

**PrP»CЦ PjPμPrPëC‡PSPsPiPs P•P°CíC,PsCíCíPIP°PSPSCЦ P»C-PeP°CĤCíCĤPePsPiPs
P•P°CíPsP±Cí**

(INDAPAMID-TEVA SR)

P†PSPrP°PiP°PjiPr б҃҃ CЎCfP»CHC,,PsPSP°PjiPrPSPëPNе PrC-CѓC҃PмC,PëPe P·
C-PSPrPsP»PsPIPëPj PeC-P»CHC†PмPj, C%оPs C,,P°C҃PjP°PePsP»PsPiiC‡PSPs
CЎPiPsC҃C-PrPSPмPSPëPNе C-P· C,iP°P·PëPrPSPëPjPë PrC-CѓC҃PмC,PëPeP°PjPë C,P°
PiC҃PëP·PSP°C‡P°C"C,CHCЎCЎ PrP»CЎ P»C-PeCѓPIP°PSPSCЎ P°C҃C,PмC҃C-P°P»CHбPSPsC—
PiC-PiPмC҃C,PмPSP·C-C—. P†PSPrP°PiP°PiC-Pr PrC-C" PSP° C҃C-PIpsc- PSPëC҃PsPe C-

$P \vdash P S P r P^{\circ} P i P^{\circ} P j i P r \quad C - P S P i C - P \pm C r C'' \quad C \bar{H} P_{\mu} P^{\circ} P \pm C \bar{I} P s C \bar{H} P \pm C \dagger C - C \bar{H} \quad P S P^{\circ} C, C \bar{H} C - C \bar{H} \quad C r$
 $P e P s C \bar{H} C, P \bar{e} P e P^{\circ} P \gg C \bar{H} P S P s P j C r \quad C \bar{I} P_{\mu} P i P j P_{\mu} P S C, C - P S P \bar{e} C \bar{H} P s P e. \quad P i P_{\mu} \quad P i C - P r P I P \bar{e} C \% C r C''$
 $P_{\mu} P e C \bar{I} P e C \bar{H} P_{\mu} C \dagger C - C \bar{H} \quad P S P^{\circ} C, C \bar{H} C - C \bar{H} \quad C, P^{\circ} \quad C \dots P \gg P s C \bar{H} P \bar{e} P r C - P I \quad C r \quad C \bar{I} P_{\mu} C \dagger C r \quad C - P j P_{\mu} P S C \bar{e} P s C \bar{H}$
 $P j C - C \bar{H} P s C \bar{H} \quad b \bar{H}'' \quad P e P^{\circ} P \gg C - C \bar{H} \quad C, P^{\circ} \quad P j P^{\circ} P i P S C - C \bar{H}, \quad P i C - P r P I P \bar{e} C \% C r C \bar{H} C \dagger P \bar{e} \quad C, P^{\circ} P e P \bar{e} P j$
 $C \dagger P \bar{e} P S P s P j \quad P r C - C r C \bar{H} P_{\mu} P.$

РљР»»С-РSC-С‡РSC- РrPsCГР»С-РrP¶PµPSPSCЦ II-III С,,Р°Р·Рө С-Р·
Р·Р°CГC,РsCГCрPIР°PSPSCЦPj C-PSPrР°PиР°PjC-PrCр Cр PjPsPSPsC,РµCГР°РiC-C-
РiCГРsPrPµPjPsPSCГC,CГCрPIР°Р»Рө, C%Ps Р°PSC,РөРiC-РiPµCГC,РµPSP·РөРIPSPөР№
РµC,,РµРeC, C-PSPrР°РiР°PjC-PrCр C,CГРөРөPIР°C” РiCГРsC,ЦiPiPsPj 24 PiPsPrРөPS.
Р”C-CрCГРµC,РөC‡PSPөР№ РµC,,РµРeC, Р±CрPI РiPsPjC-CГРPSPөРj.
РђPSC,РөРiC-РiPµCГC,РµPSP·РөРIPSP° РrC-Цi C-PSPrР°PиР°PjC-PrCр РiPsPiбГ™ ЦiР·Р°PSP° Р·
РiPsРeCГР°C%PµPSPSCЦPj РµР»Р°CГC,РөC‡PSPsCГC,C- Р°CГC,РµCГC-Р№ C,Р°
Р·РjРµPSCөРµPSPSCЦPj CГРµР·РөCГC,РµPSC,PSPsCГC,C- Р°CГC,РµCГC-РsР» C-
Р·Р°РiР°Р»»С‡PSPsPiPs РiPµCГРөC,,РµCГРөC‡PSPsPiPs PsРiPsCГCр CГCрPrРөPS.

$\text{P}_{\mu}\text{C}\overline{\text{H}}\text{P}_{\text{e}}\text{P}_{\text{i}}\text{P}_{\text{e}}\text{C}\%_{\text{o}}\text{P}_{\mu}\text{PSPSC}-\text{C}\overline{\text{H}}\text{P}_{\mu}\text{P}_{\text{e}}\text{P}_{\text{s}}\text{P}_{\text{j}}\text{P}_{\mu}\text{PSPPrPsPIP}^{\circ}\text{PSPsC}-\text{PrPsP}\cdot\text{P}_{\text{e}}$
 $\text{C},\text{P}_{\mu}\text{C}\overline{\text{H}}\text{P}^{\circ}\text{P}_{\text{i}}\text{P}_{\mu}\text{PIC},\text{P}_{\text{e}}\text{C}\pm\text{PSP}_{\text{e}}\text{PN}_{\text{e}}\text{P}_{\mu}\text{C},,\text{P}_{\mu}\text{P}_{\text{e}}\text{C},\text{C},\text{C}-\text{P}^{\circ}\text{P}\cdot\text{P}_{\text{e}}\text{PrC}-\text{PI}\text{C},\text{P}^{\circ}$
 $\text{C},\text{C}-\text{P}^{\circ}\text{P}\cdot\text{P}_{\text{e}}\text{PrPsP}_{\text{i}}\text{PsPrC}-\text{P}\pm\text{PSP}_{\text{e}}\text{C}\dots\text{PrC}-\text{CrC}\overline{\text{H}}\text{P}_{\mu}\text{C},\text{P}_{\text{e}}\text{P}_{\text{e}}\text{C}-\text{PI}\text{PSP}_{\mu}$
 $\text{P}\cdot\text{P}\pm\text{C}-\text{P}\gg\text{CH}\text{C}\epsilon\text{CrC}''\text{C},\text{CH}\text{C}\overline{\text{I}}\text{C}\overline{\text{I}},\text{C},\text{PsPrC}-\text{C}\overline{\text{I}}\text{P}_{\text{e}}\text{P}_{\text{e}}\text{C}-\text{P}\gg\text{CH}\text{P}_{\text{e}}\text{C}-\text{C}\overline{\text{I}}\text{C},\text{CH}$
 $\text{PSP}_{\mu}\text{P}\pm\text{P}^{\circ}\text{P}\overline{\text{I}}\text{P}^{\circ}\text{PSP}_{\text{e}}\text{C}\dots\text{C}\overline{\text{I}}\text{PIP}_{\text{e}}\text{C}\%_{\text{o}}\text{P}\cdot\text{C}\overline{\text{H}}\text{PsC}\overline{\text{I}}\text{C},\text{P}^{\circ}\text{C}''.\text{P}_{\text{i}}\text{P}_{\text{e}}\text{C}\%_{\text{o}}\text{Ps}\text{P}\gg\text{C}-\text{P}_{\text{e}}\text{Cr}\overline{\text{I}}\text{PIP}^{\circ}\text{PSPSC}\overline{\text{I}}\text{C}''$
 $\text{PSP}_{\mu}\text{PrPsC}\overline{\text{I}}\text{C},\text{P}^{\circ}\text{C},\text{PSC}\text{H}\text{Ps}\text{P}_{\mu}\text{C},,\text{P}_{\mu}\text{P}_{\text{e}}\text{C},\text{P}_{\text{e}}\text{PIPSP}_{\text{e}}\text{P}_{\text{j}},\text{P}_{\text{i}}\text{C}-\text{PrPIP}_{\text{e}}\text{C}\%_{\text{o}}\text{Cr}\overline{\text{I}}\text{PIP}^{\circ}\text{C},\text{P}_{\text{e}}\text{PrPsP}\cdot\text{Cr}\text{PSP}_{\mu}$
 $\text{C}\overline{\text{H}}\text{P}_{\mu}\text{P}_{\text{e}}\text{P}_{\text{s}}\text{P}_{\text{j}}\text{P}_{\mu}\text{PSPPrCrC}''\text{C},\text{CH}\text{C}\overline{\text{I}}\text{C}\overline{\text{I}}.$

B B B B B · PSPμ PIPiP»PëPIP°C” PSP° PjPμC,P°P±PsP»C-P·Pj P»iPüiPriPI
(C,C₇PëPiP»C-C†PμC₇PëPrPë, C...PsP»PμC†C,PμC₇PëPS P»C-PiPsPïC₇PsC,PμC—PrC-PI
PSPëP·CHbPePsC— C%oC-P»CHbPSPsC†C,C- C,P° C...PsP»PμC†C,PμC₇PëPS
P»C-PiPsPïC₇PsC,PμC—PrC-PI PIPëC†PsPePsC— C%oC-P»CHbPSPsC†C,C-),

$$P \vdash P S P \vdash P^{\circ} P \ddot{P}^{\circ} P \vdash C - P \vdash P \vdash C - C'' \quad P S P^{\circ} \quad C \ddot{P} C - P I P S C - \quad C \dot{P} C \vdash P \vdash P \ddot{P} P S \quad C \in P \gg C \dot{P} C \dots P S P \vdash:$$

B B B B B · P·PjPμPSC€PμPSPSCI CÍPePsCĤPsC,P»PëPIPsC— P·PrP°C,PSPsCÍ'C,C-
PiP»P°PrPμPSCĤPePëC... Pj'ClP·C-PI CÍCrPrPëPS, C%oPs PìPsPI'ClP·P°PSPs P·C-
P·PjC-PSP°PjPë C,CĤP°PSCÍ'PjPμPjP±CĤP°PSPSPsPiPs PsP±PjC-PSCr C-PsPSC-PI

(PiPsP»PsPIPSpPj C‡PpSPSPj PeP°P»CHC‡C-CH);

B B B B· C‡C,PpPjCrP»C‡C‡C-C— C‡PpPSC,PμP·Cr P‡CHPsC‡C,P°PiP»P°PSPPrPpPSCr PGE₂
C,P° P‡CHPsC‡C,P°C‡PpPeP»C-PSCr PGI₂ (PIP°P·PsPrPpP»P°C,P°C,PsCH C,P°
C-PSPiC-P±C-C,PsCH P°PiCHPμPiP°C‡C-C— C,CHPsPjP±PsC‡PpC,C-PI).

PαP°CHPjP°PePsPeC-PSPμC,PpPeP°.

P°C-CHC‡P° CHPμC‡PsPIPSpP° B‡“ 1,5 PjPi C-PSPPrP°PiP°PjC-PrCr PjC-C‡C,PpC,CHC‡C‡C Cr
C,P°P±P»PμC,C‡C- P‡CHPsP»PsPSPIPsPIP°PSPsC— PrC-C—, C‡C,PIPsCHPμPSPsC— PSP°
PsC‡PSPsPIC- PjP°C,CHPpPeC‡Cr. P PsP·PiPsPrC-P»PμPSPSC‡C C-PSPPrP°PiP°PjC-PrCr PI
C‡PpC‡C,PμPjC- PjP°C,CHPpPeC‡Cr P·P°P±PμP·PiPμC‡CrC” PμPsPiPs CHC-PIPSpPjC-CHPSPμ
PIPSPIC-P»CHPSPμPSPSC‡C P· C,P°P±P»PμC,PePp.

PpP±C‡PsCHP±C‡C-C‡

P°PpPIC-P»CHPSPμPSP° C„CHP°PeC‡C-C‡ C-PSPPrP°PiP°PjC-PrCr C€PIPSPrPePs C,P°
PiPsPIPSIC-C‡C,CH PIC‡PjPsPeC,CrC”C,CHC‡C‡C Cr C€P»C‡PSPPePsPIPs-PpPpC€PePsPIPsPjCr
C,CHP°PeC,C-. PμCHPpPpPsPj C-P¶C- PrPμC%Ps PiC-PrPIPSpC%CrC” C€PIPSPrPeC-C‡C,CH
P°P±C‡PsCHP±C‡C-C—, P°P»Pμ PSPμ PIPiP»PpPIP°C” PSP° PeC-P»CHPeC-C‡C,CH
P‡CHPμPiP°CHP°C,Cr, C%Ps PIC‡PjPsPeC,P°P»P°C‡C‡.

