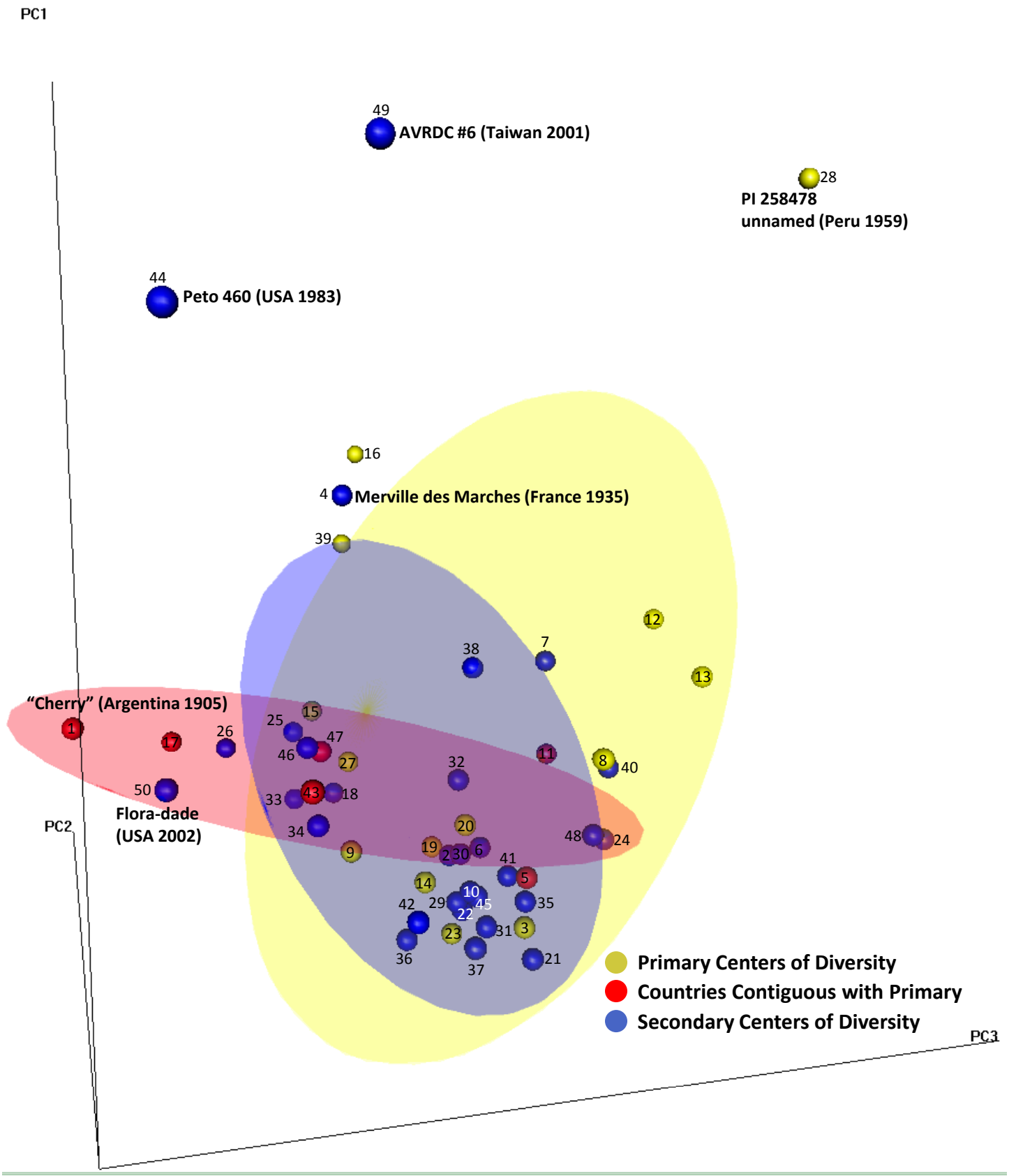


Fig. S1 Genetic diversity and divergence of tomato germplasm based on diploid SNP genotypes

**Fig. S1 Diversity in cultivated tomato (*Solanum lycopersicum*) germplasm**
Cultivated tomato (*Solanum lycopersicum* L.) dispersed out of Latin America beginning in the 16th century. Worldwide patterns of genetic diversity in tomato are of interest for purposes of conservation, characterization, and utilization. A sample of 50 PGRU accessions (unique populations) was assembled to survey primary centers of diversity Chile, Ecuador and Peru (14 accessions), countries contiguous with primary centers (6 accessions), and secondary centers of diversity (30 accessions). Original year of seed collection ranged from 1905 to 2002. Based on SNP alleles of 67 markers (supplemental file S3) the first three principal components explained 20%, 10% and 6.6% of the variation, respectively. Genotypes from primary and secondary centers of diversity were spread along axis PC1, while samples from countries contiguous with primary centers were distributed along axis PC3. Ten percent of accessions were outliers that fell outside of the three ellipsoids encompassing 90% of variation for each group. These highly diverged genotypes originated from Peru, Ecuador, USA, Europe and Asia. None of the three *a priori* defined groups should be viewed as a poor source of tomato genetic diversity in PGRU's collection.

