡P°CÍPSPsPjCÍ
PiC₇PëPM₂PsPjC- PIP°C₇C,, P°C₇PëPSCr P· C, P_μC₇PëC,, P»CÍPSPsPjC-PrPsPj
C₇P_μPePsPjP_μPSPrCÍC" C, CHCÍCÍ C₇P_μC, P_μP»CHPSPëPM₂ PePsPSC, C₇PsP»CH C-
PjPsPSC-C, PsC₇PëPSi P_hP_kP'.

P'PiP»PëPI C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ PSP° CÍCÍP±CÍC, C₇P°C, Pë
C, C₇P°PSCÍPiPsC₇C, P_μC₇CÍ PsC₇PiP°PSC-C‡PSPëC... P°PSC-PsPSC-PI 3 (OAT3). P_μC-CÍP»CÍ
P±P°PiP°C, PsPeC₇P°C, PSPsPiPs PiC₇PëPM₂PsPjCÍ C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ
CÍPiPsCÍC, P_μC₇C-PiP°P»PsCÍCÍ P·P±C-P»CHC€P_μPSPSCÍ CÍP_μC₇P_μPrPSC-C...
C₇C-PIPSC-PI C_{max} C- AUC C‡P_μC,, P°PeP»PsC₇CÍ (PI 1,43 C, P° 1,54 C₇P°P·P°
PIC-PrPiPsPIC-PrPSPs), C%₀Ps CÍPIC-PrC‡PëC, CH PiC₇Ps C-PSPiC-P±CÍCHC‡PëPM₂ PIPiP»PëPI
C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ PSP° OAT3 *in vivo*. Pj P·PiB₇TM CÍP·PeCÍ P· C‡PëPj
C₇P_μPePsPjP_μPSPrPsPIP°PSPs PrPsC, C₇PëPjCÍPIP°C, PëCÍCÍ PsP±P_μC₇P_μP¶PSPsCÍC, C-
PiC₇Pë PsPrPSPsC‡P°CÍPSPsPjCÍ PiC₇PëP·PSP°C‡P_μPSPSC- C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ C, P°
CÍCÍP±CÍC, C₇P°C, C-PI OAT3, C, P°PePëC... CÍPe C‡P_μC,, P°PeP»PsC₇,
P±P_μPSP·PëP»PiP_μPSC-C‡PëP»C-PS, C‡PëPiC₇PsC,, P»PsPeCÍP°C‡PëPS,
C-PSPrPsPjP_μC, P°C‡PëPS, PeP_μC, PsPiC₇PsC,, P_μPS, C,, CÍC₇PsCÍP_μPjC-Pr, C‡PëPjP_μC, PëPrPëPS,
PjP_μC, PsC, C₇P_μPeCÍP°C,, P·PëPrPsPICrPrPëPS.

P'PiP»PëPI C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ PSP° CÍCÍP±CÍC, C₇P°C, Pë BCRP C, P°/P°P±Ps
PiPsP»C-PiP_μPiC, PëPrPSPëC... C, C₇P°PSCÍPiPsC₇C, P_μC₇C-PI PsC₇PiP°PSC-C‡PSPëC...
P°PSC-PsPSC-PI B1 C- B3 (OATP1B1/B3). P_μC-CÍP»CÍ P±P°PiP°C, PsPeC₇P°C, PSPsPiPs
PiC₇PëPM₂PsPjCÍ C, P_μC₇PëC,, P»CÍPSPsPjC-PrCÍ CÍPiPsCÍC, P_μC₇C-PiP°P»PsCÍCH
P·P±C-P»CHC€P_μPSPSCÍ CÍP_μC₇P_μPrPSC-C... C₇C-PIPSC-PI C_{max} C- AUC
C₇PsP·CÍPIP°CÍC, P°C, PëPSCr (PI 2,65 C, P° 2,51 C₇P°P·P° PIC-PrPiPsPIC-PrPSPs). P_μC₇PsC, P_μ
PSP_μ P±CÍP»Ps PIC-PrP·PSP°C‡P_μPSPs P±CÍPrCH-CÍPePsPiPs PiPsPjC-C, PSPsPiPs PIPiP»PëPICr
C‡CHPsPiPs P·P±C-P»CHC€P_μPSPSCÍ P_μPeCÍPiPsP·PëC‡C-C— C₇PsP·CÍPIP°CÍC, P°C, PëPSCr
CÍ PiP»P°P·PjC- PeC₇PsPIC- PSP° P°PeC, PëIPSC-CÍC, CH P"PhP"-P_hPsA
(PiC-PrC₇PsPeCÍPëPjP_μC, PëP»PiP»CÍC, P°C₇PëP»-PePsP_μPSP·PëPj P_h) C₇P_μPrCÍPeC, P°P·Pë.
P_μC₇Pë PsPrPSPsC‡P°CÍPSPsPjCÍ PiC₇PëP·PSP°C‡P_μPSPSC- P· C, P_μC₇PëC,, P»CÍPSPsPjC-PrPsPj
C₇P_μPePsPjP_μPSPrCÍC" C, CHCÍCÍ P·PSPëP¶P_μPSPSCÍ PrPsP·Pë C₇PsP·CÍPIP°CÍC, P°C, PëPSCr
PSP° 50 %. PhPrPSPsC‡P°CÍPSP_μ P·P°CÍC, PsCÍCÍPIP°PSPSCÍ C-P·
C, P_μC₇PëC,, P»CÍPSPsPjC-PrPsPj C-PSC€PëC... CÍCÍP±CÍC, C₇P°C, C-PI BCRP
(PSP°PiC₇PëPeP»P°Pr PjP_μC, PsC, C₇P_μPeCÍP°C, CÍ, C, PsPiPsC, P_μPeP°PSCr,
CÍCÍP»CHC,, P°CÍP°P»P°P·PëPSCr, PrP°CÍPSPsC₇CÍP±C-C‡PëPSCr,
PrPsPeCÍPsC₇CÍP±C-C‡PëPSCr) C, P° C, C₇P°PSCÍPiPsC₇C, P_μC₇C-PI OATP, PsCÍPsP±P»PëPIPs

C-PSPIc-P±C-C,PsCḡC-PI P“PḡP“-PḡPsA CḡPμPrCíPeC,P°P·Pë (PSP°PíCḡPëPeP»P°Pr CíPëPjPIP°CíC,P°C,PëPSCr, P°C,PsCḡPIP°CíC,P°C,PëPSCr, PíCḡP°PIP°CíC,P°C,PëPSCr, PjPμC,PsC,CḡPμPeCíP°C,Cr, PSP°C,PμPiP»C-PSC-PrCí, CḡPμPíP°PiP»C-PSC-PrCí, CḡPëC„P°PjPíC-C†PëPSCr), PIPëPjP°PiP°C” PsP±PμCḡPμPḡPSPSCíC,C-. P—P° PíP°C†C-C”PSC,P°PjPë CíP»C-Pr CḡPμC,PμP»CHḡPSPs CíPíPSCíC,PμCḡC-PiP°C,Pë C%PsPrPs PíPSCḡPIPë CíPëPjPíC,PsPjC-PI PSP°PrPjC-CḡPSPëC... PePsPSC†PμPSC,CḡP°C†C-PNḡ C†PëC... P»C-PeP°CḡCíCHḡPePëC... P·P°CíPSP±C-PI PI PeCḡPsPIC- C,P° P·PIP°PḡCíPIP°C,Pë PrPsC†C-P»CHḡPSC-CíC,CHḡ P·PSPëPḡPμPSPSCḡ C—C... PrPsP·Pë.

PhCíPSP±P»PëPIPsCíC,C- P·P°CíC,PsCíC¿PIP°PSPSCḡ.

PjPμPNḡ P»C-PeP°CḡCíCHḡPePëPNḡ P·P°CíC-P± PjC-CíC,PëC,CHḡ PSP°C,CḡC-CHḡ PeCḡPsC...PjP°P»CHḡPiP»C-PePsP»CḡC, (C,PëPí Ph). PŸP»C-Pr P±CíC,Pë PsP±PμCḡPμPḡPSPëPj PíCḡPë P·P°CíC,PsCíCíPIP°PSPSC- PíP°C†C-C”PSC,P°Pj, CḡPeC- P·P°CíC,PsCíPSPICíCḡC,CHḡ PSP°C,CḡC-PNḡ-PePsPSC,CḡPsP»CHḡPsPIP°PSCr PrC-C”C,Cr.

PḡPsPSC-C,PsCḡPëPSPi

P”Ps P»C-PeC¿PIP°PSPSCḡ.

P”Ps PíPSC†P°C,PeCí P»C-PeCíPIP°PSPSCḡ C,PμCḡPëC„P»CíPSPsPjC-PrPsPj PSPμPsP±C...C-PrPSPs PsC†C-PSPëC,Pë C,P°PeC- PíPsPeP°P·PSPëPePë:

B· P°CḡC,PμCḡC-P°P»CHḡPSPëPNḡ C,PëCíPe;

B· CḡC-PIPμPSCḡ P°P»P°PSC-PSP°PjC-PSPsC,CḡP°PSCíC„PμCḡP°P·Pë/ CíPëCḡPsPIP°C,PePsPIPsC— PiP»CíC,P°PjP°C,-PíC-CḡCíPIP°C,-C,CḡP°PSCíP°PjC-PSP°P·Pë (PhP>PŸ/PŸP“PμPŸ);

B· CḡPsP·PiPsCḡPSCrC,PëPNḡ P·P°PiP°P»CHḡPSPëPNḡ P°PSP°P»C-P· PeCḡPsPIC-, Cr C,.C†. P»PμPNḡPePsC†PëC,P°CḡPSP° C„PsCḡPjCíP»P° C,P° PIPëP·PSP°C†PμPSPSCḡ PIPjC-CíC,Cr C,CḡPsPjP±PsC†PëC,C-PI.

PμC-Pr C†P°Cí P»C-PeC¿PIP°PSPSCḡ. PμC-Pr C†P°Cí P»C-PeCíPIP°PSPSCḡ C,PμCḡPëC„P»CíPSPsPjC-PrPsPj PSPμPsP±C...C-PrPSPs PePsPSC,CḡPsP»CHḡPIP°C,Pë C,P°PeC- PíPsPeP°P·PSPëPePë:

B· B P°CḡC,PμCḡC-P°P»CHḡPSPëPNḡ C,PëCíPe (PíPμCḡC-PsPrPëC†PSPs PíPμCḡPμPIC-CḡCḡC,Pë);

B· CḡC-PIPμPSCḡ P°P»P°PSC-PSP°PjC-PSPsC,CḡP°PSCíC„PμCḡP°P·Pë/ CíPëCḡPsPIP°C,PePsPIPsC— PiP»CíC,P°PjP°C,-PíC-CḡCíPIP°C,-C,CḡP°PSCíP°PjC-PSP°P·Pë (PhP>PŸ/PŸP“PμPŸ). PμPμC†C-PSPePsPIC- C„PμCḡPjPμPSC,Pë CíP»C-Pr PsC†C-PSCḡPIP°C,Pë C%PsPSP°PNḡPjPμPSC€Pμ PePsPḡPSC- C†PsC,PëCḡPë C,PëPḡPSC- PíCḡPsC,CḡPiPsPj PíPμCḡC€PëC... 6 PjC-CíCḡC†C-PI P»C-PeCíPIP°PSPSCḡ C,P° CḡPμPiCíP»CḡCḡPSPs PíC-CíP»Cḡ C†CHḡPsPiPs PíPμCḡC-PsPrCí. P”PsC†C-P»CHḡPSPs CḡPsP·PiP»CḡPSCrC,Pë PjPsPḡP»PëPIC-CíC,CHḡ PrPsPrP°C,PePsPIPsPiPs PjPsPSC-C,PsCḡPëPSPiCí, Cr PIPëPíP°PrPeP°C... PePsP»Pë PíCḡPμPíP°CḡP°C, PhP±P°PrPḡC-Ps° PíCḡPëP·PSP°C†P°C”C,CHḡCíCḡ PíP°C†C-C”PSC,P°Pj P· CíPḡPμ C-CíPSCrCḡC†PëPjPë P·P°C...PIPsCḡCHḡPIP°PSPSCḡPjPë PíPμC†C-PSPePë, Cr