PpP°PeC‡PpPjP°P»CHPSP° PePsPSC‡PμPSC,CHP°C‡C-C‡ Cr PiP»P°P·PjC- PeCHPsPIC-
PiC-C‡P»C‡ P‡CHPpPpPsPjCr PsPrPSPsCHP°P·PsPIPsC— PrPsP·Pp PrPsC‡C‡PiP°C”C,CHC‡C‡C
P‡CHPpP±P»PpP·PSPs C‡PμCHPμP· 12 PiPsPrPpPS, PiPsPrP°P»CHC€Pμ
P·P°C‡C,PsC‡CrPIP°PSPSC‡C P‡CHPμPiP°CHP°C,Cr P·PjPμPSC€CrC” PePsP»PpPIP°PSPSC‡C
CHC-PIPSIC‡C C-PSPPrP°PiP°PjC-PrCr Cr PiP»P°P·PjC- PeCHPsPIC- Cr PjC-P¶PrPsP·PsPIPsPjCr
C-PSC,PμCHPIP°P»C-. P‡C‡PSCrCHC,CH C-PSC,CHP°C-PSPPrPpPIC-PrCrP°P»CHPSC-
PePsP»PpPIP°PSPSC‡C.

P PsP·PiPsPrC-P»

P—PI’C‡P·CrPIP°PSPSC‡C P· P‡CHPsC,PμC—PSP°PjPp PiP»P°P·PjPp PeCHPsPIC- B‡“ 79%.

PμPμCHjPsPr PSP°PiPIPSpPIPSPrPμPSPSC‡C C‡C,P°PSPsPIPSpC,CH PliPr 14 PrPs 24 PiPsPrPpPS
(Cr C‡PμCHPμPrPSCpPsPjCr 18 PiPsPrPpPS).

P C-PIPSCH C‡C,P°P±C-P»CHPSPsC— PePsPSC‡PμPSC,CHP°C‡C-C—
PrPsC‡C‡PiP°C”C,CHC‡C‡C C‡PμCHPμP· 7 PrPSC-PI. P PμPiCrP»C‡CHPSPμ
P·P°C‡C,PsC‡CrPIP°PSPSC‡C PSPμ C‡P‡CHPpC‡PpPSC‡C” PeCrPjCrP»C‡C‡C-C—.

P°PpPIPSPrPμPSPSC‡C

P‡PSPPrP°PiP°PjC-Pr PIPpIPsPrPpC,CHC‡C‡C C-P· C‡PμC‡PμCH (70% PIC-Pr PrPsP·Pp) C,P°
C„PμPeP°P»C-C‡PjPp (22%) Cr PIPpPiP»C‡PrC- PSPμP°PeC,PpPIPSpC...
PjPμC,P°P±PsP»C-C,C-PI.

PμP°C‡C-C”PSC,Pp PIPpC‡PsPePsPiPs CHPpP·PpPeCr

Pj PiP°C‡C-C”PSC,C-PI C-P· PSPpCHPePsPIPsCH PSPμPrPsC‡C,P°C,PSC-C‡C,CH
C„P°CHPjP°PePsPeC-PSPμC,PpC‡PSC- PiP°CHP°PjPμC,CHPp PSPμ P·PjC-PSCCHC,CHC‡C‡C.

РЉР»С-РSC-С‡РSC- С...Р°СЃР°Р°С,РµСЃР°СЃР,РёРёРё.

РµРsРёР°Р°Р°РSPSCИ.

Р•СЃРµРSC‡С-Р°Р»СЃРSP° РiС-РiРµСЃС,РµРSP•С-СИ Сѓ РrРsСЃРsСЃР»РёС....

РµСЃРsС,РёРiРsРёР°Р°РSPSCИ.

вЃ“ РµС-РrРiРёС%РµРSP° С‡СѓС,Р»РёРiС-СЃС,СЃ РrРs С-РSPРrР°РiР°РјС-РrСѓ, С-РSCёРёС...
СЃСѓР»СЃСЃР°РјС-РrС-Рi Р°Р±Рs РrРs Р±СѓРrСЃ-СИРёРёС... РrРsРiРsРјС-РiРSPёС...
СЃРµС‡РsРiРёС;

вЃ“ С,СИРiРёР°Р° РSPёСЃРёРsРiР° РSPµРrРsСЃС,Р°С,РSiСЃС,СЃ;

вЃ“ РiРµС‡С-РSPёРsРiР° РµРSC‡РµС,,Р°Р»Р»РiР°С,С-СИ Р°Р±Рs С,СИРiРёРµРµ
РiРsСЃСѓСѓСёРµРµРSPSCИ С,,СѓРSPёС‡С-С— РiРµС‡iРSPёРё;

вЃ“ РiС-РiРsРёР°Р»С-С-С”РјС-СИ.

**Р°Р°С”РјРsРrС-СИ Р• С-РSCёРёРјРё Р»С-РёР°СЃСЃРёРёРё Р°Р°СЃРsР±Р°РјРё С,Р°
С-РSCёС- РiРёРrРё РiР°Р°С”РјРsРrС-Р№.**

РќРµСЃРµРsРјРµРsРјРSPРrРsРiР°РSC- РёРsРјР±С-РSP°С‡С-С—

Р»С-С,С-Р№. РёРsРiР»Р»РёРiРµС%РµРSPSCИ СЃС-РiРSCИ Р»С-С,С-СЃ Сѓ
РiР»Р»Р°РјС- РёСЃРsРiС- С,Р° РiРsСИРiР° СЃРёРјРiС,РsРјС-Рi РiРµСЃРµРrРsР•СѓРiР°РSPSCИ,
СИРё С- РiСЃРё Р±РµРµСЃР»СЃР»СЃСЃСЃР»СЃРiС-Р№ РrС-С”С,С- (Р•РSPёРiРµРSPSCИ
РµРёСЃРёСЃРµС‡С-С— Р»С-С,С-СЃ Р• СЃРµС‡РµСЃ). РiРёС%Рs РiРsС,СЃС-Р±РSPµ
РiСЃРёРёР•РSP°С‡РµРSPSCИ РrС-СѓСЃРµС,РёРёР°, РSPµРsР±С...С-РrРSPs РiСЃРsРiРµСЃС,Рё
СЃРµС,РµР»СЃРSPёР№ РјРsРSC-С,РsСЃРёРSPi СЃС-РiРSCИ Р»С-С,С-СЃ Сѓ РiР»Р»Р°РјС-
РёСЃРsРiС- С,Р° Р°РrР°РiС,СѓРiР°С,Рё РrРsР•С Р»С-С,С-СЃ.

Р”С-СЃСРµС,РёРёРё. РќРµ СЃРµРsРјРµРsРјРSPРrС”С,СЃСЃСЃ СЃСѓРјС-СЃРSPµ
Р°Р°СЃС,РsСЃСѓРiР°РSPSCИ С-РSPРrР°РiР°РјС-РrСѓ Р• РrС-СѓСЃРµС,РёРёР°РјРё, СИРёС-
РјРsРiСѓС,СЃ СЃРiСЃРёРёС‡РёРёС,Рё РiС-РiРsРёР°Р»С-С-С”РјС-СЃ (Р±СѓРµРµС,Р°РSC-Рr,
С,,СѓСЃРsСЃРµРµРјС-Рr, РiС-СЃРµС,Р°РSC-Рr, С,С-Р°Р•РёРёРё С,Р° РёСЃРёРiР°РјС-Рr).

РёРsРјР±С-РSP°С‡С-С—, С%Рs РiРsС,СЃРµР±СЃС,СЃ РsР±РµСЃРµРiРSPsСЃС,С-

РµСЃРµРiР°СЃР°,Рё, С%Рs РјРsРiСЃС,СЃ СЃРiСЃРёРёС‡РёРёРSPёС,Рё РiРёРSPёРёРSPµРSPSCИ
РiР°СЃРёРёР°Р»Р»Р»Р»СЃ— СёР»СЃСЃРsС‡РёРiРsС— С,Р°...С-РёР°СЃРrС-С—
С,РёРiСЃ Б«РiС-СЃСЃРµС,Б»:

Б Б Б Б• Р°РSC,РёР°СЃРёС,РјС-С‡РSC- РiСЃРµРiР°СЃР°,Рё РёР»Р»Р»Р»Р» Р‡Р°Р°
(С...С-РSC-РrРёРs, РiС-РrСЃРsС...С-РSC-РrРёРs, РrРёР•РsРiС-СЃР°РјС-Рr);

Б Б Б Б• Р°РSC,РёР°СЃРёС,РјС-С‡РSC- РiСЃРµРiР°СЃР°,Рё РёР»Р»Р»Р»Р» Р‡Р‡Р‡Р‡

(P°PjC-PsPrP°CḡPsPS, CḡPsC,P°P»PsP», PrPsC,,PμC,PëP»C-Pr, C-P±CḡC,PëP»C-Pr);

B B B B B· PrPμCḡPeC- P°PSC,PëPḡCḡPëC...PsC,PëC±PSC- PḡCḡPμPḡP°CḡP°C,Pë:

вḡ“ C,,PμPSPsC,C-P°P·PëPSPë (C...P»PsCḡPḡCḡPsPjP°P·PëPS, C†PëP°PjPμPjP°P·PëPS,
P»PμPIPSPjPμPḡCḡPsPjP°P·PëPS, C,C-PsCḡPëPrP°P·PëPS, C,CḡPëC,,P»CḡPsPḡPμCḡP°P·PëPS);

вḡ“ P±PμPSP·P°PjC-PrPë (P°PjC-CḡCḡP»CḡPḡCḡPëPr, CḡCḡP»CḡPḡC-CḡPëPr,
CḡCḡP»CḡC,PḡPḡCḡPëPr, C,C-P°PḡCḡPëPr);

вḡ“ P±CḡC,PëCḡPsC,,PμPSPsPSPë (PrCḡPsPḡPμCḡPëPrPsP», PiP°P»PsPḡPμCḡPëPrPsP»);

B B B B B· C-PSC€C- P»C-PeP°CḡCḡCḡPeC- P·P°CḡPsP±Pë: P±PμPḡCḡPëPrPëP»,
C†PëP·P°PḡCḡPëPr, PrPëC,,PμPjP°PSC-P», PμCḡPëC,CḡPsPjC-C†PëPS
PIPSCḡC,CḡC-C€PSCḡPsPIPμPSPSPëPNḡ, PiP°P»PsC,,P°PSC,CḡPëPS, PjC-P·PsP»P°CḡC,PëPS,
PḡPμPSC,P°PjC-PrPëPS, CḡPiP°CḡC,,P»PsPeCḡP°C†PëPS, PjPsPeCḡPëC,,P»PsPeCḡP°C†PëPS,
PIC-PSPeP°PjC-PS PIPSCḡC,CḡC-C€PSCḡPsPIPμPSPSPëPNḡ.

PμCḡPë P·P°CḡC,PḡCḡCḡPIP°PSPSC- C-PSPrP°PḡPjC-PrCḡ P·
PIPëC%PμP·P°P·PSP°C±PμPSPëPjPë P»C-PeP°CḡCḡCḡPePëPjPë P·P°CḡPsP±P°PjPë
PḡC-PrPIPëC%CḡC",CḡCḡCḡ CḡPëP·PëPe PIPëPSPëPePSPμPSPSCḡ C€P»CḡPSPsC±PePsPIPëC...
P°CḡPëC,PjC-PNḡ, P·PsPeCḡPμPjP° *torsades de pointes* вḡ“ PiP°CḡPsPeCḡPëP·PjP°P»CḡPSPsC—
C€P»CḡPSPsC±PePsPIPḡC— C,P°C...C-PeP°CḡPrC-C— C,PëPḡCḡ B«PḡC-CḡCḡPμC,B»
(PiC-PiPsPeP°P»C-C"ḡPjC-Cḡ C" C,,P°PeC,PḡCḡPsPj CḡPëP·PëPeCḡ).