Tomato germplasm used in this study

| ID No. | Accession | Category | Country | Year | Name |
|---|---|---|---|---|---|
| 1 | PI 97538 | Contiguous | Argentina | 1905 | "Cherry" |
| 2 | PI 98097 | Secondary | Cuba | 1932 | Rinon |
| 3 | PI 99782 | Primary | Peru | 1932 | Tomate |
| 4 | PI 109834 | Secondary | France | 1935 | Merville des Marches |
| 5 | PI 117563 | Contiguous | Brazil | 1936 | Sao Paulo |
| 6 | PI 118783 | Secondary | Venezuela | 1936 | Rinon |
| 7 | PI 121662 | Secondary | Canada | 1937 | Abel |
| 8 | PI 124035 | Primary | Peru | 1937 | na |
| 9 | PI 124037 | Primary | Chile | 1937 | na |
| 10 | PI 125831 | Secondary | Afghanistan | 1937 | Rumi Banjan |
| 11 | PI 127820 | Contiguous | Bolivia | 1938 | na |
| 12 | PI 127825 | Primary | Peru | 1938 | Ccoilo-Chuma |
| 13 | PI 128586 | Primary | Chile | 1938 | na |
| 14 | PI 128592 | Primary | Chile | 1938 | na |
| 15 | PI 129026 | Primary | Ecuador | 1938 | na |
| 16 | PI 129033 | Primary | Ecuador | 1938 | na |
| 17 | PI 129084 | Contiguous | Colombia | 1938 | na |
| 18 | PI 129128 | Secondary | Panama | 1938 | na |
| 19 | PI 129142 | Primary | Ecuador | 1938 | na |
| 20 | PI 155372 | Primary | Peru | 1946 | na |
| 21 | PI 157993 | Secondary | Italy | 1947 | Prospero |
| 22 | PI 158760 | Secondary | China | 1947 | Chih-Mu-Tao-Se |
| 23 | PI 159009 | Primary | Peru | 1947 | na |
| 24 | PI 159198 | Secondary | United States | 1947 | Vetomold (121 Mass.) |
| 25 | PI 196297 | Secondary | Nicarragua | 1951 | na |
| 26 | PI 212062 | Secondary | Costa Rica | 1954 | Turrialba |
| 27 | PI 258474 | Primary | Ecuador | 1959 | na |
| 28 | PI 258478 | Primary | Peru | 1959 | na |
| 29 | PI 262995 | Secondary | Netherlands | 1960 | Ailsa Craig |
| 30 | PI 268107 | Secondary | Mexico | 1960 | Cotaxtla I |
| 31 | PI 270206 | Secondary | United States | 1960 | Ponderosa |
| 32 | PI 270408 | Secondary | Mexico | 1960 | na |
| 33 | PI 270430 | Secondary | Mexico | 1960 | na |
| 34 | PI 272703 | Secondary | Guatemala | 1961 | na |
| 35 | PI 281555 | Secondary | Japan | 1962 | Kiyosu No. 2 |
| 36 | PI 291337 | Secondary | China | 1963 | Hong Kong |
| 37 | PI 294638 | Secondary | United Kingdom | 1964 | Devon Surprise |
| 38 | PI 341134 | Secondary | United States | 1969 | Heinz 1370 |
| 39 | PI 390510 | Primary | Ecuador | 1974 | na |
| 40 | PI 406952 | Secondary | Nicarragua | 1976 | Chilcarojo |
| 41 | PI 452026 | Secondary | Mexico | 1980 | A-1770 |
| 42 | PI 452027 | Secondary | Mexico | 1980 | A-1771 |
| 43 | PI 505317 | Contiguous | Colombia | 1986 | 1091-Chonto 21 (Mataverde) (3-21-2) |
| 44 | PI 600920 | Secondary | United States | 1983 | Peto 460 |
| 45 | PI 647305 | Secondary | Spain | 1905 | Rosa o Monserrat |
| 46 | PI 647445 | Secondary | China | 1905 | Zhongza No. 4 |
| 47 | PI 647447 | Contiguous | Bolivia | 1989 | Tomate del Lugar |
| 48 | PI 647486 | Secondary | Italy | 1992 | Pomodoro Superselezione di Marmande |
| 49 | PI 647556 | Secondary | Taiwan | 2001 | AVRDC #6 |
| 50 | PI 647566 | Secondary | United States | 2002 | Flora-dade |