PePsPjP±C-PSP°C†C-C— P· C-PSC€PëPjPë PiPsC,PµPSC†C-PNëPSPs
PiPµPiP°C,PsC,PsPeC†PëC±PSPëPjPë PiCḡPµPiP°CḡP°C,P°PjPë P°P±Ps PiCḡPë
PIPëPSPëPePSPµPSPSC- PeP»C-PSC-C±PSPëC... C†PëPjPiC,PsPjC-PI, C,P°PePëC... CµPe
PSPµP·Bḡ™ CµC†PsPIP°PSP° PSC†PrPsC,P°, P±P»CḡPIP°PSPSCµ, P±C-P»Cḡ Cr P¶PëPIPsC,C-,
PIC,PsPjP°, P°PSPsCḡPµPeC†C-Cµ P°P±Ps P¶PsPIC,CµPSPëC†Cµ C,P°/P°P±Ps C,PµPjPSP°
C†PµC±P°. PµPµC±C-PSPePsPIC- C,,PµCḡPjPµPSC,Pë C†P»C-Pr PsC†C-PSCḡPIP°C,Pë PePsP¶PSC-
PrPIP° C,PëP¶PSC- PiCḡPsC,CµPiPsPj PiPµCḡC€PëC... 6 PjC-C†CµC†C-PI P»C-PeC†PIP°PSPSCµ
C,P° C%PsPSP°PNëPjPµPSC€Pµ PePsP¶PSC- 8 C,PëP¶PSC-PI PiCḡPsC,CµPiPsPj
C%PsPSP°PNëPjPµPSC€Pµ 2 CḡPsPeC-PI PIC-Pr PiPsC±P°C,PeC† P»C-PeC†PIP°PSPSCµ. PµCḡPë
PiC-PrPIPëC%PµPSPSC- CḡC-PIPSCµ PḡP·Pḡ (PḡP“PµPḡ) Cr 2-3 CḡP°P·Pë PIPëC%Pµ
PIPµCḡC...PSCḡPsC— PjPµP¶C- PSPsCḡPjPë C†P»C-Pr PiCḡPsPIPsPrPëC,Pë
PjPsPSC-C,PsCḡPëPSPi C%PsC,PëP¶PSCµ;

B· B B Cr C...PsPrC- P»C-PeC†PIP°PSPSCµ PSPµPsP±C...C-PrPSPs PIPëPePsPSC†PIP°C,Pë
CḡPsP·PiPsCḡPSC†C,PëPNë P·P°PiP°P»CḡPSPëPNë P°PSP°P»C-P· PeCḡPsPIC- P· PsPiP»CµPrCr
PSP° B B PIPëPSPëPePSPµPSPSCµB C†PëPjPiC,PsPjC-PI (PSP°PiCḡPëPeP»P°Pr, PiCḡPë
C-PSC,,PµPeC†C-CµC...).

PµCḡPsC†PµPrCrCḡP° PiCḡPëC†PePsCḡPµPSPsPiPs PIPëPIPµPrPµPSPSCµ.

PḡPµCḡPëC,,P»C†PSPsPjC-Pr PiPsPIC-P»CḡPSPs PIPëPIPsPrPëC,CḡC†Cµ P·
PiP»P°P·PjPë PeCḡPsPIC-. P'PµP· P·P°C†C,PsC†CrPIP°PSPSCµ PiCḡPsC†PµPrCrCḡPë
PiCḡPëC†PePsCḡPµPSPsPiPs PIPëPIPµPrPµPSPSCµ PSPµPsP±C...C-PrPSPs PI
C†PµCḡPµPrPSCḡPsPjCr 8 PjC-C†CµC†C-PI PrP»Cµ PrPsC†CµPiPSPµPSPSCµ
PiP»P°P·PjPsPIPëC... PePsPSC†PµPSC,CḡP°C†C-PNë PSPëP¶C±Pµ 0,02 PjPi/P», C...PsC±P°
C±PµCḡPµP· C-PSPrPëPIC-PrCrP°P»CḡPSC† PIP°CḡC-P°P±PµP»CḡPSC-C†C,Cḡ
PeP»C-CḡPµPSC†Cr PrC-CḡC±PsC— CḡPµC±PsPIPëPSPë C†PµPNë PiCḡPsC†PµC† PjPsP¶Pµ
C,CḡPëPIP°C,Pë PrPs 2 CḡPsPeC-PI. PµCḡPsC†PµPrCrCḡCr PiCḡPëC†PePsCḡPµPSPsPiPs
PIPëPIPµPrPµPSPSCµ PjPsP¶PSP° P·P°C†C,PsC†PsPIC†PIP°C,Pë Cr P±C†PrCḡ-CµPePëPNë
C±P°C† PiC-C†P»Cµ PiCḡPëPiPëPSPµPSPSCµ PiCḡPëPNëPsPjCr C,PµCḡPëC,,P»C†PSPsPjC-PrCr
(PrPëPI. PrPµC,P°P»CḡPSPëPNë PsPiPëC† PiCḡPsC†PµPrCrCḡPë Cr CḡPsP·PrC-P»P°C...
B«PαP°CḡPjP°PePsPeC-PSPµC,PëPeP°B» C- B«P—P°C†C,PsC†CrPIP°PSPSCµ Cr PiPµCḡC-PsPr
PIP°PiC-C,PSPsC†C,C- P°P±Ps PiPsPrCrPIP°PSPSCµ PiCḡCrPrPrCḡB»).

P'PiP»PëPI PSP° PiPµC±C-PSPeC†. Pj PiP°C†C-C”PSC,C-PI, CµPeC- PiCḡPëPNëPjP°P»Pë
C,PµCḡPëC,,P»C†PSPsPjC-Pr, C†PiPsC†C,PµCḡC-PiP°P»PsC†Cµ PiC-PrPIPëC%PµPSPSCµ
CḡC-PIPSC-PI PiPµC±C-PSPePsPIPëC... C,,PµCḡPjPµPSC,C-PI (PrPëPI. CḡPsP·PrC-P»
B«PµPsP±C-C±PSC- CḡPµP°PeC†C-C—B»). PḡP°PePµ PiC-PrPIPëC%PµPSPSCµ PIPëPSPëPeP°C”
PiPµCḡPµPIP°P¶PSPs PiCḡPsC,CµPiPsPj PiPµCḡC€PëC... 6 PjC-C†CµC†C-PI
P»C-PeC†PIP°PSPSCµ.

PµC-Pr C±P°C† P»C-PeC†PIP°PSPSCµ C,PµCḡPëC,,P»C†PSPsPjC-PrPsPj
C†PiPsC†C,PµCḡC-PiP°P»PëC†Cḡ PIPëPiP°PrPePë PjPµPrPëPeP°PjPµPSC,PsP·PSPsPiPs
CrCḡP°P¶PµPSPSCµ PiPµC±C-PSPePë (PḡPjPµ), CµPeC- C-PSPsPrC- C†C,P°PSPsPIPëP»Pë
P·P°PiCḡPsP·Cr PrP»Cµ P¶PëC,C,Cµ. Pj P±C-P»CḡC€PsC†C,C- PIPëPiP°PrPeC-PI PḡPjPµ
CḡPsP·PIPëPIP°P»PsC†Cµ PiCḡPsC,CµPiPsPj PrPµPeC-P»CḡPePsC... C,PëP¶PSC-PI P°P±Ps
PjC-C†CµC†C-PI P· PjPsPjPµPSC,C† PiPsC±P°C,PeC† P»C-PeC†PIP°PSPSCµ, P°P»Pµ PḡPjPµ
C,P°PePsP¶ PjPsP¶Pµ PIPëPSPëPeP°C,Pë PiCḡPë C,CḡPëPIP°P»PsPjCr
P·P°C†C,PsC†CrPIP°PSPSC- C,PµCḡPëC,,P»C†PSPsPjC-PrCr.

P PëP·PëPe PiC-PrPIPëC%PµPSPSCµ CḡC-PIPSCµ PiPµC±C-PSPePsPIPëC... C,,PµCḡPjPµPSC,C-PI

C, P° P_hPJP_h P_iC_hP_e P»C-PeC_rPIP°PSPSC- C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj PjPsP_hP_h P±C_rC, P_e PIP_eC%_oP_ePj C_r P_iP°C_r-C" PSC, C-PI C-P. C_rP_hP_h C-C_rPSC_rC_hC_rP_ePjP_e C_rC_hP°P_hPSPSC_hPjP_e P_iP_hC_rC-PSPeP_e, P_iC_hP_e C_rC_rP_iC_rC, PSC_hPsPjC_r P»C-PeC_rPIP°PSPSC- C-PSC_eP_ePjP_e P_iP_hP_iP°C, PsC, PsPeC_rP_eC_rPSP_ePjP_e P_iC_hP_hP_iP°C_hP°C, P°PjP_e C, P°/P°P±Ps P·P»PsPIP_hP_ePIP°PSPSC- P°P»PePsPiPsP»P_hPj. P_yPsPjC_r P·P° C_rC, P°PSPsPj P_iP°C_r-C" PSC, C-PI C_rP»C-Pr C_hP_hC, P_hP»C_hPSPs C_rP_iPsC_rC, P_hC_hC-PiP°C, P_e C%_oPsPrPs P_iPsC_hPIP_e PsP·PSP°Pe C, P° C_rP_ePjP_iC, PsPjC-PI C_rC_hP°P_hPSPSC_h P_iP_hC_rC-PSPeP_e.

P_iPeC%_oPs PIP_ePSP_ePeP°C" P_iC-PrPsP·C_hP° PSP° C_rC_hP°P_hPSPSC_h P_iP_hC_rC-PSPeP_e, P»C-PeC_rPIP°PSPSC_h C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj PSP_hPsP±C...C-PrPSPs P_iC_hP_eP_iP_ePSP_eC, P_e C, P° P_iPsC_rP°C, P_e P_iC_hPsC_rP_hPrC_rC_hC_r P_iC_hP_eC_rPePsC_hP_hPSPsPiPs PIP_ePIP_hPrP_hPSPSC_h P_iC_hP_hP_iP°C_hP°C, C_r. P_hPsP_hP»P_ePIC-C_rC, C_h PIC-PrPjC-PSP_e C, P_hC_hP_eC,, P»C_rPSPsPjC-PrC_r C_rP»C-Pr C_hPsP·PiP»C_hPSC_rC, P_e, C_hPeC%_oPs P_iC-PrC, PIP_hC_hPrP_hPSPs P_iC-PrPIP_eC%_oP_hPSPSC_h C_hC-PIPSC-PI P_iP_hC_rC-PSPePsPIP_eC... C,, P_hC_hPjP_hPSC, C-PI P±C-P»C_hC_e PSC-P_h C_r 3B C_hP°P·P_e P_iPsC_hC-PIPSC_hPSPs P· P'P_hP_k.

Pj C_hP°P·C- P_iC_hP_eP_iP_ePSP_hPSPSC_h P»C-PeC_rPIP°PSPSC_h P_iP_hC_rC-PSPePsPIC- P_iC_hPsP±P_e C_rP»C-Pr P_iC_hPsPiPsPrP_eC, P_e PrPs PSPsC_hPjP°P»C-P·P°C_r-C— C_hC-PIPSC_h C, C_hP°PSC_rP°PjC-PSP°P·.

P"C-PiPsPiC_hPsC, P_hC—PSP_hPjC-C_h

P_hC_rPeC-P»C_hPeP_e C, P_hC_hP_eC,, P»C_rPSPsPjC-Pr PjP°C" PIP_eC_rPsPeC_r C_rC, C_rP_iC-PSC_h P·PIB_hTM C_hP·C_rPIP°PSPSC_h P· P±C-P»PeP°PjP_e C- PsC_rPeC-P»C_hPeP_e P·PIB_hTM C_hP·C_rPIP°PSPSC_h P·P°P»P_hP_hP_eC, C_h PIC-Pr PePsPSC_rP_hPSC, C_hP°C_r-C— P°P»C_hP±C_rPjC-PSC_r, PsC_rC-PeC_rC" C, C_hC_rC_h P_iC-PrPIP_eC%_oP_hPSPSC_h PePsPSC_rP_hPSC, C_hP°C_r-P_h PSP_hP·PIB_hTM C_hP·P°PSPsPiPs C, P_hC_hP_eC,, P»C_rPSPsPjC-PrC_r C_r P_iP»P°P·PjC- C_r P_iP°C_r-C" PSC, C-PI P· P_iC-P_iPsP_iC_hPsC, P_hC—PSP_hPjC-C" C_h, PSP°P_iC_hP_ePeP»P°Pr, P_iC_hP_e PSP_hC,, C_hPsC, P_eC_rPSPsPjC_r C_rP_ePSP_rC_hPsPjC-. P_yP_hC_hP_eC,, P»C_rPSPsPjC-Pr PSP_h C_rP»C-Pr P·P°C_rC, PsC_rPsPIC_rPIP°C, P_e P_iP°C_r-C" PSC, P°Pj P_iC_hP_e C, C_hP_hPeC-P_h P_iC-P_iPsP_iC_hPsC, P_hC—PSP_hPjC-C—.