PμPμCḡPμPr PḡCḡPëP·PSP°C±PμPSPSCḡPj C,P°PePsC— PePsPjP±C-PSP°C†C-C— CḡP»C-Pr
PḡPμCḡPμPIC-CḡPëC,Pë CḡC-PIPμPSCḡ PeP°P»C-Cḡ C,P°, Cḡ CḡP°P·C-
PSPμPsP±C...C-PrPSPsCḡC,C-, PIC-PrPePsCḡPëPiCḡPIP°C,Pë PNḡPsPiPs. PŸP»C-Pr
PePsPSC,CḡPsP»CḡPIP°C,Pë PeP»C-PSC-C†PSPëPNḡ CḡC,P°PS PḡP°C†C-C"ḡPSC,C-PI,
PμP»PμPeC,CḡPsP»C-C,Pë PiP»P°P·PjPë C,P° P·PḡP". PμCḡPë PSP°CḡPIPSPsCḡC,C-
PiC-PḡPsPeP°P»C-C"ḡPjC-C— CḡPμPePsPjPμPSPPrPsPIP°PSPs PḡCḡPëP·PSP°C±P°C,Pë
PḡCḡPμPḡP°CḡP°C,Pë, C%Ps PSPμ CḡPḡCḡPëC±PëPSCḡCḡC,Cḡ PIPëPSPëPePSPμPSPSCḡ
torsades de pointes.

*PḡPμCḡC,PμCḡPsC—PrPSC- PḡCḡPsC,PëP·P°PḡP»CḡPSC- PḡCḡPμPḡP°CḡP°C,Pë (PrP»Cḡ
CḡPëCḡC,PμPjPSPsPiPs PḡCḡPëP·PSP°C±PμPSPSCḡ), PIPeP»CḡC±P°CḡC±Pë
CḡPμP»PμPeC,PëPIPSC- C-PSPiC-P±C-C,PḡCḡPë C†PëPeP»PsPsPeCḡPëPiPμPSP°P·Pë 2,
PIPμP»PëPeC- PrPsP·Pë CḡP°P»C-C†PëP»P°C,C-PI (≥3 Pi/PrPsP±Cḡ):*

B B B B B· PjPsPḡCḡC,Cḡ P·PjPμPSC€CḡPIP°C,Pë P°PSC,PëPiC-PḡPμCḡC,PμPSP·PëPIPSPëPNḡ
PμC,,PμPeC, C-PSPrP°PḡPjC-PrCḡ;

B B B B B· Cḡ P·PSPμPIPPrPSPμPSPëC... PiP°C†C-C"ḡPSC,C-PI PḡC-PrPIPëC%CḡC",CḡCḡCḡ
CḡPëP·PëPe PIPëPSPëPePSPμPSPSCḡ PiPsCḡC,CḡPsC— PSPëCḡPePsPIPḡC—
PSPμPrPsCḡC,P°C,PSPsCḡC,C- (C±PμCḡPμP· P·PSPëPḡPμPSPSCḡ
PiP»PsPjPμCḡCḡP»CḡCḡPSPsC— C,,C-P»CḡC,CḡP°C†C-C—). PμPμCḡPμPr PḡPsC±P°C,PePsPj
P»C-PeCḡPIP°PSPSCḡ PSPμPsP±C...C-PrPSPs PIC-PrPSPsPIPëC,Pë PIPsPrPSPëPNḡ P±P°P»P°PSCḡ
C,P° PḡPμCḡPμPIC-CḡPëC,Pë C,,CḡPSPeC†C-Cḡ PSPëCḡPsPe.

*P†PSPiC-P±C-C,PḡCḡPë PḡPμPα. PḡPsPḡP»PëPIPμ PIPëPSPëPePSPμPSPSCḡ CḡP°PḡC,PḡPIPḡC—
P°CḡC,PμCḡC-P°P»CḡPSPsC— PiC-PḡPsC,PμPSP·C-C— C,P°/P°P±Ps PiPsCḡC,CḡPsC—
PSPëCḡPePsPIPḡC— PSPμPrPsCḡC,P°C,PSPsCḡC,C- Cḡ PiP°C†C-C"ḡPSC,C-PI P·C-
P·PSPëPḡPμPSPëPj CḡC-PIPSPμPj PSP°C,CḡC-Cḡ (PsCḡPsP±P»PëPIPḡ Cḡ PiP°C†C-C"ḡPSC,C-PI*

P·C- CÍC,PμPSPsP·PsPj PSPëCĤPePsPIPsC— P°CĤC,PμCĤC-C—).

PĥCĤC,PμCĤC-P°P»CH̄PSP° PiC-PiPμCĤC,PμPSP·C-CĬ. PĪPeC%Ps PĪPsPĪPμCĤPμPrPSC”
P·P°CÍC,PsCÍCÍPIP°PSPSCĬ PrC-CÍCĤPμC,PëPeP° CÍPĪCĤPëC†PëPSCĬP»Ps P·PSPëP¶PμPSPSCĬ
CĤC-PIPsCĬ PSP°C,CĤC-CĤ, PSPμPsP±C...C-PrPSPs P·P° 3 PrPsP±Pë PrPs PĪPsC†P°C,PeCÍ
P»C-PeCÍPIP°PSPSCĬ C-PSPiC-P±C-C,PsCĤPsPj
P°PSPiC-PsC,PμPSP·PëPSPiPμCĤPμC,PIPsCĤCĤPIP°P»CH̄PSPsPiPs C,,PμCĤPjPμPSC,CÍ (PĥPμPα)
PĪCĤPëPĪPëPSPëC,Pë PĪCĤPëPμPsPj PrC-CÍCĤPμC,PëPeP° C,P° PĪPsC,C-Pj PĪCĤPë
PSPμPsP±C...C-PrPSPsCÍC,C- PIC-PrPSPsPIPëC,Pë C,PμCĤP°PĪC-CĤ
PiC-PĪPsPeP°P»C-C”PjC-C†PSPëPj PrC-CÍCĤPμC,PëPePsPj P°P±Ps CĤPsP·PĪPsC†P°C,Pë
PĪCĤPëPμPsPj C-PSPiC-P±C-C,PsCĤCÍ PĥPμPα P· PSPëP·CH̄PePsC— PĪPsC†P°C,PePsPIPsC—
PrPsP·Pë C-P· PSP°CÍC,CÍPĪPSPëPj PĪPsCÍC,CÍPĪPsPIPëPj C—C— PĪC-PrPIPëC%PμPSPSCĬPj.

PμCĤPë P·P°CÍC,C-PN̄PSC-PN̄ CÍPμCĤC†PμPIC-PN̄ PSPμPrPsCÍC,P°C,PSPsCÍC,C-
P·P°CÍC,PsCÍCÍPIP°PSPSCĬ C-PSPiC-P±C-C,PsCĤCÍ PĥPμPα CÍP»C-Pr
CĤPsP·PĪPsC†PëPSP°C,Pë P· PjC-PSC-PjP°P»CH̄PSPsC— PrPsP·Pë, C,P°, PjPsP¶P»PëPIPs,
PĪC-CÍP»CĬ P·PSPëP¶PμPSPSCĬ PrPsP·Pë PĪPsPĪPμCĤPμPrPSCĤPs PĪCĤPëP·PSP°C†PμPSPsPiPs
PrC-CÍCĤPμC,PëPeP°, C%Ps PIPëPIPsPrPëC,CH̄ PeP°P»C-PN̄.

Pj P±C¿PrCH̄-CĬPePsPjC¿ PIPëPiP°PrPeC¿ PSPμPsP±C...C-PrPSPs PĪCĤPsPIPsPrPëC,Pë
PePsPSC,CĤPsP»CH̄ C,,CÍPSPeC†C-C— PSPëCĤPsPe (PeCĤPμP°C,PëPSC-PSCÍ PĪP»P°P·PjPë)
PĪCĤPsC,CĬPiPsPj PĪPμCĤC€PëC... C,PëP¶PSC-PI P»C-PeCÍPIP°PSPSCĬ
C-PSPiC-P±C-C,PsCĤPsPj PĥPμPα.

PμCĤPμPiP°CĤP°C,Pë, C%Ps PjPsP¶C¿C,CH̄ CÍPĪCĤPëC†PëPSPëC,Pë PIPëPSPëPePSPμPSPSCĬ
PiC-PĪPsPeP°P»C-C”PjC-C—: PiP»CH̄PePs- C,P° PjC-PSPμCĤP°P»PsPePsCĤC,PëPePsC—PrPë
(PrP»CĬ CÍPëCÍC,PμPjPSPsPiPs PĪCĤPëP·PSP°C†PμPSPSCĬ), P°PjC,,PsC,PμCĤPëC†PëPS P’
(PIPsC¿C,CĤC-C€PSCĤPsPIPμPSPSPëPN̄), C,PμC,CĤP°PePsP·P°PeC,PëPr, PĪCĤPsPSPsCÍPSC-
PĪCĤPμPiP°CĤP°C,Pë, C%Ps CÍC,PëPjC¿P»CH̄CĤC,CH̄ PĪPμCĤPëCÍC,P°P»CH̄C,PëPeC¿,
PĪC-PrPIPëC%CrCĤC,CH̄ CĤPëP·PëPe PIPëPSPëPePSPμPSPSCĬ PiC-PĪPsPeP°P»C-C”PjC-C—
(P°PrPëC,PëPIPsPëPN̄ PμC,,PμPeC,). PŸP»C-Pr PePsPSC,CĤPsP»CH̄PIP°C,Pë C,P° PĪCĤPë
PSPμPsP±C...C-PrPSPsCÍC,C- PĪCĤPsPIPsPrPëC,Pë PePsCĤPμPeC†C-CĤ PeP°P»C-CĤ CÍ
PĪP»P°P·PjC- PeCĤPsPIC-, PsCÍPsP±P»PëPICÍ CÍPIP°PiCÍ CÍP»C-Pr PĪCĤPëPrC-P»CĬC,Pë
PsPrPSPsC†P°CÍPSC-PN̄ C,PμCĤP°PĪC-C— C-P· CÍPμCĤC†PμPIPëPjPë PiP»C-PePsP·PëPrP°PjPë.
P PμPePsPjPμPSPrCÍC”C,CH̄CÍCĬ PĪCĤPëP·PSP°C†P°C,Pë PĪCĤPsPSPsCÍPSC-
PĪCĤPμPiP°CĤP°C,Pë, C%Ps PSPμ CÍC,PëPjCÍP»CH̄CĤC,CH̄ PĪPμCĤPëCÍC,P°P»CH̄C,PëPeCÍ.

PŸPμCĤC†PμPIC- PiP»C-PePsP·PëPrPë. PĶP°CĬPIPsC-CÍC,CH̄ PiC-PĪPsPeP°P»C-C”PjC-C—
C,P°/P°P±Ps PiC-PĪPsPjP°PiPSC-C”PjC-C— CÍPĪCĤPëCĬC”
PeP°CĤPrC-PsC,PsPeCÍPëC†PSPsCÍC,C- CÍPμCĤC†PμPIPëC... PiP»C-PePsP·PëPrC-PI.
P PμPePsPjPμPSPrPsPIP°PSPs PĪCĤPsPIPsPrPëC,Pë PjPsPSC-C,PsCĤPëPSPi PeP°P»C-CĤ,
PjP°PiPSC-CĤ CÍ PĪP»P°P·PjC- PeCĤPsPIC-, P·PμP”-PePsPSC,CĤPsP»CH̄ C,P° PĪCĤPë
PSPμPsP±C...C-PrPSPsCÍC,C- PePsCĤPëPiCÍPIP°C,Pë P»C-PeCÍPIP°PSPSCĬ.

P’P°PeP»PsC,,PμPS. PμPsCÍPëP»CH̄C” P°PSC,PëPiC-PĪPμCĤC,PμPSP·PëPIPsCÍ PrC-CĤ
PĪCĤPμPiP°CĤP°C,CÍ. PĶP° PĪPsC†P°C,PeCÍ C,PμCĤP°PĪC-C— PSPμPsP±C...C-PrPSPs
PIC-PrPSPsPIPëC,Pë PIPsPrPSPs-PμP»PμPeC,CĤPsP»C-C,PSPëPN̄ P±P°P»P°PSCÍ
PĪP°C†C-C”PSC,P° C,P° PePsPSC,CĤPsP»CH̄PIP°C,Pë C,,CÍPSPeC†C-CĤ PSPëCĤPsPe.

