In memory of
Arpad Janos Puzstai
INTRODUCTION

- Retired for 10 years
- The work I will show was completed between 1986 and 1998
- The slides I have chosen were selected from a heap of material cleared from my room in the Medical School in 2013
ARPAD FLED HUNGARY IN 1956

• He chose to come to Britain whereas his fellow refugees went to USA

• He completed a Ph.D. at the Lister and was appointed to Rowett

• I first met Arpad and Susan when they came to my lecture on Diabetogenesis at the Medical School in 1985
Arpad’s interests

- Arpad had access to the Budapest Opera House as a student
- He knew all Mozart’s operas by heart
- Arpad had an enormous collection of opera records
- These were boxed sets and included several historic recordings by Callas
- He had quality Hi Fi equipment and I was keen on good sound reproduction
Arpad’s hobbies

• He was a keen skier and usually skied in Glen Shee
• He drove there in his much loved Sunbeam Talbot car
• Arpad had an amazing collection of fine Whisky
• His favourites were the peaty Islay whiskies
Arpad’s “black hole” in Balaton

- Arpad and Susan naturally wanted a home in Hungary
- Balaton was their favoured location about 2 hr from Budapest
- They bought a beautiful villa that had been a winery
- Arpad called it a financial “black hole” but they grew vines and made wine
Arpad sought help with tomatoes

- Arpad and Susan asked me for help with localisation of tomato lectin in rat intestine
- Lectin binding sites were visualised with peroxidase.
- Arpad provided anti tomato lectin antibody
- Tomato lectin binding sites also localised with EM
- Arpad well pleased with results
Tomato lectin results

• Arpad appreciated the localisation results
• Invited to Arpad and Susan’s home at Ashley Park to discuss results and for a meal - this was the start of a long friendship - 35 years
• Also present was Dave Kilpatrick
Laboratory procedure for all experiments

• In the animal house, the group consisted of Arpad, Susan, myself and George
• Arpad cleaned the intestinal samples, my task was to orient each gut sample prior to fixation,
• Susan took many samples for analysis and George handled the animals and measured gut length and weight
• Samples always at same distance for all experiments
Arpad and PHA

• For many years Arpad had an interest in PHA
• My first collaborative experiment with his group was histology of rat gut
• PHA caused massive crypt cell production
• This cell growth could not be blocked by DFMO
Galanthus Nivalis lectin (GNA)

- Mannose binding lectin
- No binding sites present in normal rat
- Continuous feeding of GNA for 10 days induces binding
Mistletoe Lectins

- Mistletoe leaves and berries contain anti tumour properties
- The leaves contain at least 3 lectins
- The Biochemistry Dept. of Witten University extracted the lectins
- Asked Arpad to examine their biological effects
ML 1-3

- Feeding ML1 to rats produced crypt hyperplasia
- Arpad wanted collaborative experiments
- Prof. Ian Pryme (Bergen) agreed to mouse trial
- The model was injected lymphosarcome
ML effects on murine lymphosarcoma

- Murine lymphosarcoma maintained by Prof. Pryme
- Samples collected in Bergen by Arpad and Susan
- The growth of lymphosarcoma was attenuated by ML1
• ML induces gut hyperplasia that is partly responsible for reduction in growth of transplanted lymphosarcoma
• ML induces a lymphoid infiltrate associated with increased necrosis of lymphosarcoma
• ML caused total or subtotal disappearance of 5/14 transplanted lymphosarcomas.
Scot. Agri. Environment and Fisheries Dept

- SOAEFD recognised the complete lack of safety testing of GMOs
- Grant applications were invited
- Arpad’s proposal won out of 28 proposals
- The grant was for 1.6 million pounds
GM potatoes

• Ingested GM potatoes produce histological changes in bowel
• These changes were reported to Select Committee (Hansard)
• The Lancet published the changes - no histology
• Pusztai suggested that GM potatoes appeared to contain a growth factor
“Punish the messenger who brings bad news”

- Praise went to disgrace overnight on 12.08.98
- WHY?
- Daily Mail (2003) Sir Tony Blair is believed to have interceded at the suggestion of President Clinton
- The Director cancelled Arpad’s contract
- Pusztai was “gagged”
Was Arpad affected by this disgraceful outcome?

• Yes very much so!
• Arpad’s health was severely jeopardised
• He complained of symptoms consistent with IHD
• His pulse became irregular suggestive of atrial fibrillation
• Arpad and Susan eventually returned to Balaton
• While working on a GM manuscript, he became semi-conscious
• Admitted to hospital - dense stroke in left middle cerebral artery territory
Returned to Aberdeen with difficulty

- He had complete right hemiplegia
- Susan employed a carer - Katica very supportive
- When we met up several days after his return I was horrified by his lack of speech
- He could hear but could not reply
- We were able to go out for a meal or to a concert
Subsequent progress

- Arpad was very well looked after by Susan and Katica
- He never recovered power on his right side
- After a fall he was hospitalised for 12 weeks and got Covid
- He returned home after care in a local Nursing Home

- Despite Susan’s loving care he died in December 2021