P'P_iP»P_ePI PSP° P°C_hC, P_hC_hC-P°P»C_hPSPeP_hC, P_eC_rPe. P_kP° C, P»C- P»C-PeC_rPIP°PSPSC_h C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj PjPsP_hP»P_ePIP_h P_iC-PrPIP_eC%_oP_hPSPSC_h P°C_hC, P_hC_hC-P°P»C_hPSPsPiPs C, P_eC_rPeC_r (PrP_ePI. C_hPsP·PrC-P» B«P_hPsP±C-C_rPSC-C_hP_hP°PeC_r-C—B»). P_kP_hPsP±C...C-PrPSPs P_iP_hC_hP_hPIC-C_hC_hC, P_e C_hC-PIP_hPSC_h P°C_hC, P_hC_hC-P°P»C_hPSPsPiPs C, P_eC_rPeC_r P_iP_hC_hP_hPr P_iPsC_rP°C, PePsPj C, P_hC_hP°P_iC-C— C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj C, P° P_iP_hC_hC-PsPrP_eC_rPSPs PSP°PrP°P»C-. P_hC-PrPIP_eC%_oP_hPSPSC_h P°C_hC, P_hC_hC-P°P»C_hPSPsPiPs C, P_eC_rPeC_r PIP_ePjP°P_iP°C" PIC-PrP_iPsPIC-PrPSPsPiPs P»C-PeC_rPIP°PSPSC_h PrPs C, P° P_iC-Pr C_rP°C_r C, P_hC_hP°P_iC-C— C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj.

P_rPSC,, P_hPeC_r-C—. Pj P_iP°C_r-C" PSC, C-PI P· C, C_hP_hPeP_ePjP_e P°PeC, P_ePIPSP_ePjP_e C-PSC,, P_hPeC_r-C_hPjP_e C_rP»C-Pr PIC-PrPeP»P°C_rC, P_e P_iPsC_rP°C, PsPe C, P_hC_hP°P_iC-C— C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj PrPs PsPrC_rP_hP°PSPSC_h.

Pj P_iP»P°C_rP_hP±Ps-PePsPSC, C_hPsP»C_hPsPIP°PSP_eC... PrPsC_rP»C-PrP_hP_hPSPSC_hC... PSP_h C_rP_iPsC_rC, P_hC_hC-PiP°P»PsC_rC_h P_iC-PrPIP_eC%_oP_hPSPSC_h C_rP°C_rC, PsC, P_e C_rP_hC_hP_hPsP·PSP_eC... C-PSC,, P_hPeC_r-P_h PSP° C, P»C- P»C-PeC_rPIP°PSPSC_h C, P_hC_hP_eC,, P»C_rPSPsPjC-PrPsPj (PrP_ePI. C_hPsP·PrC-P» B«P_hPsP±C-C_rPSC-C_hP_hP°PeC_r-C—B»). P_hPrPSP°Pe, PIC_hP°C...PsPIC_rC_hC_rP_e C-PjC_rPSPsPjPsPrC_rP»C_hC_hC_rP_eP_h P_hC,, P_hPeC, C, P_hC_hP_eC,, P»C_rPSPsPjC-PrC_r, P_iC_hP_e

PhPrPSPsC‡P°CfPSPµ P·P°CfC,PsCfCfPIP°PSPSCl P· P°PSC,PëPSPµPsPiP»P°CfC,PëC‡PSPëPjPë
P°P±Ps C-PjCfPSPsCfCfPiCfPµCfPsCfPSPëPjPë P»C-PëP°CfCfCHPePëPjPë P·P°CfPsP±P°PjPë,
C°°Ps PIPëPePsCfPëCfC,PsPICfCfC,CHCfCfCf PrP»Cf P»C-PëCfPIP°PSPSCl P PŸ, PSPµ
PIPëPIC‡P°P»PsCfCH. P"PsCfP»C-PrP¶PµPSPSCl P· PIPëPIC‡PµPSPSCl
P±PµP·PiPµC‡PSPsCfC,C- PiCfPµPiP°CfP°C,Cf, PI ClPePëC... C,PµCfPëC,,P»CfPSPsPjC-Pr
PiCfPµC,ClPiPsPj PiPµCfC-PsPrCf C,CfPëPIP°P»C-CfC,Cf PrPs PsPrPSPsPiPs CfPsPeCf
PiCfPëPµPjP°PICfCf PsPrPSPsC‡P°CfPSPs P· C-PSC,PµCfC,,PµCfPsPSPsPj P±PµC,P° P°P±Ps P·

PJ PĪP°C†C-C"PSC,C-PI P· P PŸ PĭC-C†P»CĬ P±P°PĭP°C,PsPeCĤP°C,PSPsPiPs
P·P°C†C,PsC†C†PIP°PSPSCĬ C,PμCĤPĖC,,P»C†PSPsPjC-PrC† C† PrPsP·C- 14 PjPi PjPμPrC-P°PSP°
C,PμCĤPjC-PSP°P»CHPSPsPiPs PĭPμCĤC-PsPrC† PSP°PĭC-PIIPĖPIPμPrPμPSPSCĬ ($t_{1/2z}$)
C†C,P°PSPsPIPĖP»P° PĭCĤPĖP±P»PĖP·PSPs 19 PrPSC-PI. PĖPeC%oPs PĭCĤPĖPN₂PSCĬC,Ps
CĤC-CĖPμPSPSCĬ PĭCĤPs PĭCĤPĖPĭPĖPSPμPSPSCĬ C,PμCĤP°PĭC-C— PĭCĤPμPĭP°CĤP°C,PsPj
PhP±P°PrP¶C-Ps^{B®}, PĭPsC±P°C,PsPe P»C-PeC†PIP°PSPSCĬ C-PSCĖPĖPj P·P°C†PsP±PsPj

$P_{\mu}P^{\circ}C^{\dagger}C-C''PSC,PeCr\ PSp_{\mu}PsP\pm C...C-PrPSPs\ P\ddot{C}H_{\mu}PsC-PSC,,PsC\ddot{H}PjCrPIP^{\circ}C,P\ddot{e},\ C\%_{\infty}Ps\ Cr$
 $C\ddot{H}P^{\circ}P\cdot C-P\cdot P^{\circ}C,C\ddot{H}P\ddot{e}PjPeP\ddot{e}\ P\ddot{I}PsC\ddagger P^{\circ}C,PeCr\ PjP_{\mu}PSC\ddot{I}C,C\ddot{H}CrP^{\circ}C^{\dagger}C-PN_{\infty}\ P^{\circ}P\pm Ps\ P\ddot{I}C\ddot{H}P\ddot{e}$
 $P\ddot{I}C-PrPsP\cdot C\ddot{H}C- PSP^{\circ}\ PIP^{\circ}PiC-C,PSC-C\ddot{I}C,CH\ PIPsPSP^{\circ}\ PjP^{\circ}C''\ P\ddot{I}C\ddot{H}P\ddot{e}P\ddot{I}P\ddot{e}PSP\ddot{e}C,P\ddot{e}$
 $P\ddot{I}C\ddot{H}P\ddot{e}PN_{\infty}PsPj\ P\ddot{I}C\ddot{H}P_{\mu}P\ddot{I}P^{\circ}C\ddot{H}P^{\circ}C,Cr\ PhP\pm P^{\circ}PrP\ddot{I}C-Ps^{B\circ}\ C,P^{\circ}\ PSp_{\mu}PiP^{\circ}PN_{\infty}PSPs$
 $P\cdot PIP_{\mu}C\ddot{H}PSC\ddot{I}C,P\ddot{e}C\ddot{I}C\ddot{I}\ PrPs\ P\gg C-PeP^{\circ}C\ddot{H}C\ddot{I}\ PrP\gg C\ddot{I}\ P\ddot{I}C\ddot{H}PsPIP_{\mu}PrP_{\mu}PSPSC\ddot{I}\ C,P_{\mu}C\ddot{I}C,Cr\ PSP^{\circ}$
 $PIP^{\circ}PiC-C,PSC-C\ddot{I}C,CH,\ P^{\circ}\ Cr\ PIP\ddot{e}P\ddot{I}P^{\circ}PrPeCr\ P\ddot{I}PsP\cdot P\ddot{e}C,P\ddot{e}PIPSPsPiPs\ C\ddot{H}P_{\mu}P\cdot CrP\gg CHC,P^{\circ}C,Cr$
 $C^{\dagger}CHPsPiPs\ C,P_{\mu}C\ddot{I}C,Cr\ P\gg C-PeP^{\circ}C\ddot{H}\ C- P\ddot{I}P^{\circ}C^{\dagger}C-C''PSC,PeP^{\circ}\ P\ddot{I}PsPIP\ddot{e}PSPSC-$
 $PsP\pm PiPsPIPSC\ddot{H}P\ddot{e}C,P\ddot{e}\ C\ddot{H}P\ddot{e}P\cdot P\ddot{e}PeP\ddot{e}\ PrP\gg C\ddot{I}\ PIP^{\circ}PiC-C,PSPsC\ddot{I}C,C-. P^{\dagger}C\ddot{I}PSC\ddot{I}C''$
 $C-PjPsPIC-C\ddot{H}PSC-C\ddot{I}C,CH\ C,PsPiPs,\ C\%_{\infty}Ps\ C\ddot{e}PIP\ddot{e}PrPeP_{\mu}\ P\cdot PSP\ddot{e}P\ddot{I}P_{\mu}PSPSC\ddot{I}\ C\ddot{H}C-PIPSC\ddot{I}$
 $C,P_{\mu}C\ddot{H}P\ddot{e}C,,P\gg CrPSPsPjC-PrCr\ PI\ PeC\ddot{H}PsPIC- C\ddot{e}P\gg C\ddot{I}C...PsPj\ P\cdot P^{\circ}C\ddot{I}C,PsC\ddot{I}CrPIP^{\circ}PSPSC\ddot{I}$
 $P\ddot{I}C\ddot{H}PsC^{\dagger}P_{\mu}PrCrC\ddot{H}P\ddot{e}\ P\ddot{I}C\ddot{H}P\ddot{e}C\ddot{I}PePsC\ddot{H}P_{\mu}PSPsPiPs\ PIP\ddot{e}PIP_{\mu}PrP_{\mu}PSPSC\ddot{I},\ PsP\ddot{I}P\ddot{e}C\ddot{I}P^{\circ}PSPsC-$
 $PSP\ddot{e}P\ddot{I}C\ddagger P_{\mu},\ P\ddot{I}C\ddot{H}P\ddot{e}\ P\ddot{I}P_{\mu}C\ddot{H}C\ddot{e}P\ddot{e}C... PsP\cdot PSP^{\circ}PeP^{\circ}C... P\cdot P^{\circ}C,C\ddot{H}P\ddot{e}PjPeP\ddot{e}$
 $PjP_{\mu}PSC\ddot{I}C,C\ddot{H}CrP^{\circ}C^{\dagger}C-C- PjPsP\ddot{I}P_{\mu}\ P\cdot PjP_{\mu}PSC\ddot{e}P\ddot{e}C,P\ddot{e}\ C\ddot{H}P\ddot{e}P\cdot P\ddot{e}Pe\ PrP\gg C\ddot{I}\ P\ddot{I}P\gg PsPrP^{\circ}.$

$P-C-PSPeP^{\circ}Pj,\ C\ddot{I}PeC- PsC,C\ddot{H}P\ddot{e}PjCrC\ddot{H}C,CH\ P\gg C-PeCrPIP^{\circ}PSPSC\ddot{I}$
 $C,P_{\mu}C\ddot{H}P\ddot{e}C,,P\gg CrPSPsPjC-PrPsPj\ C,P^{\circ}\ P\pm P^{\circ}P\ddot{I}P^{\circ}C\ddot{H}C,CH\ P\cdot P^{\circ}PIP^{\circ}PiC-C,PSC-C,P\ddot{e},$
 $PSP_{\mu}PsP\pm C...C-PrPSPs\ PIC-PrPjC-PSP\ddot{e}C,P\ddot{e}\ P\ddot{I}C\ddot{H}P_{\mu}P\ddot{I}P^{\circ}C\ddot{H}P^{\circ}C,,\ C- P\ddot{I}C\ddot{H}P\ddot{e}\ C^{\dagger}CHPsPjCr$
 $C\ddot{H}P_{\mu}PePsPjP_{\mu}PSPPrPsPIP^{\circ}PSPs\ P\cdot P^{\circ}C\ddot{I}C,PsC\ddot{I}CrPIP^{\circ}C,P\ddot{e}\ P\ddot{I}C\ddot{H}PsC^{\dagger}P_{\mu}PrCrC\ddot{H}Cr$
 $P\ddot{I}C\ddot{H}P\ddot{e}C\ddot{I}PePsC\ddot{H}P_{\mu}PSPsPiPs\ PIP\ddot{e}PIP_{\mu}PrP_{\mu}PSPSC\ddot{I}\ P\cdot PjP_{\mu}C,PsC\ddot{H}\ P\pm C-P\gg CHC\ddot{e}$
 $C\ddot{e}PIP\ddot{e}PrPePsPiPs\ PrPsC\ddot{I}C\ddot{I}PiPSP_{\mu}PSPSC\ddot{I}\ PePsPSC^{\dagger}P_{\mu}PSC,C\ddot{H}P^{\circ}C^{\dagger}C-PN_{\infty}\ PSP\ddot{e}P\ddot{I}C\ddagger P_{\mu}$
 $0,02\ PjPi/P\gg (PrP\ddot{e}PI.\ PSP\ddot{e}P\ddot{I}C\ddagger P_{\mu}).$