PμPsPjP±C-PSP°C†C-C—, C%Ps PĪPsC,CĤPμP±C¿CH̄C,CH̄ C¿PIP°PiPë

$P_{\text{Л}}P^{\circ}P \gg C - PN_{\text{L}}P \cdot P \pm P_{\mu}C_{\text{H}}C - PiP^{\circ}C_{\text{H}}C \# C - PrC - C \acute{z}C_{\text{H}}P_{\mu}C, P\ddot{e}PeP\ddot{e} (P^{\circ}PjC - P \gg PsC_{\text{H}}P\ddot{e}Pr,$
 $C\acute{I}PiC - C_{\text{H}}PsPSPsP \gg P^{\circ}PeC, PsPS, C, C_{\text{H}}P\ddot{e}P^{\circ}PjC, P_{\mu}C_{\text{H}}P_{\mu}PS).$ $P\ddot{I}PeC\%_{\text{Ps}} C - C\acute{I}PSCrC''$
 $PrPsC \dagger C - P \gg CH\text{PSC} - C\acute{I}C, CH PiC_{\text{H}}P\ddot{e}P \cdot PSP^{\circ}C \dagger P_{\mu}PSPSC \sqcup C, P^{\circ}PePsC - PePsPjP \pm C - PSP^{\circ}C \dagger C - C -$
 $PrP_{\mu}C \sqcup PeP\ddot{e}Pj PiP^{\circ}C \dagger C - C''PSC, P^{\circ}Pj, PSP_{\mu} PIP\ddot{e}PeP \gg C_{\text{H}}C \dagger P^{\circ}C''C, CHC\acute{I}C \sqcup PjPsP \P P \gg P\ddot{e}PIC - C\acute{I}C, CH$
 $PIP\ddot{e}PSP\ddot{e}PePSP_{\mu}PSPSC \sqcup PiC - PiPsPeP^{\circ}P \gg C - C''PjC - C - P^{\circ}P \pm Ps PiC - PiP_{\mu}C_{\text{H}}PeP^{\circ}P \gg C - C''PjC - C -$
 $(PsC\acute{I}PsP \pm P \gg P\ddot{e}IPs Cr PiP^{\circ}C \dagger C - C''PSC, C - PI P \cdot C \dagger CrPeC_{\text{H}}PsPIP\ddot{e}Pj PrC - P^{\circ}P \pm P_{\mu}C, PsPj P^{\circ}P \pm Ps C - P \cdot$
 $PSP\ddot{e}C_{\text{H}}PePsPIPsC_{\text{H}} PSP_{\mu}PrPsC\acute{I}C, P^{\circ}C, PSC - C\acute{I}C, C_{\text{H}}).$ $P\ddot{Y}P \gg C - Pr PiC_{\text{H}}PsPIPsPrP\ddot{e}C, P\ddot{e}$
 $PjPsPSC - C, PsC_{\text{H}}P\ddot{e}PSPi PeP^{\circ}P \gg C - C_{\text{H}} Cr PiP \gg P^{\circ}P \cdot PjC - PeC_{\text{H}}PsPIC -, PePsPSC, C_{\text{H}}PsP \gg CH P \cdot P_{\text{Л}}P''$
 $C, P^{\circ} PiC_{\text{H}}P\ddot{e} PSP_{\mu}PsP \pm C \dots C - PrPSPsC\acute{I}C, C - PePsC_{\text{H}}P\ddot{e}PiCrPIP^{\circ}C, P\ddot{e} C, P_{\mu}C_{\text{H}}P^{\circ}PiC - C_{\text{H}}.$

$P_{\text{Л}}P_{\mu}C, C, \text{PsC}_{\text{H}}PjC - PS.$ $P_{\mu}C - PrPIP\ddot{e}C\%_{\text{Cr}}C''C, CHC\acute{I}C \sqcup C_{\text{H}}P\ddot{e}P \cdot P\ddot{e}Pe$
 $PIP\ddot{e}PSP\ddot{e}PePSP_{\mu}PSPSC \sqcup PjPsP \gg PsC \dagger PSPsPeP\ddot{e}C\acute{I}P \gg PsPiPs P^{\circ}C \dagger P\ddot{e}PrPsP \cdot Cr Cr C_{\text{H}}P^{\circ}P \cdot C -$
 $C_{\text{H}}PsP \cdot PIP\ddot{e}C, PeCr C, \text{Cr}PSPeC \dagger C - PsPSP^{\circ}P \gg CH\text{PSPsC} - PSP\ddot{e}C_{\text{H}}PePsPIPsC -$
 $PSP_{\mu}PrPsC\acute{I}C, P^{\circ}C, PSPsC\acute{I}C, C - PIPSP^{\circ}C\acute{I}P \gg C - PrPsPe PiC_{\text{H}}P\ddot{e}PN_{\text{L}}PsPjCr$
 $PrC - CrC_{\text{H}}P_{\mu}C, P\ddot{e}PeC - PI, PsC\acute{I}PsP \pm P \gg P\ddot{e}IPs PiP_{\mu}C, P \gg CH\text{PsPIP}\ddot{e}C \dots P\acute{K}P_{\mu} C\acute{I}P \gg C - Pr$
 $PiC_{\text{H}}P\ddot{e}P \cdot PSP^{\circ}C \dagger P^{\circ}C, P\ddot{e} PjP_{\mu}C, C, \text{PsC}_{\text{H}}PjC - PS, C \sqcup PeC\%_{\text{Ps}} C_{\text{H}}C - PIP_{\mu}PSC_{\text{H}}$
 $PeC_{\text{H}}P_{\mu}P^{\circ}C, P\ddot{e}PSC - PSCr Cr PiP \gg P^{\circ}P \cdot PjC - PeC_{\text{H}}PsPIC - PiP_{\mu}C_{\text{H}}P_{\mu}PIP\ddot{e}C\%_{\text{Cr}}C'' 15 PjPi/P \gg$
 $(135 PjPePjPsP \gg CH/P \gg) Cr C \dagger PsP \gg PsPIC - PeC - PI C, P^{\circ} 12 PjPi/P \gg (110 PjPePjPsP \gg CH/P \gg) Cr$
 $P \P C - PSPsPe.$

$P^{\text{TM}} PsPrPsPePsPSC, C_{\text{H}}P^{\circ}C\acute{I}C, PSC - P \cdot P^{\circ}C\acute{I}PsP \pm P\ddot{e}.$ $Pj C_{\text{H}}P^{\circ}P \cdot C - PrP_{\mu}PiC - PrC_{\text{H}}P^{\circ}C, P^{\circ}C \dagger C - C - ,$
 $C\acute{I}PiC_{\text{H}}P\ddot{e}C \dagger P\ddot{e}PSP_{\mu}PSPsC - PiC_{\text{H}}P\ddot{e}PN_{\text{L}}PsPjPsPj PrC - CrC_{\text{H}}P_{\mu}C, P\ddot{e}PeC - PI,$
 $P \cdot P \pm C - P \gg CHC\epsilon CrC''C, CHC\acute{I}C \sqcup C_{\text{H}}P\ddot{e}P \cdot P\ddot{e}Pe C_{\text{H}}PsP \cdot PIP\ddot{e}C, PeCr PiPsC\acute{I}C, C_{\text{H}}PsC -$
 $PSP\ddot{e}C_{\text{H}}PePsPIPsC - PSP_{\mu}PrPsC\acute{I}C, P^{\circ}C, PSPsC\acute{I}C, C -, PsC\acute{I}PsP \pm P \gg P\ddot{e}IPs PiC_{\text{H}}P\ddot{e}$
 $P \cdot P^{\circ}C\acute{I}C, PsC\acute{I}CrPIP^{\circ}PSPSC - PIP_{\mu}P \gg P\ddot{e}PeP\ddot{e}C \dots PrPsP \cdot PN_{\text{L}}PsPrPsPePsPSC, C_{\text{H}}P^{\circ}C\acute{I}C, PSP\ddot{e}C \dots$
 $P \cdot P^{\circ}C\acute{I}PsP \pm C - PI. P\acute{K}P_{\mu}PsP \pm C \dots C - PrPSPs PIC - PrPSPsPIP\ddot{e}C, P\ddot{e} PIPsPrPSP\ddot{e}PN_{\text{L}} P \pm P^{\circ}P \gg P^{\circ}PSC\acute{I} PrPs$
 $PiC_{\text{H}}P\ddot{e}P \cdot PSP^{\circ}C \dagger P_{\mu}PSPSC \sqcup PN_{\text{L}}PsPrPsPePsPSC, C_{\text{H}}P^{\circ}C\acute{I}C, PSP\ddot{e}C \dots P \cdot P^{\circ}C\acute{I}PsP \pm C - PI.$

$P \dagger PjC - PiC_{\text{H}}P^{\circ}PjC - PSPsPiPsPrC - P \pm PSC - P^{\circ}PSC, P\ddot{e}PrP_{\mu}PiC_{\text{H}}P_{\mu}C\acute{I}P^{\circ}PSC, P\ddot{e},$
 $PSP_{\mu}PN_{\text{L}}C_{\text{H}}PsP \gg P_{\mu}PiC, P\ddot{e}PeP\ddot{e}.$ $P_{\mu}PsC\acute{I}P\ddot{e}P \gg P_{\mu}PSPSC \sqcup P^{\circ}PSC, P\ddot{e}PiC - PiP_{\mu}C_{\text{H}}C, P_{\mu}PSP \cdot P\ddot{e}PIPSPsPiPs$
 $P_{\mu}C, \text{P}_{\mu}PeC, Cr C, P^{\circ} C_{\text{H}}P\ddot{e}P \cdot P\ddot{e}PeCr C_{\text{H}}PsP \cdot PIP\ddot{e}C, PeCr PsC_{\text{H}}C, PsC\acute{I}C, P^{\circ}C, P\ddot{e}C \dagger PSPsC -$
 $PiC - PiPsC, P_{\mu}PSP \cdot C - C - P \cdot P^{\circ} C_{\text{H}}P^{\circ}C \dots CrPSPsPe P^{\circ}PrP\ddot{e}C, P\ddot{e}PIPSPsPiPs P_{\mu}C, \text{P}_{\mu}PeC, Cr.$

$P\ddot{Y}PsP \gg C - PeP^{\circ}P \gg CHC \dagger C - C_{\text{H}}.$ $P_{\text{Л}}PsP \P P \gg P\ddot{e}PIP_{\mu} PIP\ddot{e}PSP\ddot{e}PePSP_{\mu}PSPSC \sqcup$
 $PiC - PiP_{\mu}C_{\text{H}}PeP^{\circ}P \gg CHC \dagger C - C''PjC - C - PIPSP^{\circ}C\acute{I}P \gg C - PrPsPe P \cdot PSP\ddot{e}P \P P_{\mu}PSPSC \sqcup$
 $P_{\mu}P \gg C - PjC - PSP^{\circ}C \dagger C - C - PeP^{\circ}P \gg CHC \dagger C - C_{\text{H}} C \dagger P_{\mu}C_{\text{H}}P_{\mu}P \cdot PSP\ddot{e}C_{\text{H}}PeP\ddot{e}.$

$P \dagger P\ddot{e}PeP \gg PsC\acute{I}PiPsC_{\text{H}}P\ddot{e}PS, C, P^{\circ}PeC_{\text{H}}PsP \gg C - PjC \acute{z}C\acute{I}.$ $P P\ddot{e}P \cdot P\ddot{e}Pe PiC - PrPIP\ddot{e}C\%_{\text{P}_{\mu}}PSPSC \sqcup$
 $PeC_{\text{H}}P_{\mu}P^{\circ}C, P\ddot{e}PSC - PSCr Cr PiP \gg P^{\circ}P \cdot PjC - PeC_{\text{H}}PsPIC - P \pm P_{\mu}P \cdot PIPiP \gg P\ddot{e}PICr PSP^{\circ} C_{\text{H}}C - PIP_{\mu}PSC_{\text{H}}$
 $C \dagger P\ddot{e}C_{\text{H}}PeCrP \gg C_{\text{H}}C_{\text{H}}C \dagger PsPiPs C \dagger P\ddot{e}PeP \gg PsC\acute{I}PiPsC_{\text{H}}P\ddot{e}PSCr, PSP^{\circ}PIC - C, CH Cr C_{\text{H}}P^{\circ}P \cdot C -$
 $PIC - PrC\acute{I}CrC, PSPsC\acute{I}C, C - P \cdot PSP\ddot{e}P \P P_{\mu}PSPSC \sqcup C_{\text{H}}C - PIPSC \sqcup PIPsPrP\ddot{e}/PSP^{\circ}C, C_{\text{H}}C - C_{\text{H}}.$

