possibility, which we cannot adequately evaluate, given the small number of crater chains, is that the Davy and perhaps the Abulfeda chains were created by tidally disrupted 'rubble pile' asteroids.

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Statue enigma

SIR — Ragge and Munier in Scientific Correspondence[1] presented a Hellenistic statue displaying multiple skin nodules. While I agree with their diagnosis of neurofibromatosis type 1, I think that it is more likely to have been a votive offering than a teaching aid.

Ancient votive offerings did include representations of pathological states, involving both the extremities (the most famous being the oversized leg with a varicose vein from Athens[2]) and the torso (for example a female statue with ascites from Cos[3]). Even the Etruscan terracottas showing normal and pathological visceral anatomy in a fairly detailed manner clearly were votive offerings[4] and did not form part of an anatomical museum. Therefore, there is a lot of evidence for the traditional interpretation of the neurofibromatosis statue as a votive offering, but little to support the view that it was a teaching aid.

The hypothesis that a certain group of the "grotesque" terracotta figures, which were found at Smyrna and various other centres of the Hellenistic world and to which this statue bears resemblance, served as teaching aids for the local medical schools[5,6] is itself questionable. The existence of pathological collections for teaching purposes would be alien to all that we know about ancient medical education. It would be surprising that Galen, who attended the medical school situated at Smyrna[7], should not mention a collection which would without doubt have been of enormous interest to him.

With regard to the style of the statuettes, the element of caricature often prevails over anatomical exactitude[8], which would be rather odd for teaching material. The only figures for which the 'teaching-aid' hypothesis may be considered are those showing acute problems amenable to surgical intervention, such as the scrotal enlargement or the acute dyspnoea due to a foreign body in the airways (Figs D 1203, D 1211-2 of ref. 8).

Chronic conditions of the skin were regarded as incurable by the methods of scientific medicine and therefore a domain of both popular and temple medicine[7]. How could the man who suffered from neurofibromatosis make it clearer to the god Asclepius what he wanted to be relieved from, than by a sculptural representation of the remarkable features of his disease?

Unfortunately, the statue has apparently disappeared from the Meyer-Steineg Collection at Jena University[9]. The complete survey of this collection, announced in ref. 9, might bring further evidence. But in my view, the statue was not an "early three-dimensional teaching aid" (ref. 1), but a propitiatory offering, given by a man who hoped to be cured by the god from his deforming condition.

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As planets go by

SIR — The search for protoplanetary disks around normal main-sequence stars like our Sun has gained wide interest because it offers the unique opportunity to study one of the preconditions for extraterrestrial life, namely the formation of planets. The discovery of a far-infrared excess around Vega, β Pictoris and a few other nearby stars[1] was interpreted as having originated from circumstellar dust grains with sizes of $\sim$50 μm, which is considerably larger than the constituents of the interstellar medium. This fits into a picture where circumstellar grains grow owing to collisions during their orbit. Because the wavelength of maximum emission of a dust grain increases with its size, observations at millimetre wavelengths can provide evidence for still larger particles. Therefore, we observed[2] some of these stars at $\lambda = 1.3$ mm in an 11-arcsec beam and derived grain-size distributions where particle diameters up to 1 cm were required to explain the data. Measurements in a 24-arcsec beam indicated that the 1.3-mm emission is extended on a scale of several 100 AU[3].

Stern *et al.*[4,5] have reported the detection of a 200-AU extended disk-like structure by mapping the area around Fomalhaut (α PsA) at 1.3 mm. Such a discovery would have been the second case (after β Pictoris) of a disk and the first direct evidence for a spatially resolved, flattened structure at 1.3 mm around a main-sequence star. The 1.3-mm contour map obtained by these authors, however, is noisy and also shows emission from outside the postulated disk area[5]. Similarly, the inferred 1.3-mm flux densities from the central 11 arcsec at the stellar position of 50 mJy (ref. 4) and 32±12 mJy (ref. 5) conflict with our result[2] of 7.3±2.2 mJy and with that of Mannings and Emerson[6], who found a 3σ upper limit of 24 mJy. For that reason we decided to clarify the situation by repeating the 1.3-mm observations on Fomalhaut.

Between 6 and 9 April 1994, we used the MPIfR seven-channel bolometer array[7] at the IRAM 30-m telescope and performed on–off measurements at the position of the star. The beam separation, provided by the wobbling secondary mirror was 32 arcsec. The weather was stable, with a zenith opacity between 0.08 and 0.13 at 1.3 mm; Uranus served as a calibrator. In this way we obtained a central (11 arcsec) flux density of 6.7±2.1 mJy, in perfect agreement with our previous result[2]. For the total flux in the six surrounding beams of the hexagonal array configuration we derive a 3σ upper limit of 26.4 mJy which is also consistent with our measurement of 21.0±2.5 mJy within a 24-arcsec area[3]; these data, however, are not compatible with the results of Stern *et al.*[5].

To investigate the extended emission claimed by Stern *et al.*[5], we performed three maps at the position of Fomalhaut, each 180×96 arcsec in size. The figure shows our final co-added map which is drawn for direct comparison with Stern *et al.*[5] over an identical field and with the same contour levels. Our map has a factor of two better sensitivity (1σ r.m.s. = 6.3 mJy) and shows no hint of extended emission. We therefore conclude that the disk claimed by Stern *et al.*[5] must be erroneous owing to observational artefacts. There is no significant dust emission from Fomalhaut above the limits given by us[2,3].

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■ See the correction by Stern *et al.* page 766.