$P\ddot{I}PeC\%_{\infty}Ps\ P\ddot{I}C\ddot{H}PsC^{\dagger}P_{\mu}PrCrC\ddot{H}Cr\ P\ddot{I}C\ddot{H}P\ddot{e}C\ddot{I}PePsC\ddot{H}P_{\mu}PSPsPiPs\ PIP\ddot{e}PIP_{\mu}PrP_{\mu}PSPSC\ddot{I}\ PSP_{\mu}$
 $P\cdot P^{\circ}C\ddot{I}C,PsC\ddot{I}PsPIC\ddot{I}PIP^{\circ}C,P\ddot{e},\ PjPsP\ddot{I}PSP^{\circ}\ PsC\ddagger C-PeCrPIP^{\circ}C,P\ddot{e},\ C\%_{\infty}Ps\ C\ddot{H}C-PIPSC-$
 $C,P_{\mu}C\ddot{H}P\ddot{e}C,,P\gg CrPSPsPjC-PrCr\ Cr\ P\ddot{I}P\gg P^{\circ}P\cdot PjC- PeC\ddot{H}PsPIC- P\pm CrPrCrC,CH$
 $P\cdot P^{\circ}P\gg P\ddot{e}C\ddot{e}P^{\circ}C,P\ddot{e}C\ddot{I}C\ddot{I}\ PIP\ddot{e}C\%_{\infty}P_{\mu}\ 0,02\ PjPi/P\gg\ P\ddot{I}C\ddot{H}PsC,C\ddot{I}PiPsPj\ Cr$
 $C\ddot{I}P_{\mu}C\ddot{H}P_{\mu}PrPSC\ddot{H}PsPjCrB\ B\ B\ B\ B\ B\ B\ B\ B\ B\ 8\ PjC-C\ddot{I}C\ddot{I}C^{\dagger}C-PI,\ P\ddot{I}C\ddot{H}PsC,P_{\mu}\ PrP_{\mu}C\ddot{I}PeP\ddot{e}Pj$
 $P\ddot{I}P^{\circ}C^{\dagger}C-C''PSC,P^{\circ}Pj\ PjPsP\ddot{I}P_{\mu}\ P\pm CrC,P\ddot{e}\ P\ddot{I}PsC,C\ddot{H}C-P\pm PSPs\ PrPs\ 2\ C\ddot{H}PsPeC-PI\ PrP\gg C\ddot{I}$
 $PrPsC\ddot{I}C\ddot{I}PiPSP_{\mu}PSPSC\ddot{I}\ C\ddot{H}C-PIPSC\ddot{I}\ P\ddot{I}P\gg P^{\circ}P\cdot PjPsPIPSC- PePsPSC^{\dagger}P_{\mu}PSC,C\ddot{H}P^{\circ}C^{\dagger}C-C-$
 $PSP\ddot{e}P\ddot{I}C\ddagger P_{\mu}\ 0,02\ PjPi/P\gg.\ PJ\ P\cdot PI\ddot{e}H^{\text{TM}}\ C\ddot{I}P\cdot PeCr\ P\cdot C^{\dagger}P\ddot{e}Pj\ PSP_{\mu}PsP\pm C...C-PrPSPs$
 $PIP\ddot{e}P\cdot PSP^{\circ}C\ddagger P\ddot{e}C,P\ddot{e}\ PePsPSC^{\dagger}P_{\mu}PSC,C\ddot{H}P^{\circ}C^{\dagger}C-C\ddot{H}\ C,P_{\mu}C\ddot{H}P\ddot{e}C,,P\gg CrPSPsPjC-PrCr\ Cr$
 $P\ddot{I}P\gg P^{\circ}P\cdot PjC- PeC\ddot{H}PsPIC-, P\ddot{I}P_{\mu}C\ddot{H}C\ddot{e}\ PSC-P\ddot{I}P\ddot{I}C-PSPeP^{\circ}\ C\ddot{H}PsP\cdot P\ddot{I}PsC\ddagger PSP_{\mu}\ C\ddot{I}P\ddot{I}C\ddot{H}PsP\pm P\ddot{e}$
 $P\cdot P^{\circ}PIP^{\circ}PiC-C,PSC-C,P\ddot{e}.\ P_{\mu}C-C\ddot{I}P\gg C\ddot{I}\ C,PsPiPs,\ C\ddot{I}Pe\ P\pm CrPrP_{\mu}\ PIP\ddot{e}P\cdot PSP^{\circ}C\ddagger P_{\mu}PSPs$
 $PePsPSC^{\dagger}P_{\mu}PSC,C\ddot{H}P^{\circ}C^{\dagger}C-C\ddot{H}\ C,P_{\mu}C\ddot{H}P\ddot{e}C,,P\gg CrPSPsPjC-PrCr\ PI\ P\ddot{I}P\gg P^{\circ}P\cdot PjC- PeC\ddot{H}PsPIC-$
 $PSP\ddot{e}P\ddot{I}C\ddagger P_{\mu}\ 0,02\ PjPi/P\gg,\ PN_{\infty}PsPiPs\ P\ddot{I}P\gg P^{\circ}P\cdot PjPsPIC\ddot{I}\ PePsPSC^{\dagger}P_{\mu}PSC,C\ddot{H}P^{\circ}C^{\dagger}C-C\ddot{H}$
 $P\ddot{I}PsC,C\ddot{H}C-P\pm PSPs\ P\pm CrPrP_{\mu}\ PIP\ddot{e}P\cdot PSP^{\circ}C\ddagger P\ddot{e}C,P\ddot{e}\ P\ddot{I}PsPIC,PsC\ddot{H}PSPs\ C\ddagger P_{\mu}C\ddot{H}P_{\mu}P\cdot$
 $C-PSC,P_{\mu}C\ddot{H}PIP^{\circ}P\gg\ C\ddagger P^{\circ}C\ddot{I}Cr\ C,C\ddot{H}P\ddot{e}PIP^{\circ}P\gg C-C\ddot{I}C,C\ddot{H}\ PSP_{\mu}$
 $PjP_{\mu}PSC\ddot{e}P_{\mu}B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ B\ 14\ PrPSC-PI.$

$P\ddot{I}PeC\%_{\infty}Ps\ C\ddot{H}P_{\mu}P\cdot CrP\gg CHC,P^{\circ}C,P\ddot{e}\ PsP\pm PsC... PrPsC\ddot{I}P\gg C-PrP\ddot{I}P_{\mu}PSC\ddot{H}\ P\ddot{I}P\gg P^{\circ}P\cdot PjPsPIP\ddot{e}C...$
 $PePsPSC^{\dagger}P_{\mu}PSC,C\ddot{H}P^{\circ}C^{\dagger}C-PN_{\infty}\ PSP\ddot{e}P\ddot{I}C\ddagger P_{\mu}\ 0,02\ PjPi/P\gg,\ PSC-C\ddot{I}PePsPiPs\ C\ddot{H}P\ddot{e}P\cdot P\ddot{e}PeCr\ PrP\gg C\ddot{I}$
 $P\ddot{I}P\gg PsPrP^{\circ}\ PSP_{\mu}\ PsC\ddagger C-PeCrC''C,CHC\ddot{I}C\ddot{I}.$

$P''P\gg C\ddot{I}\ PsC,C\ddot{H}P\ddot{e}PjP^{\circ}PSPSC\ddot{I}\ PrPsPrP^{\circ}C,PePsPIPSC- C-PSC,,PsC\ddot{H}PjP^{\circ}C^{\dagger}C-C- C\%_{\infty}PsPrPs$
 $C,P_{\mu}C\ddot{I}C,CrPIP^{\circ}PSPSC\ddot{I}\ P\cdot C\ddot{H}P^{\circ}P\cdot PeP^{\circ}\ PeC\ddot{H}PsPIC- PrP\gg C\ddot{I}\ PIP\ddot{e}P\cdot PSP^{\circ}C\ddagger P_{\mu}PSPSC\ddot{I}\ C^{\dagger}CHPsPiPs$
 $P\ddot{I}PsPeP^{\circ}P\cdot PSP\ddot{e}PeP^{\circ}\ C\ddot{I}P\gg C-Pr\ P\cdot PIP_{\mu}C\ddot{H}C,P^{\circ}C,P\ddot{e}C\ddot{I}C\ddot{I}\ PrPs\ PIP\gg P^{\circ}C\ddot{I}PSP\ddot{e}PeP^{\circ}$
 $C\ddot{H}P_{\mu}C''C\ddot{I}C,C\ddot{H}P^{\circ}C^{\dagger}C-PN_{\infty}PSPsPiPs\ P\ddot{I}PsC\ddot{I}PIC-PrC\ddagger P_{\mu}PSPSC\ddot{I}\ P^{\circ}P\pm Ps\ PrPs\ PN_{\infty}PsPiPs$
 $PjC-C\ddot{I}C^{\dagger}P_{\mu}PIP\ddot{e}C... P\ddot{I}C\ddot{H}P_{\mu}PrC\ddot{I}C,P^{\circ}PIPSP\ddot{e}PeC-PI (PrP\ddot{e}PI.\ C\ddot{H}PsP\cdot PrC-P\gg$
 $B\ll P\ddot{e}C\ddot{H}PsP\pm PSP\ddot{e}PeB\gg).$

$P_{\mu}C\ddot{H}PsC^{\dagger}P_{\mu}PrCrC\ddot{H}P^{\circ}\ P\ddot{I}C\ddot{H}P\ddot{e}C\ddot{I}PePsC\ddot{H}P_{\mu}PSPsPiPs\ PIP\ddot{e}PIP_{\mu}PrP_{\mu}PSPSC\ddot{I}$

$P-P\tau P^{\circ}C, PSC-Cl^{\circ}C, CH_3 PIPiP \gg P\ddot{e}PIP^{\circ}C, P\ddot{e} PSP^{\circ} C \in PIP\ddot{e}P\tau P\epsilon C-Cl^{\circ}C, CH_3 C\overline{H}P\mu P^{\circ}P\epsilon C\uparrow C-C-P\ddot{e}C\overline{H}P\ddot{e}$
 $P\epsilon P\mu C\overline{H}C\acute{z}PIP^{\circ}PSPSC-P^{\circ}PIC, P_sC, C\overline{H}P^{\circ}PSC\overline{I}^{\circ}P_iP_sC\overline{H}C, P_sP_j P^{\circ}P\pm P_s C-PSC\epsilon P\ddot{e}P_jP\ddot{e}$
 $P_jP\mu C...P^{\circ}PSC-P\cdot P_jP^{\circ}P_jP\ddot{e}.$

P'PīP»PēPI PīCḡPμPīP°CḡP°C,Cr PḡP±P°PrP¶C-Ps^{B®} PSP° P·PrP°C,PSC-CÍC,CH
 PePμCḡCrPIP°C,Pē C,CḡP°PSCÍPīPsCḡC,PSPēPjPē P·P°CÍPsP±P°PjPē C±Pē PīCḡP°C†CḡPIP°C,Pē
 P· C-PSCēPēPjPē PjPμC...P°PSC-P·PjP°PjPē PIC-PrCÍCrC,PSC-PNē C±Pē PSPμP·PSP°C±PSPēPNē. PJ
 CḡP°P·C- CḡPsP·PIPēC,PeCr C,P°PePēC... PīPsP±C-C±PSPēC... CḡPμP°PeC†C-PNē, CıPe
 P·P°PīP°PjPsCḡPsC±PμPSPSCı, C%Ps P±CrP»Ps P·P°CḡPμC"ÍC,CḡPsPIP°PSPμ PSP° C,P»C-
 P·P°CÍC,PscÍCrPIP°PSPSCı P»PμC,,P»CrPSPsPjC-PrCr (CÍPīPsP»CrPePē-
 PīPsPīPμCḡPμPrPSPēPeP° C,PμCḡPēC,,P»CrPSPsPjC-PrCr), PjPsP¶Pμ
 PīPsPīC-CḡCēCrPIP°C,PēCÍCı P·PrP°C,PSC-CÍC,CH PīP°C†C-C"PSC,P° PrPs
 PePsPSC†PμPSC,CḡP°C†C-C— CrPIP°PīPē C,P° PSP°P»PμP¶PSPsC— CēPIPēPrPePsCÍC,C-
 CḡPμP°PeC†C-C—. PJ C,P°PePēC... PIPēPīP°PrPeP°C... PīP°C†C-C"PSC,P°Pj CÍP»C-Pr
 CrC,CḡPēPjCrPIP°C,PēCÍCı PIC-Pr PePμCḡCrPIP°PSPSCı P°PIC,PsC,CḡP°PSCÍPīPsCḡC,PsPj
 C,P° CḡPsP±PsC,Pē P· C-PSCēPēPjPē PjPμC...P°PSC-P·PjP°PjPē.