$P_{\text{Л}}PsC_{\text{H}}C, P\ddot{e}PePsC\acute{I}C, P_{\mu}C_{\text{H}}PsC - PrP\ddot{e}, C, P_{\mu}C, C_{\text{H}}P^{\circ}PePsP \cdot P^{\circ}PeC, P\ddot{e}Pr (C\acute{I}P\ddot{e}C\acute{I}C, P_{\mu}PjPSPsC -$
 $PrC - C -).$ $P - PjP_{\mu}PSC \P P_{\mu}PSPSC \sqcup P^{\circ}PSC, P\ddot{e}PiC - PiP_{\mu}C_{\text{H}}C, P_{\mu}PSP \cdot P\ddot{e}PIPSPsC - PrC - C -$
 $C - PSPrP^{\circ}PiP^{\circ}PjC - PrCr PIPSP^{\circ}C\acute{I}P \gg C - PrPsPe P \cdot P^{\circ}C, C_{\text{H}}P\ddot{e}PjPeP\ddot{e} PIPsPrP\ddot{e} C, P^{\circ} C - PsPSC - PI$
 $PSP^{\circ}C, C_{\text{H}}C - C_{\text{H}} PiC - Pr PIPiP \gg P\ddot{e}IPsPj PePsC_{\text{H}}C, P\ddot{e}PePsC\acute{I}C, P_{\mu}C_{\text{H}}PsC - PrC - PI.$

$PhC\acute{I}PsP \pm P \gg P\ddot{e}IPsC\acute{I}C, C - P \cdot P^{\circ}C\acute{I}C, PsC\acute{I}C \acute{z}PIP^{\circ}PSPSC \sqcup.$

$P_{\mu}P^{\circ}C \dagger C - C''PSC, P\ddot{e} P \cdot PiPsC_{\text{H}}C \acute{z}C \P P_{\mu}PSPSC \sqcup Pj C, \text{C} \acute{z}PSPeC \dagger C - C - PiP_{\mu}C \dagger C - PSPeP\ddot{e}$

PJ PiP°C†C-C" PSC, C-PI C-P· PiPsCḡCfC€PμPSPSCḡPj C,,CfPSPeC†C-C— PiPμC†C-PSPePë
P·P°C†C,PsC†CfPIP°PSPSCḡ C,C-P°P·PëPrPsPiPsPrC-P±PSPëC... PrC-CfCḡPμC,PëPeC-PI
PjPsPḡPμ C†PiCḡPëC†PëPSPëC,Pë PIPëPSPëPePSPμPSPSCḡ PiPμC†C-PSPePsPiPsC—
PμPSC†PμC,,P°P»PsPiP°C,C-C—, PsC†PsP±P»PëPIPs PiCḡPë PiPsCḡCfC€PμPSPSCḡC...
PμP»PμPeC,CḡPsP»C-C,PSPsPiPs P±P°P»P°PSC†Cf. PJ C,P°PePsPjCf PIPëPiP°PrPeCf
PiCḡPëPNëPsPj PrC-CfCḡPμC,PëPeC-PI C†P»C-Pr PSPμPiP°PNëPSPs PiCḡPëPiPëPSPëC,Pë.

PŸPIC-C,P»PsC†CžC,P»PëPIC-C†C,CH

PμPsPIC-PrPsPjP»CḡP»PsC†Cḡ PiCḡPs PIPëPiP°PrPePë CḡPμP°PeC†C-PNë
C†PIC-C,P»PsC†CfC,P»PëPIPsC†C,C- Cf PiP°C†C-C" PSC, C-PI, CḡPeC-
PiCḡPëPNëPjP°P»Pë C,C-P°P·PëPrPSC- C,P° C,C-P°P·PëPrPsPiPsPrC-P±PSC-
PrC-CfCḡPμC,PëPePë (PrPëPI. CḡPsP·PrC-P» B«PμPsP±C-C†PSC- CḡPμP°PeC†C-C—B»).

PμCḡPë PIPëPSPëPePSPμPSPSC- C,P°PePëC... CḡPμP°PeC†C-PNë P»C-PeCfPIP°PSPSCḡ
PrC-CfCḡPμC,PëPeP°PjPë CḡPμPePsPjPμPSPrPsPIP°PSPs PiCḡPëPiPëPSPëC,Pë.
PiPeC%Ps C" PSPμPsP±C...C-PrPSC-C†C,CH Cf PiPsPIC,PsCḡPSPsPjCf
PiCḡPëP·PSP°C†PμPSPSC- PrC-CfCḡPμC,PëPeC-PI, C†P»C-Pr P·P°C...PëC†C,PëC,Pë
PICḡP°P·P»PëPIC- PrC-P»CḡPSPePë PIC-Pr C†PsPSC†Cḡ P°P±Ps PIC-Pr PrPḡPμCḡPμP»
C€C,CfC†PSPsPiPs CfP»CHC,CḡP°C,,C-PsP»PμC,Cf.

P"PsPiPsPjC-PḡPSC- CḡPμC†PsPIPëPSPë

PμCḡPμPiP°CḡP°C, PjC-C†C,PëC,CH P»P°PeC,PsP·Cf, C,PsPjCf PNëPsPiPs PSPμ C†P»C-Pr
PiCḡPëP·PSP°C†P°C,Pë PiP°C†C-C" PSC,P°Pj P· CfCḡPsPrPḡPμPSPsCḡ
PSPμPiPμCḡPμPSPsC†PëPjC-C†C,Cḡ PiP°P»P°PeC,PsP·Pë, C†PëPSPrCḡPsPjPsPj
PjP°P»CHP°P±C†PsCḡP±C†C-C— PiP»CḡPePsP·Pë C,P° PiP°P»P°PeC,PsP·Pë,
PSPμPrPsC†C,P°C,PSC-C†C,Cḡ P»P°PeC,P°P·Pë P»P°PiP°P.

P'P°P»P°PSC† PIPsPrPë C,P° PμP»PμPeC,CḡPsP»C-C,C-PI

PkP°C,CḡC-PNë PiP»P°P·PjPë

PkPμPsP±C...C-PrPSPs PePsPSC,CḡPsP»CḡPIP°C,Pë CḡC-PIPμPSCḡ PSP°C,CḡC-Cḡ Cf
PiP»P°P·PjC- PeCḡPsPIC- PiPμCḡPμPr PiPsC†P°C,PePsPj P»C-PeCfPIP°PSPSCḡ C,P°
PSP°PrP°P»C- Bḡ" CḡPμPiCfP»CḡCḡPSPs PiC-Pr C†P°C† P»C-PeCfPIP°PSPSCḡ.
P—PSPëPḡPμPSPSCḡ CḡC-PIPSḡ PSP°C,CḡC-Cḡ Cf PiP»P°P·PjC- PeCḡPsPIC- PjPsPḡPμ
P±C†C,Pë C†PiPsC†P°C,PeCf P±PμP·C†PëPjPiC,PsPjPSPëPj, C,PsPjCf
CḡPμPiCfP»CḡCḡPSPëPNë PjPsPSC-C,PsCḡPëPSPi C" PSPμPsP±C...C-PrPSPëPj.
PḡPsPSC-C,PsCḡPëPSPi CḡC-PIPSḡ PSP°C,CḡC-Cḡ C†P»C-Pr PiCḡPsPiPsPrPëC,Pë
C†P°C†C,C-C€Pμ Cf PiP°C†C-C" PSC, C-PI P»C-C,PSCḡPsPiPs PIC-PeCf C,P° Cf
PiP°C†C-C" PSC, C-PI C-P· C†PëCḡPsP·PsPj PiPμC†C-PSPePë. P' CfPrCH-CḡPePëPNë
PrC-CfCḡPμC,PëPe PjPsPḡPμ C†PiCḡPëC†PëPSPëC,Pë PIPëPSPëPePSPμPSPSCḡ
PiC-PiPsPSP°C,CḡC-C" PjC-C—, C%Ps C-PSPsPrC- PjP°C" C†PμCḡPNëPsP·PSC-
PSP°C†P»C-PrPePë.

P"C-PiPsPSP°C,CḡC-C" PjC-Cḡ C-P· PiC-PiPsPiPsP»PμPjC-C" Cḡ PjPsPḡPμ PiCḡPëP·PIPμC†C,Pë
PrPs PIPëPSPëPePSPμPSPSCḡ PrPμPiC-PrCḡP°C,P°C†C-C— C,P° PsCḡC,PsC†C,P°C,PëC†PSPsC—
PiC-PiPsC,PμPSP·C-C—; C†CfPiCfC,PSCḡ PIC,CḡP°C,P° C-PsPSC-PI C...P»PsCḡCf PjPsPḡPμ
C†PiCḡPëC†PëPSPëC,Pë PIC,PsCḡPëPSPSPëPNë PePsPjPiPμPSC†P°C,PsCḡPSPëPNë
PjPμC,P°P±PsP»C-C†PSPëPNë P°P»PeP°P»PsP· (C†P°C†C,PsC,P° C,P° PIPëCḡP°PḡPμPSC-C†C,CH

C†CHbPsPiPs C‡PIPëC‰P° PSPëP·CHbPeC-).

P_лP°P»C-PN_ë PiP»P°P·PjPë

P—PSPëP¶PµPSPSC‡ C‡C-PIPSC‡ PeP°P»C-CH PiP»P°P·PjPë PeC‡PsPIC- P·
PIPëPSPëPePSPµPSPSC‡Pj PiC-PiPsPeP°P»C-C”PjC-C— C” PsC‡PSPsPIPSPëPj C‡PëP·PëPePsPj
PiC‡Pë P·P°C‡C,PsC‡C†PIP°PSPSC- C,C-P°P·PëPrPSPëC... C,P°
C,C-P°P·PëPrPsPiPsPrC-P±PSPëC... PrC-C†C‡PµC,PëPeC-PI. P†PjPsPIC-C‡PSC-C‡C,CH
C‡PsP·PIPëC,PeC† PiC-PiPsPeP°P»C-C”PjC-C— (<3,4 PjPjPsP»CH/P») PjP°C” P±C†C,Pë
PiPsPiPµC‡PµPrP¶PµPSP° C† PiPµPIPSPëC... PeP°C,PµPiPsC‡C-PN_ë PiP°C†C-C”PSC,C-PI
PIPëC‡PsPePsPiPs C‡PëP·PëPeC†, C,P°PePëC... C‡Pe PiP°C†C-C”PSC,Pë P»C-C,PSCHbPsPiPs
PIC-PeC†, PiP°C†C-C”PSC,Pë, C‡PeC- PSPµPrPsC‡C,P°C,PSCHbPs C...P°C‡C†C†C,CHC‡C‡
C,P°/P°P±Ps PiP°C†C-C”PSC,Pë, C‡PeC- PiC‡PëPN_ëPjP°C‡C,CH P±P°PiP°C,Ps
PjPµPrPëPeP°PjPµPSC,C-PI, PiP°C†C-C”PSC,Pë C-P· C†PëC‡PsP·PsPj PiPµC†C-PSPePë, C‰Ps
C‡C†PiC‡PsPIPsPrP¶C†C”C,CHC‡C‡ PSP°P±C‡C‡PeP°PjPë C,P° P°C‡C†PëC,PsPj,
PiP°C†C-C”PSC,Pë P· C-C†PµPjC-C†PSPsC C...PIPsC‡PsP±PsC C‡PµC‡C†C‡ C,P°
PiP°C†C-C”PSC,Pë P· C‡PµC‡C†PµPIPsC PSPµPrPsC‡C,P°C,PSC-C‡C,CH. Pj C,P°PePëC...
PIPëPiP°PrPeP°C... PiC-PiPsPeP°P»C-C”PjC-C‡ PiC-PrPIPëC‰C†C”
PeP°C‡PrC-PsC,PsPeC‡PëC†PSC-C‡C,CH C‡PµC‡C†PµPIPëC... PiP»C-PePsP·PëPrC-PI C,P°
C‡PëP·PëPe PIPëPSPëPePSPµPSPSC‡ P°C‡PëC,PjC-PN_ë.