PŸPīPsCÍC-P± P·P°CÍC,PsCÍC¿PIP°PSPSCı C,P° PrPsP·Pē.

PjCÍC- PSPμPIPēPePsCḡPēCÍC,P°PSC- P»C-PeP°CḡCÍCHPeC- PīCḡPμPīP°CḡP°C,Pē P°P±Ps
 C—C...PSC- P·P°P»PēCēPePē PīC-PrP»CıPīP°CḡC,CH CrC,PēP»C-P·P°C†C-C—
 PIC-PrPīPsPIC-PrPSPs PrPs PjC-CÍC†PμPIPēC... PIPēPjPsPi.

P>C-PeCrPIP°PSPSCı CÍP»C-Pr CḡPsP·PīPsC±PēPSP°C,Pē C- PīCḡPsPīPsPrPēC,Pē PīC-Pr
 PSP°PīP»CıPrPsPj P»C-PeP°CḡCı, CıPePēPNē PjP°C" PrPsCÍPIC-Pr P»C-PeCrPIP°PSPSCı
 CḡPsP·CÍC-CıPSPsPiPs CÍPeP»PμCḡPsP·Cr.

P"PsP·CÍPIP°PSPSCı.

P"PsCḡPsCÍP»C-

P PμPePsPjPμPSPPrPsPIP°PSP° PrPsP·P° PḡP±P°PrP¶C-Ps^{B®} B CÍC,P°PSPsPIPēC,CH 14 PjPi
 PīPμCḡPsCḡP°P»CHPSPs PsPrPēPS CḡP°P· PSP° PrPsP±Cr.

P"C-C,Pē (PIC-PePsPj PIC-Pr 10 CḡPsPeC-PI)

P"P»Cı PrC-C,PμPNē (PIC-PePsPj PIC-Pr 10 CḡPsPeC-PI) CḡPμPePsPjPμPSPPrPsPIP°PSP° PrPsP·P°
 P·P°P»PμP¶PēC,CH PIC-Pr PjP°CÍPē C,C-P»P°:

-B B B B B B B B B PrC-C,Pē P· PjP°CÍPsCḡ C,C-P»P° > 40 PePi: 14 PjPi PsPrPēPS CḡP°P· PSP°
 PrPsP±Cr,

-B B B B B B B B B PrC-C,Pē P· PjP°CÍPsCḡ C,C-P»P° ≤ 40 PePi: 7 PjPi PsPrPēPS CḡP°P· PSP°
 PrPsP±Cr,

P"C-C,CıPj, CıPeC- PrPsCÍCıPīP»Pē CÍC,P°P±C-P»CHPSPsC— PjP°CÍPē C,C-P»P° PīPsPSP°Pr
 40 PePi, CÍP»C-Pr PīPμCḡPμPNēC,Pē PSP° C,P°P±P»PμC,PeCr 14 PjPi 1 CḡP°P· PSP° PrPsP±Cr.

PŸP°P±P»PμC,PePē PSPμPsP±C...C-PrPSPs PePsPIC,P°C,Pē C†C-P»PēPjPē, P·P°PīPēPIP°CḡC±Pē
 PSPμPIPμP»PēPePsCḡ PeC-P»CHPeC-CÍC,Cḡ PIPsPrPē. PŸP°P±P»PμC,PePē, PIPeCḡPēC,C-
 PīP»C-PIPePsPīPsCḡ PsP±PsP»PsPSPePsCḡ, PjPsP¶PSP° PīCḡPēPNēPjP°C,Pē PSPμP·P°P»PμP¶PSPs
 PIC-Pr PīCḡPēPNēPsPjCr C—P¶C-.

PḡCÍPsP±P»PēPIC- PīCḡC¿PīPē PīP°C†C-C"PSC,C-PI.

*PμP°C†C-C''PSC,Pë P»C-C,PSCHbPsPiPs PIC-PeCé. PhP±P°PrP¶C-Ps^{B®} PSpμPsP±C...C-PrPSPs P·
PsP±PμC¶PμP¶PSC-C†C,C¶ PiC¶PëP·PSP°C±P°C,Pë PiP°C†C-C''PSC,P°Pj PIC-PePsPj
PIC-PrB B B B 65 C¶PsPeC-PI C±PμC¶PμP· PSpμPrPsC†C,P°C,PSC-C†C,C¶ PrP°PSPëC...
C%oPsPrPs P±PμP·PiPμC±PSPsC†C,C- C,P° PμC,,PμPeC,PëPIPSPsC†C,C-
P·P°C†C,PsC†C†PIP°PSPSC¶ PiC¶PμPiP°C¶P°C,C† C†C-PMë PiPsPiC†P»C¶C†C-C—
PiP°C†C-C''PSC,C-PI.*

*PkPëC¶PePsPIP° PSpμPrPsC†C,P°C,PSC-C†C,C¶. P¶PsC¶PμPeC†C-C¶ PrPsP·Pë PrP»C¶
PiP°C†C-C''PSC,C-PI P· P»PμPiPePëPj, PiPsPjC-C¶PSPëPj P°P±Ps C,C¶P¶PePëPj
PiPsC¶C†C¶PμPSPSC¶Pj C,,C†PSPeC†C-C— PSPëC¶PsPe, C¶PeC- PSpμ PsC,C¶PëPjC†C¶C,C¶
PrC-P°P»C-P·, PSpμ PiPsC,C¶C-P±PSP°.*

*PμP°C†C-C''PSC,Pë P· C,C¶P¶PePëPj PiPsC¶C†C¶PμPSPSC¶Pj C,,C†PSPeC†C-C— PSPëC¶PsPe,
C¶PeC- PsC,C¶PëPjC†C¶C,C¶ PrC-P°P»C-P·, PSpμ PsC†C-PSC¶PIP°P»PëC†C¶.
P¶PμC¶PëC,,P»C†PSPsPjC-Pr PiC¶PsC,PëPiPsPeP°P·P°PSPëPNë C†C-PMë PiPsPiC†P»C¶C†C-C—
PiP°C†C-C''PSC,C-PI (PrPëPI. C¶PsP·PrC-P» B«PμC¶PsC,PëPiPsPeP°P·P°PSPSC¶B»).*

*PμPμC±C-PSPePsPIP° PSpμPrPsC†C,P°C,PSC-C†C,C¶. P''P»C¶ PiP°C†C-C''PSC,C-PI P·
P»PμPiPePëPj P°P±Ps PiPsPjC-C¶PSPëPj PiPsC¶C†C¶PμPSPSC¶Pj C,,C†PSPeC†C-C—
PiPμC±C-PSPePë PePsC¶PμPeC†C-C¶ PrPsP·Pë PiC¶PμPiP°C¶P°C,C† PSpμ PiPsC,C¶C-P±PSP°.
P¶PμC¶PëC,,P»C†PSPsPjC-Pr PiC¶PsC,PëPiPsPeP°P·P°PSPëPNë PiP°C†C-C''PSC,P°Pj P·
C,C¶P¶PePëPj PiPsC¶C†C¶PμPSPSC¶Pj C,,C†PSPeC†C-C— PiPμC±C-PSPePë (PrPëPI.
C¶PsP·PrC-P» B«PμC¶PsC,PëPiPsPeP°P·P°PSPSC¶B»).*

P''C-C,Pë.

*P'PμP·PiPμC±PSC-C†C,C¶ C,P° PμC,,PμPeC,PëPIPSC-C†C,C¶ P·P°C†C,PsC†C†PIP°PSPSC¶
PiC¶PμPiP°C¶P°C,C† PhP±P°PrP¶C-Ps^{B®} PrC-C,C¶Pj PIC-PePsPj PrPs 10 C¶PsPeC-PI PSP°
PrP°PSPëPNë C±P°C† PSpμ PIC†C,P°PSPsPIP»PμPSP°. P''P°PSC- PIC-PrC†C†C,PSC-.*

PμPμC¶PμPrPsP·CéPIP°PSPSC¶.

*P¶PëPjPiC,PsPjPë. P''PsC†PIC-Pr PiPμC¶PμPrPsP·C†PIP°PSPSC¶
C,PμC¶PëC,,P»C†PSPsPjC-PrC† P°P±Ps P·C†PjPsPIP»PμPSPsC— C†PëPj
PiC¶PμPiP°C¶P°C,PsPj C-PSC,PsPeC†PëPeP°C†C-C— P»C¶PrPëPSPë
PIC-PrC†C†C,PSC-PMë. P¶PμC¶PëC,,P»C†PSPsPjC-Pr C† PrPsP·C- 70 PjPi PSP° PrPsP±C†
PiC¶PëP·PSP°C±P°PIC†C¶ PiC¶PsC,C¶PiPsPj 14 PrPSC-PI P·PrPsC¶PsPIPëPj
PrPsP±C¶PsPIPsP»C¶C†C¶Pj. PμPsP±C-C±PSC- C¶PμP°PeC†C-C—
C†P·PiPsPrP¶C†PIP°P»PëC†C¶ C-P· PiC¶PsC,,C-P»PμPj P±PμP·PiPμC±PSPsC†C,C-
C,PμC¶PëC,,P»C†PSPsPjC-PrC† C† PiP°C†C-C''PSC,C-PI P· C¶PsP·C†C-C¶PSPëPj
C†PeP»PμC¶PsP·PsPj.*

*P>C-PeC†PIP°PSPSC¶. PμC¶Pë P·PSP°C±C†C%oPsPjC† PiPμC¶PμPrPsP·C†PIP°PSPSC- P°P±Ps
PiC¶Pë PSP°C¶PIPSPsC†C,C- PsP·PSP°Pe C,PsPeC†PëC±PSPsC†C,C-
C¶PμPePsPjPμSPPrC†C,C¶C†C¶ PiC¶PëPNëPsPj C...PsP»PμC†C,PëC¶P°PjC-PSC† P°P±Ps
P°PeC,PëPIPSPIP°PSPsPiPs PIC†PiC-P»P»C¶ PrP»C¶ PiC¶PëC†PePsC¶PμPSPSC¶
PIPëPIPμPrPμPSPSC¶ PiC¶PμPiP°C¶P°C,C†. P PμPePsPjPμSPPrPsPIP°PSP° PiC¶PsC†PμPrC†C¶P°
PIPëPIPμPrPμPSPSC¶ PiC¶PμPiP°C¶P°C,C† PiPsP»C¶PiP°C'' C† P·P°C†C,PsC†C†PIP°PSPSC-
C...PsP»PμC†C,PëC¶P°PjC-PSC† C† PrPsP·C-B 8 Pi C,C¶PëC±C- PSP° PrPsP±C†*

PĭCĥPsC,CĭPiPsPj 11 PrPSC-PI. PĭPeC%Ps C†Cĭ CĭC...PμPjP° PĭPsPiP°PSPs
 PĭPμCĥPμPSPsCĭPĕC,CHCĭCĭ PĭP°C†C-C" PSC,PsPj, PjPsP¶PSP° P·P°CĭC,PsCĭPsPICrPIP°C,Pĕ
 C...PsP»PμCĭC,PĕCĥP°PjC-PS Cĭ PrPsP·C- 4 Pi C,CĥPĕC†C- PSP° PrPsP±Cĭ PĭCĥPsC,CĭPiPsPj 11
 PrPSC-PI. PĭPe P°P»CHC,PμCĥPSP°C,PĕPICr, CĭPeC%Ps C...PsP»PμCĭC,PĕCĥP°PjC-PS
 PSPμPrPsCĭC,CĭPiPSPĕPNĕ, C,P°PePsP¶ PjPsP¶PSP° P·P°CĭC,PsCĭPsPICrPIP°C,Pĕ
 P°PeC,PĕPIPsPIP°PSPμ PICrPiC-P»P»Cĭ Cĭ PrPsP·C- 50 Pi PrPIC-C†C- PSP° PrPsP±Cĭ
 PĭCĥPsC,CĭPiPsPj 11 PrPSC-PI. PμCĥC-Pj C,PsPiPs, CĭPeC%Ps C†Pμ PSPμPsP±C...C-PrPSPs P·
 PĭCĥPĕC†PĕPS PĭPμCĥPμPSPsCĭPĕPjPsCĭC,C-, P·P°CĭC,PsCĭCĭPIP°PSPSCĭ
 C...PsP»PμCĭC,PĕCĥP°PjC-PSCĭ P°P±Ps P°PeC,PĕPIPsPIP°PSPsPiPs PICrPiC-P»P»Cĭ PSPμ
 PsP±PsPiPĕĥ™ CĭP·PePsPIPs PjP°C" PIPĕPePsPSCĭPIP°C,PĕCĭCĭ PĭCĥPsC,CĭPiPsPj
 PĭPsCĭP»C-PrPsPIPsPĕC... 11 PrPSC-PI (PrPĕPI. CĥPsP·PrC-P»
 B«PαP°CĥPjP°PePsPeC-PSPμC,PĕPeP°B»).

PμPsP±C-C†PSC- CĥPμP°PeC†C-C—.

P PμP·CĥPjPμ PĭCĥPsC,,C-P»Cĥ P±PμP·PĭPμC†PSPsCĭC,C-. PκP°PNĕP±C-P»CHCĕ
 C†P°CĭC,PĕPjPĕ PĭPsP±C-C†PSPĕPjPĕ CĥPμP°PeC†C-CĭPjPĕ PĭCĥPĕ PĭCĥPĕPNĕPsPjC-
 C,PμCĥPĕC,,P»CĭPSPsPjC-PrCĭ (Cĭ PrPsP·CĭPIP°PSPSC- 7 PjPi C,P° 14 PjPi) P±CĭP»Pĕ:
 PiPsP»PsPIPsPĕPNĕ P±C-P»CH (17,8 %, 15,7 %), PrC-P°CĥPμCĭ (13,1 %, 13,6 %),
 PĭC-PrPIPĕC%PμPSPSCĭ CĥC-PIPsCĭ PĥP·Pŷ (13 %, 15 %), PSCĭPrPsC,P° (8 %, 10,7 %) C,P°
 P°P»PsPĭPμC†C-Cĭ (9,8 %, 13,5 %). PĭPe PĭCĥP°PIPĕP»Ps, PiPsP»PsPIPsPĕPNĕ P±C-P»CH,
 PrC-P°CĥPμCĭ, PSCĭPrPsC,P° C,P° P°P»PsPĭPμC†C-Cĭ PjP°P»Pĕ P»PμPiPeCĭ P°P±Ps
 PĭPsPjC-CĥPSCĭB C,CĭP¶PeC-CĭC,CH, P±CĭP»Pĕ C,CĥP°PSP·PĕC,PsCĥPSPĕPjPĕ C-
 PSPμC†P°CĭC,Ps PĭCĥPĕP·PIPsPrPĕP»Pĕ PrPs PIC-PrPjC-PSPĕ PĭCĥPμPĭP°CĥP°C,Cĭ.

PŷPμCĥPĕC,,P»CĭPSPsPjC-Pr C" PsCĭPSPsPIPsPĕPj PjPμC,P°P±PsP»C-C,PsPj
 P»PμC,,P»CĭPSPsPjC-PrCĭ. PμCĥPsC,,C-P»CH P±PμP·PĭPμC†PSPsCĭC,C-
 P·P°CĭC,PsCĭCĭPIP°PSPSCĭ P»PμC,,P»CĭPSPsPjC-PrCĭ Cĭ PĭP°C†C-C" PSC,C-PI P·
 CĥPμPIPjP°C,PsC—PrPSPĕPj P°CĥC,CĥPĕC,PsPj P°P±Ps PĭCĭPsCĥC-P°C,PĕC†PSPĕPj
 P°CĥC,CĥPĕC,PsPj PjPsP¶Pμ PIC-PrPĭPsPIC-PrP°C,Pĕ C,P°PePsPjCĭ Cĭ PĭP°C†C-C" PSC,C-PI P·
 P Pŷ PĭCĥPĕ PĭCĥPĕP·PSP°C†PμPSPSC- C,PμCĥPĕC,,P»CĭPSPsPjC-PrCĭ.

PŷP°P±P»PĕC†PSPĕPNĕ PĭPμCĥPμP»C-Pe PĭPsP±C-C†PSPĕC... CĥPμP°PeC†C-PNĕ. P'CĭCHPsPiPs
 2267 PĭP°C†C-C" PSC,C-PI PĭCĥPĕPNĕPjP°P»Pĕ C,PμCĥPĕC,,P»CĭPSPsPjC-Pr (1155 Bĥ" PI
 PrPsP·C-B 7 PjPi C- 1112 Bĥ" PI PrPsP·C- 14 PjPi) PsPrPĕPS CĥP°P· PSP° PrPsP±Cĭ P·
 PjPμPrC-P°PSPsCĥ C,CĥPĕPIP°P»PsCĭC,C- P»C-PeCĭPIP°PSPSCĭ 672 PrPSC- Cĭ CĥP°PjPeP°C...
 4 PĭP»P°C†PμP±Ps-PePsPSC,CĥPsP»CHPsPIP°PSPĕC... PrPsCĭP»C-PrP¶PμPSCĥ (PrPμ 1045 C-
 1002 PĭP°C†C-C" PSC,Pĕ PĭCĥPĕPNĕPjP°P»Pĕ PĭCĥPμPĭP°CĥP°C, Cĭ PrPsP·P°C... 7 PjPi C- 14 PjPi
 PIC-PrPĭPsPIC-PrPSPs) C,P° PsPrPSPsPiPs PrPsCĭP»C-PrP¶PμPSPSCĭ P· P°PeC,PĕPIPsPĕPj
 PePsPSC,CĥPsP»PμPj (PĭPs 110 PĭP°C†C-C" PSC,C-PI Cĭ PePsP¶PSC-PNĕ PĭCĥCĭPĭC-
 P»C-PeCĭPIP°PSPSCĭ C,PμCĥPĕC,,P»CĭPSPsPjC-PrPsPj) P·P° CĭC†P°CĭC,Cĥ PĭP°C†C-C" PSC,C-PI
 P· CĥPμC†PĕPrPĕPIPsPĕPjPĕ C,,PsCĥPjP°PjPĕ P Pŷ (CĥPμC†PĕPrPĕPICrCĥC†PĕPNĕ
 CĥPsP·CĭC-CĭPSPĕPNĕ CĭPeP»PμCĥPsP·, P P Pŷ).

Pj C,P°P±P»PĕC†C- 2 PSP°PIPμPrPμPSPs PĭPsP±C-C†PSC- CĥPμP°PeC†C-C—,
 P·P°CĥPμC" CĭC,CĥPsPIP°PSC- Cĭ PrPsCĥPsCĭP»PĕC... PĭP°C†C-C" PSC,C-PI, CĭPeC-
 PĭCĥPĕPNĕPjP°P»Pĕ C,PμCĥPĕC,,P»CĭPSPsPjC-Pr Cĭ PrPsP·P°C... 7 PjPi P°P±Ps 14 PjPi, Cĭ
 CĥP°PjPeP°C... PĭP»P°C†PμP±Ps-PePsPSC,CĥPsP»CHPsPIP°PSPĕC... PrPsCĭP»C-PrP¶PμPSCĥ
 PĭCĥPμPĭP°CĥP°C,Cĭ PĥP±P°PrP¶C-Ps^{B®} P·P° CĭC†P°CĭC,Cĥ PrPsCĥPsCĭP»PĕC...

$$P \dot{y} P^{\circ} P \pm P \gg P \ddot{e} C \dagger C \downarrow 3$$
$$P\hbar P \gg P_s P_i P_\mu C \dagger C - C\downarrow. P\hbar P \gg P_s P_i P_\mu C \dagger C - C\downarrow \text{ Cr } PIP\ddot{e}PiP \gg C\downarrow PrC - \ddot{P}iPsC, PsPSC \epsilon P^\circ PSPSC\downarrow$$

*P'PiP»PëPI PSP° P°CḡC,PμCḡC-P°P»CHḡPSPëPNḡ C,PëCḡPε. PJ C...PsPrC- PiP»P°C†PμP±Ps-
PePsPSC,CḡPsP»CHḡPsPIP°PSPëC... PrPsCḡP»C-PrP¶PμPSCḡ P·P° C†C‡P°CḡC,Cḡ
PrPsCḡPsCḡP»PëC... PiP°C†C-C''PSC,C-PI P±C†P»Ps PIPëCḡPIP»PμPSPs PSP°CḡC,C†PiPSPμ:*

- CḡPëCḡC,PSP»C-C‡PSPëPNḡ P°CḡC,PμCḡC-P°P»CHḡPSPëPNḡ C,PëCḡPε P±C†PI > 140
PjPj CḡC,. CḡC,. C† 19,9 % PiP°C†C-C''PSC,C-PI, CḡPeC- PsC,CḡPëPjC†PIP°P»Pë
C,PμCḡPëC,,P»C†PSPsPjC-Pr C† PrPsP·C- 14 PjPi/PrPsP±C†, PiPsCḡC-PIPSCḡPSPs P· 15,5 %
PiP°C†C-C''PSC,C-PI, CḡPeC- PsC,CḡPëPjC†PIP°P»Pë PiP»P°C†PμP±Ps;

- CḡPëCḡC,PSP»C-C‡PSPëPNḡ P°CḡC,PμCḡC-P°P»CHḡPSPëPNḡ C,PëCḡPε P±C†PI > 160
PjPj CḡC,. CḡC,. C† 3,8 % PiP°C†C-C''PSC,C-PI, CḡPeC- PsC,CḡPëPjC†PIP°P»Pë
C,PμCḡPëC,,P»C†PSPsPjC-Pr C† PrPsP·C- 14 PjPi/PrPsP±C†, PiPsCḡC-PIPSCḡPSPs P· 2,0 %
PiP°C†C-C''PSC,C-PI, CḡPeC- PsC,CḡPëPjC†PIP°P»Pë PiP»P°C†PμP±Ps;

- PrC-P°CḡC,PSP»C-C‡PSPëPNḡ P°CḡC,PμCḡC-P°P»CHḡPSPëPNḡ C,PëCḡPε P±C†PI > 90
PjPj CḡC,. CḡC,. C† 21,4 % PiP°C†C-C''PSC,C-PI, CḡPeC- PsC,CḡPëPjC†PIP°P»Pë
C,PμCḡPëC,,P»C†PSPsPjC-Pr C† PrPsP·C- 14 PjPi/PrPsP±C†, PiPsCḡC-PIPSCḡPSPs P· 13,6 %
PiP°C†C-C''PSC,C-PI, CḡPeC- PsC,CḡPëPjC†PIP°P»Pë PiP»P°C†PμP±Ps.