PµP°C†C-C”PSC,Pë, C‡PeC- PjP°C‡C,CH PiPsPrPsPIP¶PµPSPëPN_ë C-PSC,PµC‡PIP°P» QPÿ,
PIC‡PsPrP¶PµPSPsPiPs P°P±Ps C‡C,C‡PsPiPµPSPSPsPiPs PiPµPSPµP·C†, C,P°PePsP¶
PSP°P»PµP¶P°C,CH PrPs PiC‡C†PiPë C‡PëP·PëPeC†. P”C-PiPsPeP°P»C-C”PjC-C‡, C‡Pe C-
P±C‡P°PrPëPeP°C‡PrC-C‡, PjPsP¶C†C,CH C‡PiC‡PëC‡C,Pë C‡PsP·PIPëC,PeC† C,C‡P¶PePëC...
PiPsC‡C†C†PµPSC C‡PµC‡C†PµPIPsPiPs C‡PëC,PjC†, P·PsPeC‡PµPjP°
PiP°C‡PsPeC‡PëP·PjP°P»CHbPSPsC— C†P»C†PSPsC†PePsPIPsC— C,P°C...C-PeP°C‡PrC-C—
C,PëPiC† B«PiC-C‡C†PµC,B», C‰Ps PjPsP¶Pµ PiC‡PëP·PIPµC‡C,Pë PrPs P»PµC,P°P»CHbPSPsPiPs
PSP°C‡P»C-PrPeC†.

P’ C†C‡C-C... PIPëC‰PµP·P°P·PSP°C†PµPSPëC... PIPëPiP°PrPeP°C...
PSPµPsP±C...C-PrPSPëPN_ë C†P°C‡C,C-C†PëPN_ë PePsPSC,C‡PsP»CH C‡C-PIPSC‡
PeP°P»C-CH C† PeC‡PsPIC-. PµPµC‡C†PëPN_ë P°PSP°P»C-P· PjP°C” P±C†C,Pë
P·PrC-PN_ëC‡PSPµPSPëPN_ë PiC‡PsC,C‡PiPsPj 1-PiPs C,PëP¶PSC‡ P»C-PeC†PIP°PSPSC‡.

Pj C‡P°P·C- PIPëC‡PIP»PµPSPSC‡ PiC-PiPsPeP°P»C-C”PjC-C— C‡P»C-Pr
PiC‡PsPIPµC‡C,Pë C—C— PePsC‡PµPeC†C-CH. P”C-PiPsPeP°P»C-C”PjC-C‡, C‰Ps
PiPsC”PrPSC†C”C,CHC‡C‡ P· PSPëP·CHbPePëPj C‡C-PIPSPµPj PjP°PiPSC-CH C†
C‡PëC‡PsPIP°C,C†C- PeC‡PsPIC-, PjPsP¶Pµ P±C†C,Pë C‡PµC,,C‡P°PeC,PµC‡PSPsC‡
PrPs P»C-PeC†PIP°PSPSC‡, C‡PeC‰Ps PSPµ C‡PePsC‡PµPiC†PIP°C,Pë C‡C-PIPµPSC‡
PjP°PiPSC-CH PI C‡PëC‡PsPIP°C,C†C- PeC‡PsPIC-.

P_лP°PiPSC-PN_ë PiP»P°P·PjPë

PÿC-P°P·PëPrPSC- C,P° C,C-P°P·PëPrPsPiPsPrC-P±PSC- PrC-C†C‡PµC,PëPePë,
PIPëP»CHC†P°CHC†Pë C-PSPrP°PiP°PjC-Pr, PjPsP¶C†C,CH P·P±C-P»CHC†C†PIP°C,Pë
PµPeC‡PeC‡PµC†C-CH PjP°PiPSC-CH P· C‡PµC†PµC C,P° PiC‡PëP·PIPsPrPëC,Pë PrPs
PiC-PiPsPjP°PiPSC-C”PjC-C— (PrPëPI. C‡PsP·PrC-P»Pë B«P’P·P°C”PjPsPrC-C‡ P· C-PSC†PëPjPë
P»C-PeP°C‡C†CHbPePëPjPë P·P°C‡PsP±P°PjPë C,P° C-PSC†C- PIPëPrPë PIP·P°C”PjPsPrC-PN_ëB»
C- B«PµPsP±C-C†PSC- C‡PµP°PeC†C-C—B»).

P_лP°P»CHC†C-PN₆ PiP»P°P·PjPë

PŸC-P°P·PëPrPSC- C,P° C,C-P°P·PëPrPsPiPsPrC-P±PSC- PrC-CrCĤPμC,PëPePë PjPsP¶CrC,CHB
P·PjPμPSC€CrPIP°C,Pë PμPeC†PeCĤPμC†C-CĤ PeP°P»CHC†C-CĤ C-P· C†PμC†PμCĤ C,P°
PiCĤPëP·PIPsPrPëC,Pë PrPs PSPμP·PSP°C†PSPsPiPs C- C,PëPjC†P°C†PsPIPsPiPs
PiC-PrPIPëC%PμPSPSCĬ CĤC-PIPSCĬ PeP°P»CHC†C-CĤ Cr PiP»P°P·PjC- PeCĤPsPIC-.
P'PëCĤP°P¶PμPSP° PiC-PiPμCĤPeP°P»CHC†C-C" PjC-CĬ PjPsP¶Pμ P±CrC,Pë
PSP°C†P»C-PrPePsPj PiPsPiPμCĤPμPrPSCĤPsPiPs PSPμPrC-P°PiPSPsC†C,PsPIP°PSPsPiPs
PiC-PiPμCĤPiP°CĤP°C,PëCĤPμPsC—PrPëP·PjCr. PJ C,P°PePsPjCr CĤP°P·C- P»C-PeCrPIP°PSPSCĬ
C†P»C-Pr PiCĤPëPiPëPSPëC,Pë C,P° PsP±C†C,PμP¶PëC,Pë C„CrPSPeC†C-CĤ
PiP°CĤP°C,PëCĤPμPsC—PrPSPëC... P·P°P»PsP·.

P"P»CHPePsP·P° PeCĤPsPIC-

PJ C...PIPsCĤPëC... PSP° C†CrPeCĤPsPIPëPN₆ PrC-P°P±PμC, PIP°P¶P»PëPIPs
PePsPSC,CĤPsP»CHPIP°C,Pë PiP»CHPePsP·Cr PI PeCĤPsPIC-, PsC†PsP±P»PëPIPs PiCĤPë
PSP°CĬPIPSPsC†C,C- PiC-PiPsPeP°P»C-C" PjC-C—.

PŸPμC†PsPIP° PePëC†P»PsC,P°

PJ PiP°C†C-C" PSC,C-PI C-P· PiC-PrPIPëC%PμPSPëPj CĤC-PIPSPμPj C†PμC†PsPIPsC—
PePëC†P»PsC,Pë PjPsP¶Pμ C†PiPsC†C,PμCĤC-PiP°C,PëC†CĬ C,PμPSPrPμPSC†C-CĬ PrPs
PiC-PrPIPëC%PμPSPSCĬ PeC-P»CHPePsC†C,C- PSP°PiP°PrC-PI PiPsPrP°PiCĤPë.

PαCžPSPeC†C-CĬ PSPëCĤPsPe C,P° PrC-CžCĤPμC,PëPePë

PŸC-P°P·PëPrPSC- C,P° C,C-P°P·PëPrPsPiPsPrC-P±PSC- PrC-CrCĤPμC,PëPePë
PSP°PN₆P±C-P»CHC€ PμC„PμPeC,PëPIPSC-, CĬPeC%Ps C„CrPSPeC†C-CĬ PSPëCĤPsPe PSPμ
PiPsCĤCrC€PμPSP° P°P±Ps CĬPeC%Ps PiPsCĤCrC€PμPSPSCĬ C" PSPμP·PSP°C†PSPëPjPë
(PeCĤPμP°C,PëPSC-PS PiP»P°P·PjPë PeCĤPsPIC- <25 PjPi/P», C,PsP±C,Ps 220 PjPePjPsP»CHB/P»
Cr PrPsCĤPsC†P»PëC...). PJ PiP°C†C-C" PSC,C-PI P»C-C,PSCHBPsPiPs PIC-PeCr
PeCĤPμP°C,PëPSC-PS Cr PiP»P°P·PjC- PeCĤPsPIC- PjP°C" P±CrC,Pë PSP° CĤC-PIPSC-, C%Ps
PIC-PrPiPsPIC-PrP°C" PIC-PeCr, PjP°C†C- C,C-P»P° C,P° C†C,P°C,C-. P"C-PiPsPIPsP»PμPjC-CĬ,
PiPsPiBĤ™ CĬP·P°PSP° P· PIC,CĤP°C,PsCĤ PIPsPrPë C,P° PSP°C,CĤC-CĤ PIPSP°C†P»C-PrPsPe
P·P°C†C,PsC†CrPIP°PSPSCĬ PrC-CrCĤPμC,PëPeC-PI, PSP° PiPsC†P°C,PeCr
P»C-PeCrPIP°PSPSCĬ C†PiCĤPëC†PëPSCĬC" P·PSPëP¶PμPSPSCĬ
PiP»PsPjPμCĤCrP»CĬCĤPSPsC— C„C-P»CHC,CĤP°C†C-C—. PiPμ PjPsP¶Pμ PiCĤPëP·PIPμC†C,Pë
PrPs PiC-PrPIPëC%PμPSPSCĬ CĤC-PIPSCĬ C†PμC†PsPIPëPSPë C,P° PeCĤPμP°C,PëPSC-PSC† Cr
PeCĤPsPIC-. PŸP°PeP° C,CĤP°PSP·PëC,PsCĤPSP° C„CrPSPeC†C-PsPSP°P»CHBSPSP°
PSPëCĤPePsPIP° PSPμPrPsC†C,P°C,PSC-C†C,CHB PSPμ PjP°C" PSP°C†P»C-PrPeC-PI PI PsC†C-P±
C-P· PSPsCĤPjP°P»CHBSPsCĤ C„CrPSPeC†C-C" CĤ PSPëCĤPsPe, P°P»Pμ PjPsP¶Pμ
PiPsPiC-CĤC€PëC,Pë C-C†PSC†CĤC†Cr PSPëCĤPePsPIC† PSPμPrPsC†C,P°C,PSC-C†C,CHB.

*PIPsCĤPsC—PrP°P»CHBSPSPëPN₆ PIPëPiC-C,, PiPsC†C,CĤP° PjC-PsPiC-CĬ C,P° PIC,PsCĤPëPSPSP°
P·P°PeCĤPëC,PsPeCžC,PsPIP° PiP»P°CžPePsPjP°*

PŸCrP»CHC„PsPSP°PjC-PrPSC- P»C-PeP°CĤC†CHPeC- P·P°C†PsP±Pë P°P±Ps
PiPsC...C-PrPSC- C†CrP»CHC„PsPSP°PjC-PrCr PjPsP¶CrC,CHB C†PiCĤPëC†PëPSPëC,Pë
C-PrC-PsC†PëPSPeCĤP°C,PëC†PSC† CĤPμP°PeC†C-CĤ, C%Ps PiCĤPëP·PIPsPrPëC,CHB PrPs
C...PsCĤPsC—PrP°P»CHBSPsPiPs PIPëPiPsC,C† P· PrPμC„PμPeC,PsPj PiPsP»CĬ P·PsCĤCr,
C,CĤP°PSP·PëC,PsCĤPSPsC— PjC-PsPiC-C— C,P° PiPsC†C,CĤPsC—
P·P°PeCĤPëC,PsPeCrC,PsPIPsC— PiP»P°CrPePsPjPë. PŸPëPjPiC,PsPjPë PIPeP»CHC†P°CĤC,CHB

PiPsCfC,ChPëPNë PiPsC±P°C,PsPe P·PSPëP¶PµPSPSC¶ PiPsCfC,ChPsC,Pë P·PsChCf P°P±Ps
P±C-P»CH PI PsC±P°C... C- P·P°P·PIPëC±P°PNë PIPëPSPëPeP°ChC,Ch PiChPsC,C¶PiPsPj
PeC-P»CHPePsC... PiPsPrPëPS P°P±Ps C,PëP¶PSC-PI PïC-CfP»C¶ PiPsC±P°C,PeCf
P·P°CfC,PsCfCfPIP°PSPSC¶ PiChPµPïP°ChP°C,Cf. PkPµP»C-PePsPIP°PSP° PiPsCfC,ChP°
P·P°PeChPëC,PsPeCfC,PsPIP° PiP»P°CfPePsPjP° PjPsP¶Pµ PiChPëP·PIPµCfC,Pë PrPs
PSPµPsP±PsChPsC,PSPSC— PIC,ChP°C,Pë P·PsChCf. PµPµChPIPëPSPSPµ P»C-PeCfPIP°PSPSC¶
PIPeP»ChC±P°C” C¶PePSP°PNëCëPIPëPrCëPµ PiChPëPïPëPSPµPSPSC¶ PiChPëPNëPsPjCf
P»C-PeP°ChCfChPePsPiPs P·P°CfPsP±Cf. PïPeC%Ps PIPSCfC,ChC-CëPSCHePsPsC±PSPëPNë
C,PëCfPe P·P°P»PëCëP°C”C,ChCfC¶ PSPµPePsPSC,ChPsP»CHPsPIP°PSPëPj, PjPsP¶Pµ
P±CfC,Pë PSPµPsP±C...C-PrPSPëPj PiChPëPNëPSC¶C,C,C¶ ChC-CëPµPSPSC¶ PiChPs
PiChPsPIPµPrPµPSPSC¶ CëPIPëPrPePsPiPs PjPµPrPëC±PSPsPiPs P°P±Ps
C...C-ChCfChPiC-C±PSPsPiPs P»C-PeCfPIP°PSPSC¶. P”Ps C,,P°PeC,PsChC-PI ChPëP·PëPeCf
ChPsP·PIPëC,PeCf PiPsCfC,ChPsC— P·P°PeChPëC,PsPeCfC,PsPIPsC— PiP»P°CfPePsPjPë
PjPsP¶CfC,Ch PSP°P»PµP¶P°C,Pë PSP°C¶PIPSC-CfC,Ch PI P°PSP°PjPSPµP·C-
P°P»PµChPiC-C— PSP° CfCfP»CHC,,PsPSP°PjC-Pr P°P±Ps PïPµPSC-C†PëP»C-PS.

PJ CfPiPsChC,CfPjPµPSC-PI C-PSPrP°PïP°PjC-Pr PjPsP¶Pµ CfPiChPëC±PëPSPëC,Pë
PïPsP·PëC,PëPIPSCf ChPµP°PeC†C-Ch PiChPë PiChPsPIPµPrPµPSPSC- PrPsPïC-PSPi-
PePsPSC,ChPsP»Ch.

P—P°CfC,PsCfCzPIP°PSPSC¶ Cz PiPµChC-PsPr PIP°PiC-C,PSPsCfC,C- P°P±Ps
PiPsPrCzPIP°PSPSC¶ PiChCzPrPrCh.

P’P°PiC-C,PSC-CfC,Ch

P”P°PSC- C%PsPrPs P·P°CfC,PsCfCfPIP°PSPSC¶ C-PSPrP°PïP°PjC-PrCf PIP°PiC-C,PSPëPj
P¶C-PSPeP°Pj PIC-PrCfCfC,PSC- P°P±Ps PsP±PjPµP¶PµPSC- (PjPµPSCëPµ
300 PIPëPïP°PrPeC-PI). PkP°CfP»C-PrPePsPj C,ChPëPIP°P»PsPiPs P·P°CfC,PsCfCfPIP°PSPSC¶
C,C-P°P·PëPrPSPsPiPs PrC-CfChPµC,PëPeP° PïC-Pr C±P°Cf P†P†P† C,ChPëPjPµCfC,ChCf
PIP°PiC-C,PSPsCfC,C- PjPsP¶Pµ P±CfC,Pë P·PSPëP¶PµPSPSC¶ PsP±B¶™C”PjCf
C†PëChPeCfP»ChChC±PsC— PeChPsPIC- PIP°PiC-C,PSPsC— P¶C-PSPePë C,P°
PjP°C,PePsPIPs-PïP»P°C†PµPSC,P°ChPSPsPiPs PeChPsPIPsPSP°PïPsPIPSPµPSPSC¶,
C%Ps PjPsP¶Pµ CfPiChPëC±PëPSPëC,Pë C,,PµC,PsPïP»P°C†PµPSC,P°ChPSCf
C-CëPµPjC-Ch C- P·P°C,ChPëPjPeCf ChPsP·PIPëC,PeCf PïP»PsPrP°.
P”PsCfP»C-PrP¶PµPSPSC¶ PSP° C,PIP°ChPëPSP°C... PSPµ PIPëC¶PIPëP»Pë
PiChC¶PjPsPiPs P°P±Ps PsPiPsCfPµChPµPrPePsPIP°PSPsPiPs C,PsPeCfPëC±PSPsPiPs
PIPïP»PëPICf PSP° ChPµPiChPsPrCfPeC,PëPIPSC-CfC,Ch. PïPe P·P°PïPsP±C-P¶PSPëPNë
P·P°C...C-Pr P±P°P¶P°PSPs CfPSPëPeP°C,Pë P·P°CfC,PsCfCfPIP°PSPSC¶
C-PSPrP°PïP°PjC-PrCf PïC-Pr C±P°Cf PIP°PiC-C,PSPsCfC,C-.

P”PsPrCzPIP°PSPSC¶ PiChCzPrPrCh

P”P°PSC- C%PsPrPs PiChPsPSPëPePSPµPSPSC¶
C-PSPrP°PïP°PjC-PrCf/PjPµC,P°P±PsP»C-C,PI Cf PiChCfPrPSPµ PjPsP»PsPePs
PSPµPrPsCfC,P°C,PSC-. PhPsP¶CfC,Ch ChPsP·PIPëPSCfC,PëCfC¶
PiC-PïPµChC±CfC,P»PëPIC-CfC,Ch PrPs PïPsC...C-PrPSPëC... CfCfP»CHC,,PsPSP°PjC-PrC-PI
C,P° PiC-PïPsPeP°P»C-C”PjC-C¶. P PëP·PëPe PrP»C¶
PSPsPIPsPSP°ChPsPrP¶PµPSPëC.../PSPµPjPsPIP»C¶C, PIPëPeP»ChC±P°C,Pë PSPµ PjPsP¶PSP°.
P†PSPPrP°PïP°PjC-Pr PSP°P»PµP¶PëC,Ch PrPs C,C-P°P·PëPrPsPiPsPrC-P±PSPëC...

PrC-CrC₇P_μC, PēPeC-PI, P·P°CfC, PsCfCfPIP°PSPSCl₁ C₁PePēC... PīC-Pr C‡P°Cf
PiPsPrCrPIP°PSPSCl₁ PiC₇CrPrPrC₇ PiPsPIb₇TM C₁IP·CrC₇C, CH P·C- P·PjP_μPSC€P_μPSPSCl₁Pj
P°P±Ps PSP°PIC-C, CH PiC₇PēPiPSC-C‡P_μPSPSCl₁Pj P»P°PeC, P°C†C-C—. P†PSPrP°PīP°PjC-Pr
PīC₇PsC, PēPiPsPeP°P·P°PSPēPN₂ Cr PīP_μC₇C-PsPr PiPsPrCrPIP°PSPSCl₁ PiC₇CrPrPrC₇.

PαP_μC₇C, PēP»CHPSC-CfC, CH

P°PsCfP»C-PrP₁P_μPSPSCl₁ C₇P_μPiC₇PsPrCrPeC, PēPIPSPsC— C, PsPeCfPēC‡PSPsCfC, C-
PiPsPeP°P·P°P»Pē PIC-PrCfCfC, PSC-CfC, CH PIPiP»PēPICf PSP° C, P_μC₇C, PēP»CHPSC-CfC, CH
CfP°PjC†C-PI C, P° CfP°PjPsPe C%oCfC₇C-PI. P°PīP»PēPICf PSP° C, P_μC₇C, PēP»CHPSC-CfC, CH
P»CHPrPēPSPē PSP_μ PsC‡C-PeCfC°C, CHCfC₁.

*P—PrP°C, PSC-CfC, CH PIPiP»PēPIP°C, Pē PSP° C€PIPēPrPeC-CfC, CH C₇P_μP°PeC†C-C—
PiC₇Pē PeP_μC₇C‡PIP°PSPSC- P°PIC, PsC, C₇P°PSCfPiPsC₇C, PsPj P°P±Ps C-PSC€PēPjPē
PjP_μC...P°PSC-P·PjP°PjPē.*

P†PSPrP°PīP°PjC-Pr C‡PēPSPēC, CH PSP_μP·PSP°C‡PSPēPN₂ P°P±Ps PiPsPjC-C₇PSPēPN₂
PIPiP»PēPI PSP° P·PrP°C, PSC-CfC, CH PeP_μC₇CrPIP°C, Pē P°PIC, PsC, C₇P°PSCfPiPsC₇C, PsPj
P°P±Ps PiC₇P°C†C₇PIP°C, Pē P· PjP_μC...P°PSC-P·PjP°PjPē. P†PSPrP°PīP°PjC-Pr PSP_μ
PIPiP»PēPIP°C° PSP° PiPēP»CHPSC-CfC, CH. P_hP»P_μ Cr C₇P°P·C- PIPēPSPēPePSP_μPSPSCl₁
PSP_μP±P°P₁P°PSPēC... C₇P_μP°PeC†C-PN₂ (PrPēPI. C₇PsP·PrC-P» B«P_μPsP±C-C‡PSC-
C₇P_μP°PeC†C-C—B»), Cr C, PsPjCr C‡PēCfP»C- CfPēPjPiC, PsPjC-PI, PiPsPIb₇TM C₁IP·P°PSPēC...
P·C- P·PSPēP₁P_μPSPSCl₁Pj P°C₇C, P_μC₇C-P°P»CHPSPsPiPs C, PēCfPeCf, PsCfPsP±P»PēPIPs
PSP° PiPsC‡P°C, PeCf P»C-PeCfPIP°PSPSCl₁ P°P±Ps Cr PePsPjP±C-PSP°C†C-C— P· C-PSC€PēPj
P°PSC, PēPiC-PiP_μC₇C, P_μPSP·PēPIPSPēPj P·P°CfPsP±PsPj, P·PrP°C, PSC-CfC, CH
PeP_μC₇CrPIP°C, Pē P°PIC, PsPjPsP±C-P»P_μPj P°P±Ps PiC₇P°C†C₇PIP°C, Pē P· C-PSC€PēPjPē
PjP_μC...P°PSC-P·PjP°PjPē PjPsP₁P_μ P±CfC, Pē PiPsC₇CrC€P_μPSPsC₇.

PŸPiPsCfC-P± P·P°CfC, PsCfC‡PIP°PSPSCl₁ C, P° PrPsP·Pē.

PŸPiPsCfC-P± P·P°CfC, PsCfC‡PIP°PSPSCl₁

P°P»C₁ PiP_μC₇PsC₇P°P»CHPSPsPiPs P·P°CfC, PsCfCfPIP°PSPSCl₁.

P°PsP·C‡PIP°PSPSCl₁

1 C, P°P±P»P_μC, PeP° PSP° PrPsP±Cf, P±P°P₁P°PSPs PIC₇P°PSC†C-. PŸP°P±P»P_μC, PeCf
CfP»C-PrB PePsPIC, P°C, Pē C†C-P»PsC₇, PSP_μ C₇PsP·P₁PsPICfC₇C‡Pē, P·P°PīPēPIP°C₇C‡Pē
PIPsPrPsC₇.

P—P°CfC, PsCfCfPIP°PSPSCl₁ P±C-P»CHC€ PIPēCfPsPePēC... PrPsP· PiC₇P_μPīP°C₇P°C, Cr PSP_μ
PiC₇PēP·PIPsPrPēC, CH PrPs P·P±C-P»CHC€P_μPSPSCl₁
P°PSC, PēPiC-PiP_μC₇C, P_μPSP·PēPIPSPsPiPs P_μC, P_μPeC, Cr, P°P»P_μ PrC-CrC₇P_μC, PēC‡PSPēPN₂
P_μC, P_μPeC, P·C₇PsCfC, P°C°.

P_hCfPsP±P»PēPIC- PiC₇C‡PiPē PiP°C†C-C°PSC, C-PI

*P_kPēC₇PePsPIP° PSP_μPrPsCfC, P°C, PSC-CfC, CH (PrPēPI. C₇PsP·PrC-P»Pē
B«P_hCfPsP±P»PēPIPsCfC, C- P·P°CfC, PsCfCfPIP°PSPSCl₁B» C, P°*

P—P°C...PsPrPë PïPuCĤC€PsC— PrPsPïPsPjPsPiPë PIPeP»CĤC‡P°CĤC,CĤ C€PIPëPrPePu
PIPëPIPuPrPuPSPSCII PïCĤPuPïP°CĤP°C,Cr C€P»CII C...PsPj PïCĤPsPjPëPIP°CSPSCII

C€P»CfPSPeP° C,P°/P°P±Ps PİCḡPēP·PSP°C‡PμPSPSCḡPj P°PeC,PēPIPsPIP°PSPsPiPs
PICfPiC-P»P»Cḡ C-P· PSP°CfC,CfPİPSPēPj PIC-PrPSPsPIP»PμPSPSCḡPj PIPsPrPSPs-
PμP»PμPeC,CḡPsP»C-C,PSPsPiPs P±P°P»P°PSCfCf PI CfPjPsPIP°C... CfC,P°C†C-PsPSP°CḡCf.