*P†PSC,,PμPeC†C-C—. PJ PiP»P°C†PμP±Ps-PePsPSC,CḡPsP»CHḡPsPIP°PSPëC...
PrPsCḡP»C-PrP¶PμPSPSCḡC... P·P° C†C‡P°CḡC,Cḡ PrPsCḡPsCḡP»PëC... PiP°C†C-C''PSC,C-PI
PSPμ CḡPiPsCḡC,PμCḡC-PiP°P»PsCḡCḡ P·CḡPsCḡC,P°PSPSCḡ C‡P°CḡC,PSc,Pë
CḡPμCḡPNḡPsP·PSPëC... C-PSC,,PμPeC†C-PNḡ PiCḡPë P·P°CḡC,PScC†C†PIP°PSPSC-
C,PμCḡPëC,,P»C†PSPsPjC-PrC† 14 PjPi (2,7 %) PiPsCḡC-PIPSCḡPSPs P· PiP»P°C†PμP±Ps (2,2 %).
PŸPμCḡPNḡPsP·PSC- PsPiPsCḡC,C†PSC-CḡC,PëC‡PSC- C-PSC,,PμPeC†C-C— PIPëPSPëPeP»Pë C†
0,2 % PiP°C†C-C''PSC,C-PI C† PePsP¶PSC-PNḡ PiCḡC†PiC-. PJ
PiC-CḡP»CḡCḡPμC''CḡC,CḡP°C†C-PNḡPSPëPNḡ PiPμCḡC-PsPr PiPsPIC-PrPsPjP»CḡP»PsCḡCḡ
PiCḡPs PIPëPiP°PrPePë C,CḡP¶PePëC... C-PSC,,PμPeC†C-PNḡ, PI C,PSPjC† C‡PëCḡP»C-
CḡPμPiCḡPëCḡC†, CḡPePëPNḡ C-PSPsPrC- P±C†PI P»PμC,P°P»CHḡPSPëPj.*

*P'PiP»PëPI PSP° PeCḡPsPIPsC,PIPsCḡPμPSPSCḡ. PJ C...PsPrC- PiP»P°C†PμP±Ps-
PePsPSC,CḡPsP»CHḡPsPIP°PSPëC... PrPsCḡP»C-PrP¶PμPSCḡ P·P° C†C‡P°CḡC,Cḡ
PrPsCḡPsCḡP»PëC... PiP°C†C-C''PSC,C-PI PSP° C,P»C- P·P°CḡC,PScC†C†PIP°PSPSCḡ
PiCḡPμPiP°CḡP°C,C† PhP±P°PrP¶C-Ps^{B®} CḡPiPsCḡC,PμCḡC-PiP°P»PsCḡCḡ P·PSPëP¶PμPSPSCḡ
PeC-P»CHḡPePsCḡC,C- P»PμPNḡPePsC†PëC,C-PI C† PeCḡPsPIC- (PI CḡPμCḡPμPrPSCḡPsPjC†
PSP°B B < 15 % PIC-Pr PiPsC‡P°C,PePsPIPëC... CḡC-PIPSC-PI, PiPμCḡPμPiP°P¶PSPs P·P°
CḡP°C...C†PSPsPe P·PSPëP¶PμPSPSCḡ CḡC-PIPSC-PI PSPμPNḡC,CḡPsC,,C-P»C-PI C,P°
P»C-PjC,,PSc†PëC,C-PI), C...PsC‡P° C† PrPμCḡPePëC... PiP°C†C-C''PSC,C-PI
PIC-PrP·PSP°C‡P°P»PsCḡCḡ P±C-P»CHḡC€ PIPëCḡP°P¶PμPSPμ P·PSPëP¶PμPSPSCḡ C†CHḡPsPiPs
PiPsPeP°P·PSPëPeP°. PiPμ P·PSPëP¶PμPSPSCḡ CḡPμCḡPμPrPSC-C... CḡC-PIPSC-PI
P»PμPNḡPePsC†PëC,C-PI PiPsCḡC-PIPSCḡPSPs P· PiPsC‡P°C,PePsPIPëPjPë
P·PSP°C‡PμPSPSCḡPjPë PIC-PrP±C†PIP°P»PsCḡCḡ PiC-Pr C‡P°Cḡ PiPμCḡC€PëC... 6
C,PëP¶PSC-PI P»C-PeC†PIP°PSPSCḡ PiCḡPμPiP°CḡP°C,PSPj, PiC-CḡP»Cḡ C‡PsPiPs P· C‡P°CḡPsPj
CḡC,P°P±C-P»C-P·C†PIP°P»PsCḡCḡ PiCḡPë PiCḡPsPrPsPIP¶PμPSPSC- PiCḡPëPNḡPsPjC†
PiCḡPμPiP°CḡP°C,C†, P°P»Pμ PSP° P±C-P»CHḡC€ PSPëP·CHḡPePëC... CḡC-PIPSCḡC... (PjPμPSC€
PSC-P¶PSP° 15 % PSPëP¶C‡Pμ PIC-Pr PIPëC...C-PrPSPëC... CḡC-PIPSC-PI). P'PiP»PëPI PSP°
PIPjC-CḡC, PμCḡPëC,CḡPsC†PëC,C-PI (< 2 %) C- C,CḡPsPjP±PsC†PëC,C-PI (< 10 %) P±C†PI
PjPμPSC€ PIPëCḡP°P¶PμPSPëPNḡ.*

*PμPμCḡPëC,,PμCḡPëC‡PSP° PSPμPNḡCḡPsPiP°C,C-Cḡ. PJ C...PsPrC- PiP»P°C†PμP±Ps-
PePsPSC,CḡPsP»CHḡPsPIP°PSPëC... PrPsCḡP»C-PrP¶PμPSCḡ P·P° C†C‡P°CḡC,Cḡ
PrPsCḡPsCḡP»PëC... C† PiP°C†C-C''PSC,C-PI, CḡPeC- PiCḡPëPNḡPjP°P»Pë*

C, P_μCT_{HP}EC, „P»C_rPSPsPjC-Pr, C_±P°C_rC, C-C_{EP}_μ, PSC-P_¶ C_r P_iP°C_†C-C”PSC, C-PI, C_¶PeC-
P_iCT_{HP}P_{EP}N_{EP}PjP°P»P_{EP} P_iP»P°C_†P_μP_±Ps, C_rP_iPsC_rC, P_μCT_{HC}-P_iP°P»P_{EC}C_¶ P_iP_{EP}P_iP°PrPeP_{EP}
P_iP_μCT_{HP}EC, „P_μCT_{HP}EC_±PSPsC— PSP_μP_NCT_{HP}PsP_iP°C, C-C—, C_r C, PsPjC_r C_±P_{EC}C_rP»C- C_¶Pe
P_iPsP»C-PSP_μP_NCT_{HP}PsP_iP°C, C-C—, C, P°Pe C- PjPsPSPsPSP_μP_NCT_{HP}PsP_iP°C, C-C—
(PSP°P_iCT_{HP}P_{EP}PeP»P°Pr, C, C_rPSP_μP»CH_{EP}PSP_{EP}N_{EP} C_rP_{EP}PSP_rCT_{HP}PsPj P·P°P_ib_{EP}™ C_¶C_rC, C_¶). PJ
P_±P°P·PsPIP_{EC}... P_iP»P°C_†P_μP_±Ps-PePsPSC, CT_{HP}PsP»CH_{EP}PsPIP°PSP_{EC}...
PrPsC_rP»C-PrP_¶P_μPSPSC_¶C... C_±P°C_rC, PsC, P° CT_{HP}PsP·PIP_{EC}, PeC_r P_iP_μCT_{HP}EC, „P_μCT_{HP}EC_±PSPsC—
PSP_μP_NCT_{HP}PsP_iP°C, C-C—, P_iC-PrC, PIP_μCT_{HP}PrP_¶P_μPSPsC— PsC_†C-PSPePsC_¶ PSP_μCT_{HP}PIP_sPIP_sC—
P_iCT_{HP}PsPIC-PrPSPsC_rC, C-, C_rC, P°PSPsPIP_{EP}P»P°B 1,9 % (17 P_iP°C_†C-C”PSC, C-PI P· 898) P_iCT_{HP}P_{EP}
P·P°C_rC, PsC_rC_rPIP°PSPSC- C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r C_r PrPsP·C- 14 PjPi
P_iPsCT_{HC}-PIPSC_¶PSPs P· 0,4 % (4 P_iP°C_†C-C”PSC, P_{EP} P· 898) P_iCT_{HP}P_{EP} P·P°C_rC, PsC_rC_rPIP°PSPSC-
P_iP»P°C_†P_μP_±Ps. P_YP_μCT_{HP}P°P_iC-CT_{HP} P_±C_rP»Ps PIC-PrPjC-PSP_μPSPs C_r 5 P_iP°C_†C-C”PSC, C-PI P·
P_iP_μCT_{HP}EC, „P_μCT_{HP}EC_±PSPsC_¶ PSP_μP_NCT_{HP}PsP_iP°C, C-C”CT_{HP}, C_¶PeC- PsC, CT_{HP}P_{EP}PjC_rPIP°P»P_{EP}
C, P_μCT_{HP}EC, „P»C_rPSPsPjC-Pr C_r PrPsP·C- 14 PjPi. PJ 4 P· C_†P_{EC}... P_iP°C_†C-C”PSC, C-PI
P_iP_μCT_{HP}EC, „P_μCT_{HP}EC_±PSP° PSP_μP_NCT_{HP}PsP_iP°C, C-C_¶ P·PSP_{EP}PeP°P»P° P_iC-C_rP»C_¶
P_iCT_{HP}P_{EP}P_iP_{EP}PSP_μPSPSC_¶ P»C-PeC_rPIP°PSPSC_¶.

P”PsP_±CT_{HP}PsC_¶PeC-C_rPSC-, P·P»PsC_¶PeC-C_rPSC- C, P° PSP_μC_zC, PsC_±PSP_μPSC-
PSPsPIP_sC_zC, PIPsCT_{HP}P_μPSPSC_¶ (C_z C, C_±. PeC-C_rC, P_{EP} C, P° P_iPsP»C-P_iP_{EP}). P—P°
CT_{HP}P_μP·C_rP»CH_{EP}C, P°C, P°PjP_{EP} PrPsC_rPIC-PrC_r P·P°C_rC, PsC_rC_rPIP°PSPSC_¶
C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r C_r CT_{HP}P°PjPeP°C... PeP»C-PSC-C_±PSP_{EP}C...
PrPsC_rP»C-PrP_¶P_μPSC_¶ PSP_μ P_±C_rP»Ps PIP_{EP}C_¶PIP»P_μPSPs P_iC-PrPIP_{EP}C%P_μPSPSC_¶
CT_{HP}P_{EP}·P_{EP}PeC_r CT_{HP}PsP·PIP_{EC}, PeC_r P·P»PsC_¶PeC-C_rPSP_{EP}C... P·P°C...PIP_sCT_{HP}CT_{HP}PIP°PSC_¶.
P P_{EP}·P_{EP}Pe CT_{HP}PsP·PIP_{EC}, PeC_r P·P»PsC_¶PeC-C_rPSP_{EP}C... P·P°C...PIP_sCT_{HP}CT_{HP}PIP°PSC_¶,
PsC_rPsP_±P»P_{EP}IPs P»C-PjC, „PsP_iCT_{HP}PsP»C-C, „P_μCT_{HP}P°C, P_{EP}IPSP_{EP}C... CT_{HP}PsP·P»P°PrC-PI,
P·P_±C-P»CH_{EP}C_{EP}C_rPIP°PIC_rC_¶ P_iCT_{HP}P_{EP} P·P°C_rC, PsC_rC_rPIP°PSPSC- PrP_μC_¶PeP_{EC}... C-PSC_{EP}P_{EP}C...
P·P°C_rPsP_±C-PI, C%P_s PIP_iP»P_{EP}PIP°CT_{HC}, CH_{EP} PSP° C-PjC_rPSPSC_r C_rP_{EP}C_rC, P_μPjC_r (P_μC, „P_μPeC,
PeP»P°C_rC_r P»C-PeP°CT_{HC}C_{EP}PeP_{EC}... P·P°C_rPsP_±C-PI).

P_YC_¶P_¶PeC- C_{EP}PeC-CT_{HP}PSC- CT_{HP}P_μP°PeC_†C-C—. PJ P_iC-C_rP»C_¶CT_{HP}P_μC”C_rC, CT_{HP}P°C_†C-P_NEPSP_{EP}N_{EP}
P_iP_μCT_{HC}-PsPr P_iPsPIC-PrPsPjP»C_¶P»PsC_rC_¶ P_iCT_{HP}Ps PIP_{EP}P_iP°PrPeP_{EP} CT_{HP}PsP·PIP_{EC}, PeC_r
C, C_¶P_¶PeP_{EC}... C_{EP}PeC-CT_{HP}PSP_{EP}C... CT_{HP}P_μP°PeC_†C-P_NEPSP° C, P»C- P·P°C_rC, PsC_rC_rPIP°PSPSC_¶
C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r (PrP_{EP}PI. CT_{HP}PsP·PrC-P» B«P_hC_rPsP_±P»P_{EP}IPsC_rC, C-
P·P°C_rC, PsC_rC_rPIP°PSPSC_¶IB»).

P_hC_rC, P_μPSC-C_¶

PJ P_iP»P°C_†P_μP_±Ps-PePsPSC, CT_{HP}PsP»CH_{EP}PsPIP°PSP_{EP}C... PrPsC_rP»C-PrP_¶P_μPSPSC_¶C... P·P°
C_rC_±P°C_rC, CT_{HP} PrPsCT_{HP}PsC_rP»P_{EP}C... P_iP°C_†C-C”PSC, C-PI C_±P°C_rC, PsC, P° P°C_rC, P_μPSC-C—
C_rC, P°PSPsPIP_{EP}P»P° 2,0 %, 1,6 % C- 2,2 % C_r P_iCT_{HC}C_rP_iP°C... P·P°C_rC, PsC_rC_rPIP°PSPSC_¶
P_iP»P°C_†P_μP_±Ps, C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r 7 PjPi C, P° C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r 14
PjPi PIC-PrP_iPsPIC-PrPSPs.

P_μC_rPsCT_{HC}-P°P·

PJ P_iP»P°C_†P_μP_±Ps-PePsPSC, CT_{HP}PsP»CH_{EP}PsPIP°PSP_{EP}C... PrPsC_rP»C-PrP_¶P_μPSPSC_¶C...
C_±P°C_rC, PsC, P° P_iC_rPsCT_{HC}-P°P·C_r C_rC, P°PSPsPIP_{EP}P»P° 0,3 %, 0,3 % C, P° 0,4 % C_r
P_iCT_{HC}C_rP_iP°C... P·P°C_rC, PsC_rC_rPIP°PSPSC_¶ P_iP»P°C_†P_μP_±Ps, C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r C_r
PrPsP·C- 7 PjPi C, P° C, P_μCT_{HP}EC, „P»C_rPSPsPjC-PrC_r C_r PrPsP·C- 14 PjPi PIC-PrP_iPsPIC-PrPSPs.

P_μPsCT_{HC}C_zC_{EP}P_μPSPSC_¶ P· P_±PsPeC_z C_{EP}P»C_zPSPePsPIP_s-PeP_{EC}C_{EP}PePsPIP_sPiPs C, CT_{HP}P°PeC, C_z

P' PīC-CīP»CīCīPμC" CīC, CīP° C†C- P№PSPēP№ PīPμCīC- PsPr P»C- PeCīPIP°PSPSCī C, PμCīPēC,, P»CīPSPsPjC- PrPsPj PīCīPs PīP°PSPeCīPμP°C, PēC, Cī PrPsCīPsCīP»PēC... PīPsPIC- PrPsPjP»CīP»PsCīCī CīC- PrPePs, P·PsPeCīPμPjP° PīCīPs PIPēPīP°PrPePē PSPμPeCīPsC, PēP·CīCīC†PsPiPs PīP°PSPeCīPμP°C, PēC, Cī C, P° PīCīPμPIPrPsPeC- CīC, Pē PīC- PrCēP»CīPSPePsPIPsC— P·P°P»PsP·Pē. P—P°C... PIPsCīCīPIP°PSPSCī PīC- PrCēP»CīPSPePsPIPsC— P·P°P»PsP·Pē PjPsP¶CīC, Cī PIPēPSPēPePSCīC, Pē P±CīPrCīH- PePsP»Pē PīC- Pr C†P°Cī P»C- PeCīPIP°PSPSCī C, PμCīPēC,, P»CīPSPsPjC- PrPsPj; PIPsPSPē PjPsP¶CīC, Cī PīCīPēP·PIPμCīC, Pē PrPs PīPsCīPīC- C, P°P»C- P·P°C†C- C— C, P°/P°P±Ps PIPēPjP°PiP°C, Pē PePsCīPēPīCīPIP°P»CīPSPsPiPs P»C- PeCīPIP°PSPSCī.

P" C-C, Pē

PŸPīPsCīC, PμCīPμP¶CīPIP°PSPēP№ PīCīPsC,, C-P»Cī P±PμP·PīPμPePē Cī PrC-C, PμP№ (PIC- PePsPj PIC- Pr 10 PrPs 17 CīPsPeC-PI), CīPeC- PsC, CīPēPjCīPIP°P»Pē C, PμCīPēC,, P»CīPSPsPjC- Pr C%PsPrPSCī, P·P°PiP°P»PsPj P±CīPI PīPsPrC- P±PSPēPj PrPs C, P°PePsPiPs, C%Ps CīPīPsCīC, PμCīC- PīP°PICīCī Cī PrPsCīPsCīP»PēC... PīP°C†C- C" PSC, C-PI. PħPrPSP°Pe Cī PrPsCīP»C- PrP¶PμPSPSC- P·P° CīC†P°CīC, Cī PrC-C, PμP№ (166 PīP°C†C- C" PSC, C-PI: 109 Bī " Cī PīCīCīPīC- C, PμCīPēC,, P»CīPSPsPjC- PrCī C, P° 57 Bī " Cī PīCīCīPīC- PīP»P°C†PμP±Ps) PIPēPīP°PrPePē PīP°PSPeCīPμP°C, PēC, Cī P±CīP»Pē P·P°CīPμC" CīC, CīPsPIP°PSC- Cī 1,8 % (2/109) PīP°C†C- C" PSC, C-PI, CīPeC- PsC, CīPēPjCīPIP°P»Pē P»C- PeCīPIP°PSPSCī C, PμCīPēC,, P»CīPSPsPjC- PrPsPj, C, PsPrC- CīPe Cī PīCīCīPīC- PīP»P°C†PμP±Ps Bī " P¶PsPrPSPsPiPs Cī PīPsPrPIC- P№PSPs CīP»C- PīC- P№ C,, P°P·C-. PħPrPSP° P· C†PēC... PīPsPrC- P№ PīCīPēP·PIPμP»P° PrPs PīPsCīPīC- C, P°P»C- P·P°C†C- C— C, P° PIPēPjP°PiP°P»P° PePsCīPēPīCīPIP°P»CīPSPsPiPs P»C- PeCīPIP°PSPSCī. Pj PīP°C†C- C" PSC, C-PI PrPēC, CīC†PsPiPs PIC- PeCī, CīPeC- PsC, CīPēPjCīPIP°P»Pē P»C- PeCīPIP°PSPSCī C, PμCīPēC,, P»CīPSPsPjC- PrPsPj PSP° PIC- PrPeCīPēC, PsPjCī PμC, P°PīC- PrPsCīP»C- PrP¶PμPSPSCī, PīPsPIC- PrPsPjP»CīP»PsCīCī C%Pμ PīCīPs 2 PIPēPīP°PrPePē PīP°PSPeCīPμP°C, PēC, Cī (PsPrPēPS PīPsPIC- PrPsPjP»CīPICīCī CīPe CīPμCīPμP№Ps·PSP° PīPsPrC- Cī, C- PSCēPēP№ Bī " PSPμCīPμCīPμP№Ps·PSP° PīPsPrC- Cī P»PμPiPePsC— C- PSC, PμPSCīPēPIPSPsCīC, C-) C, P° PsPrPēPS PIPēPīP°PrPsPe CīPμCīPμP№Ps·PSPsPiPs PīPsCīC, CīPsPiPs PīP°PSPeCīPμP°C, PēC, Cī (P· PīCīPμPIPrPsPīP°PīC- P»PsPjPsCī). Pj PrPIPSC... C- P· C†PēC... 3 PīP°C†C- C" PSC, C-PI PīP°PSPeCīPμP°C, PēC, PīCīPēP·PIC-PI PrPs PīPsCīPīC- C, P°P»C- P·P°C†C- C— . PħP»C- PSC- C†PSC- CīPēPjPīC, PsPjPē PIPEP»CīC†P°P»Pē P±C- P»Cī Cī P¶PēIPsC, C-, PSCīPrPsC, Cī C, P°/P°P±Ps P±P»CīPIP°PSPSCī, P° C, P°PePsP¶ C†C- PīP°C†C- C" PSC, Pē PjP°P»Pē PīC- PrPIPēC%PμPSC- CīC- PIPSC- P°PjC- P»P·P·Pē C, P° P»C- PīP°P·Pē PI CīPēCīPsPIP°C, C†C- PeCīPsPIC-. PjCīC- PīP°C†C- C" PSC, Pē PsPrCīP¶P°P»Pē PīC- CīP»Cī PīCīPēPīPēPSPμPSPSCī P»C- PeCīPIP°PSPSCī C, P° PīCīPsPIPμPrPμPSPSCī PīCīPēCīPePsCīPμPSPsC— PīCīPsC†PμPrCīCīPē PIPēPIPμPrPμPSPSCī PīCīPμPīP°CīP°C, Cī (PrPēPI. CīPsP·PrC- P» B«PħCīPsP±P»PēPIPsCīC, C- P·P°CīC, PsCīCīPIP°PSPSCīB») C- PePsCīPēPīCīPIP°P»CīPSPsC— C, PμCīP°PīC- C— .

PkPμP±P°P¶P°PSC- CīPIPēC%P°, CīPeC- CīPμC" CīC, CīCīPIP°P»PēCīCī C†P°CīC, C- CēPμ Cī PrC-C, PμP№, PSC- P¶ Cī PrPsCīPsCīP»PēC...:

BīB B B B B B B B PμCīPs P°P»PsPīPμC†C- Cī PīPsPIC- PrPsPjP»CīP»PsCīCī Cī 22,0 % PīP°C†C- C" PSC, C-PI, CīPeC- PsC, CīPēPjCīPIP°P»Pē C, PμCīPēC,, P»CīPSPsPjC- Pr, Cī PīPsCīC- PIPSCīPSPSC- P· 12,3 % Cī PīP°C†C- C" PSC, C-PI, CīPeC- PsC, CīPēPjCīPIP°P»Pē PīP»P°C†PμP±Ps.

BīB B B B B B B B P†PSC,, PμPeC†C- C— P±CīP»Pē P·P°CīPμC" CīC, CīPsPIP°PSC- Cī 66,1 % PīP°C†C- C" PSC, C-PI, CīPeC- PsC, CīPēPjCīPIP°P»Pē C, PμCīPēC,, P»CīPSPsPjC- Pr, Cī

PJPjPsPIp̄ P·P±PμCȚC-PiP°PSPSCII. P—P±PμCȚC—PiP°C, Pē Cr̄ PSPμPrPsCȚC, Cr̄P̄iPSPsPjCr̄ PrP»CȚ PrC—C, PμPN̄ PjC—CȚC†C—. Pk̄Pμ PiPsC, CȚPμP±CrC” CȚPiPμC†C—P°P»Ch̄PSPēC... Cr̄PjPsPI P·P±PμCȚC—PiP°PSPSCII.

PJPiP°PePsPIPeP°.

P°P»CΠ PrPsP·CfPIP°PSPSCΠ PīPsB 7 PjPi:

B,, - 28 (14×2): PīPs 14 C,P°P±P»PμC,PsPe, PIPECΠPëC,PëC... PīP»C-PIPePsPIPsCΠ
PsP±PsP»PsPSPePsCΠ, Cf P±P»C-CfC,PμCΠC- P· P°P»CΠPjC-PSC-CΠ; PīPs 2
P±P»C-CfC,PμCΠPë PIPEP»P°PrPμPSPs Π CfPīP°PePsPIPeCf C,PëPīCf PīP°PjP°PSC†CΠ;
PīPs 1 CfPīP°PePsPIC†C-B C,PëPīCf PīP°PjP°PSC†CΠB PIPEP»P°PrPμPSPs PIB
PeP°CΠC,PsPSPSCf PePsCΠPsP±PeCf.

-

P°P»CΠ PrPsP·CfPIP°PSPSCΠ PīPs 14 PjPi:

B,, - 28 (14×2): PīPs 14 C,P°P±P»PμC,PsPe, PIPECΠPëC,PëC... PīP»C-PIPePsPIPsCΠ
PsP±PsP»PsPSPePsCΠ, Cf P±P»C-CfC,PμCΠC- P· P°P»CΠPjC-PSC-CΠ; PīPs 2
P±P»C-CfC,PμCΠPë PIPEP»P°PrPμPSPs Π CfPīP°PePsPIPeCf C,PëPīCf PīP°PjP°PSC†CΠ; PīPs 1
CfPīP°PePsPIC†C-B C,PëPīCf PīP°PjP°PSC†CΠ B PIPEP»P°PrPμPSPs PIB PeP°CΠC,PsPSPSCf
PePsCΠPsP±PeCf.

B,, - 84 (14×6): PīPs 14 C,P°P±P»PμC,PsPe, PIPECΠPëC,PëC... PīP»C-PIPePsPIPsCΠ
PsP±PsP»PsPSPePsCΠ, Π P±P»C-CfC,PμCΠC- P· P°P»CΠPjC-PSC-CΠ; PīPs 2
P±P»C-CfC,PμCΠPë PIPEP»P°PrPμPSPs Π CfPīP°PePsPIPeCf C,PëPīCf PīP°PjP°PSC†CΠ; PīPs 3
CfPīP°PePsPIPePë C,PëPīCf PīP°PjP°PSC†CΠB PIPEP»P°PrPμPSPs PIB PeP°CΠC,PsPSPSCf
PePsCΠPsP±PeCf.

PΛP°C,PμPiPsCΠC-CΠ PIC-PrPīCfCfPeCf. P—P° CΠPμC†PμPīC,PsPj.

P°PëCΠPsP±PSPëPe.

PhPīPμP»P»P° PΓPμP»CfPePμP° P†PSC,PμCΠPSPμC€PSP» PŸPħPŸ/

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PjC-CfC†CΠ PīCΠPsPIP°PrP¶PμPSPSCΠ PN°PsPiPs PrC-CΠP»CΠPSPScfC,C-.**

56 CΠCfC, PrPμ PëCfP°P·C-, PΛPhPΠPμBΠ™ P,,PκP¬, 60200, PαCΠP°PSC†C-CΠ/

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