PμPsP±C-C‡PSC- CḡPμP°PeC†C-C—.

PkP°PNεC‡P°CfC,C-C€Pμ PİPsPIC-PrPsPjP»CḡP»PsCfCḡ PİCḡPs
PIPēPSPēPePSPμPSPSCḡ C,P°PePēC... PİPsP±C-C‡PSPēC... CḡPμP°PeC†C-PNε:
PiC-PİPsPeP°P»C-C”PjC-Cḡ, CḡPμP°PeC†C-C— PiC-PİPμCḡC‡CfC,P»PēPIPsCfC,C-,
PiPsP»PsPIPSPēPj C‡PēPSPsPj PrPμCḡPjP°C,PsP»PsPiC-C‡PSC-, Cf PİP°C†C-C”PSC,C-PI,
CfC...PēP»CHPSPēC... PrPs CḡPsP·PIPēC,PeCf P°P»PμCḡPiC-C‡PSPēC... C,P°
P°CfC,PjP°C,PēC‡PSPēC... CḡPμP°PeC†C-PNε, C- PjP°PeCfP»PsPİP°PİCfP»CHPsP·PSC-
PIPēCfPēPİP°PSPSCḡ.

P’C-P»CHC€C-CfC,CH PSPμP±P°P¶P°PSPēC... PμC,,PμPeC,C-PI, CḡPe
PeP»C-PSC-C‡PSPēC..., C,P°Pe C- P· P±PsPeCf P»P°P±PsCḡP°C,PsCḡPSPēC...
PİPsPeP°P·PSPēPeC-PI, C” PrPsP·PsP·P°P»PμP¶PSPēPjPē.

PμC-Pr C‡P°Cf P»C-PeCfPIP°PSPSCḡ C-PSPrP°PİP°PjC-PrPsPj
CfPİPsCfC,PμCḡC-PİP°P»PēCfCḡ PSP°CfC,CfPİPSC- PİPsP±C-C‡PSC- CḡPIPēC%P°,
PIPeP°P·P°PSC- PSPēP¶C‡Pμ, P· C,P°PePsCḡ C‡P°CfC,PsC,PsCḡ
PIPēPSPēPePSPμPSPSCḡ: PrCfP¶Pμ C‡P°CfC,Ps (≥1/10), C‡P°CfC,Ps (≥1/100, <1/10),
PSPμC‡P°CfC,Ps (≥1/1000, <1/100), CḡC-PrPePs (≥1/10000, <1/1000), PrCfP¶Pμ
CḡC-PrPePs (<1/10000), C‡P°CfC,PsC,P° PSPμPIC-PrPsPjP° (PSPμ PjPsP¶Pμ P±CfC,Pē
PIPēP·PSP°C‡PμPSP° P·PiC-PrPSPs P· PSP°CḡPIPSPsCḡ C-PSC,,PsCḡPjP°C†C-C”Cḡ).

P— P±PsPeCž CfPēCfC,PμPjPē PeCḡPsPIC- C,P° P»C-PjC,,P°C,PēC‡PSPsC— CfPēCfC,PμPjPē

P”CfP¶Pμ CḡC-PrPePs bḡ“ C,CḡPsPjP±PsC†PēC,PsPİPμPSC-Cḡ,
P»PμPNεPePsPİPμPSC-Cḡ, P°PİCḡP°PSCfP»PsC†PēC,PsP·, P°PİP»P°CfC,PēC‡PSP°
P°PSPμPjC-Cḡ, PİPμPjPsP»C-C,PēC‡PSP° P°PSPμPjC-Cḡ.

P— P±PsPeCž PjPμC,P°P±PsP»C-P·PjCž C,P° PsP±PjC-PSCž CḡPμC‡PsPIPēPS

P§P°CfC,Ps bḡ“ PiC-PİPsPeP°P»C-C”PjC-Cḡ (PrPēPI CḡPsP·PrC-P»
B«PhCfPsP±P»PēPIPsCfC,C- P·P°CfC,PsCfCfPIP°PSPSCḡB»);

PSPμC‡P°CfC,Ps bḡ“ PiC-PİPsPSP°C,CḡC-C”PjC-Cḡ (PrPēPI CḡPsP·PrC-P»
B«PhCfPsP±P»PēPIPsCfC,C- P·P°CfC,PsCfCfPIP°PSPSCḡB»);

CḡC-PrPePs bḡ“ PiC-PİPsC...P»PsCḡPμPjC-Cḡ, PiC-PİPsPjP°PİPSC-C”PjC-Cḡ;

PrCfP¶Pμ CḡC-PrPePs bḡ“ PiC-PİPμCḡPeP°P»CHC†C-C”PjC-Cḡ.

P— P±PsPeCž PSPμCḡPIPSPsC— CfPēCfC,PμPjPē

P C-PrPePs bḡ“ P·P°PİP°PjPsCḡPsC‡PμPSPSCḡ (PIPμCḡC,PēPiPs),
PIC,PsPjP»CḡPIP°PSC-CfC,CH, PiPsP»PsPIPSPēPNε P±C-P»CH, PİP°CḡPμCfC,PμP·C-Cḡ;

C‡P°CÍC,PsC,P° PSPµPIC-PrPsPjP° BĤ“ PSPµPīCĤPëC,PsPjPSC-CÍC,CH.

P— P±PsPeCž PsCĤPiP°PSC-PI P·PsCĤCž

PŞP°CÍC,PsC,P° PSPµPIC-PrPsPjP° BĤ“ PjC-PsPīC-CĬ, CĤPsP·PjPëC,C-CÍC,CH P·PsCĤCÍ,
PīPsCĤCÍC€PµPSPSCĬ P·PsCĤCÍ, C...PsCĤPsC—PrP°P»CHßPSPëPNë PIPëPīC-C,.

P— P±PsPeCž CÍPµCĤC†CĬ

P”CÍP¶Pµ CĤC-PrPePs BĤ“ P°CĤPëC,PjC-CĬ;

C‡P°CÍC,PsC,P° PSPµPIC-PrPsPjP° BĤ“ PīP°CĤPsPeCÍPëP·PjP°P»CHßPSP° C€P»CÍPSPsC‡PePsPIP°
C,P°C...C-PeP°CĤPrC-CĬ C,PëPīCÍ B«PīC-CĤCÍPµC,B» (*torsades de pointes*), C%Ps PjPsP¶Pµ
PīCĤPëP·PIPµCÍC,Pë PrPs P»PµC,P°P»CHßPSPsPiPs PSP°CÍP»C-PrPeCÍ (PrPëPI. CĤPsP·PrC-P»Pë
B«PhCÍPsP±P»PëPIPsCÍC,C- P·P°CÍC,PsCÍCÍPIP°PSPSCĬB», B«P’P·P°C”PjPsPrC-CĬ P·
C-PSC€PëPjPë P»C-PeP°CĤCÍCHPePëPjPë P·P°CÍPsP±P°PjPë C,P° C-PSC€C- PIPëPrPë
PIP·P°C”PjPsPrC-PNëB»).

P— P±PsPeCž CÍCžPrPëPSPSPsC— CÍPëCÍC,PµPjPë

P”CÍP¶Pµ CĤC-PrPePs BĤ“ P°CĤC,PµCĤC-P°P»CHßPSP° PiC-PīPsC,PµPSP·C-CĬ.

P— P±PsPeCž C,CĤP°PIPSPsC— CÍPëCÍC,PµPjPë

PkPµC‡P°CÍC,Ps BĤ“ P±P»CHßPIP°PSPSCĬ;

CĤC-PrPePs BĤ“ PSCÍPrPsC,P°, P·P°PīPsCĤ, CÍCÍC...C-CÍC,CH CÍ CĤPsC,C-;

PrCÍP¶Pµ CĤC-PrPePs BĤ“ PīP°PSPeCĤPµP°C,PëC,.

P— P±PsPeCž PSPëCĤPsPe C,P° CÍPµC‡PsPIPëPrC-P»CHßPSPsC— CÍPëCÍC,PµPjPë

P”CÍP¶Pµ CĤC-PrPePs BĤ“ PSPëCĤPePsPIP° PSPµPrPsCÍC,P°C,PSC-CÍC,CH.

P— P±PsPeCž CĤPµPīCĤPsPrCžPeC,PëPIPSPsC— CÍPëCÍC,PµPjPë C,P° PjPsP»PsC‡PSPëC...
P·P°P»PsP·

PkPµC‡P°CÍC,Ps BĤ“ PµCĤPµPeC,PëP»CHßPSP° PrPëCÍC,,CÍPSPeC†C-CĬ.

P— P±PsPeCž PiPµPīP°C,PsP±C-P»C-P°CĤPSPsC— CÍPëCÍC,PµPjPë

P”CÍP¶Pµ CĤC-PrPePs BĤ“ PīPsCĤCÍC€PµPSPSCĬ C,,CÍPSPeC†C-C— PīPµC‡C-PSPePë;

C‡P°CÍC,PsC,P° PSPµPIC-PrPsPjP° BĤ“ PīCĤPë PīPµC‡C-PSPePsPIC-PNë
PSPµPrPsCÍC,P°C,PSPsCÍC,C- PjPsP¶P»PëPIPµ PIPëPSPëPePSPµPSPSCĬ PīPµC‡C-PSPePsPIPsC—
PµPSC†PµC,,P°P»PsPīP°C,C-C— (PrPëPI. CĤPsP·PrC-P»Pë B«PhCÍPsP±P»PëPIPsCÍC,C-
P·P°CÍC,PsCÍCÍPIP°PSPSCĬB», B«PµCĤPsC,PëPīPsPeP°P·P°PSPSCĬB»), PiPµPīP°C,PëC,.

P PsP·P»P°PrPë P· P±PsPeCž C€PeC-CĤPë C,P° C—C— PīPsC...C-PrPSPëC...

P PµP°PeC†C-C— PiC-PīPµCĤC‡CÍC,P»PëPIPsCÍC,C-, PiPsP»PsPIPSPëPj C‡PëPSPsPj P· P±PsPeCÍ
C€PeC-CĤPë, CÍ PīP°C†C-C”PSC,C-PI, CĬPeC- PjP°CĤC,CH CÍC...PëP»CHßPSC-CÍC,CH PrPs
P°P»PµCĤPiC-C‡PSPëC... C,P° P°CÍC,PjP°C,PëC‡PSPëC... CĤPµP°PeC†C-PNë:

3 C₇PsPeP₆.

PJPjPsPIP₆ P·P±P_μC₇C-PiP°PSPSC₁₁.

P—P±P_μC₇C-PiP°C,P₆ PiC₇P₆ C,P_μPjPiP_μC₇P°C,C₇C₇C- PSP_μ PIP₆C%P_μ 30 B°P₇ C₇
PSP_μPrPsC₇C,C₇PiPSPsPjC₇ PrP»C₁₁ PrC-C,P_μPN₆ PjC-C₇C₇C-.

PJPiP°PePsPIP₆P°.

P_μPs 10 C,P°P±P»P_μC,PsPe C₇ P±P»C-C₇C,P_μC₇C-; PiPs 3 P±P»C-C₇C,P_μC₇P₆ C₇
PePsC₇PsP±C₇C-.

P₇P°C,P_μPiPsC₇C-C₁₁ PIC-PrPiC₇C₇PeC₇.

P—P° C₇P_μC₇P_μPiC,PsPj.

P'P₆C₇PsP±PSP₆Pe.

P₇P_μC₇PeP»P_μ P''PjP±P₇.

**P₇C-C₇C₇P_μP·PSP°C...PsPrP₇P_μPSPSC₁₁ PIP₆C₇PsP±PSP₆PeP° C,P° P°PrC₇P_μC₇P°
PjC-C₇C₇C₁₁ PiC₇PsPIP°PrP₇P_μPSPSC₁₁ PN₆PsPiPs PrC-C₁₁P»CH₇PSPsC₇C,C-.**

P>C₇PrPIC-Pi-P₇P_μC₇PeP»P_μ-P₆C,C₇P°C₇C₇P_μ 3, 89143 P'P»P°C₇P±PsPN₆C₇P_μPS,
P₇C-PjP_μC₇C₇P₆PSP°.