



THE ROLE OF SMMES IN GROWING THE CANNABIS AND HEMP INDUSTRY IN SOUTH AFRICA

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science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



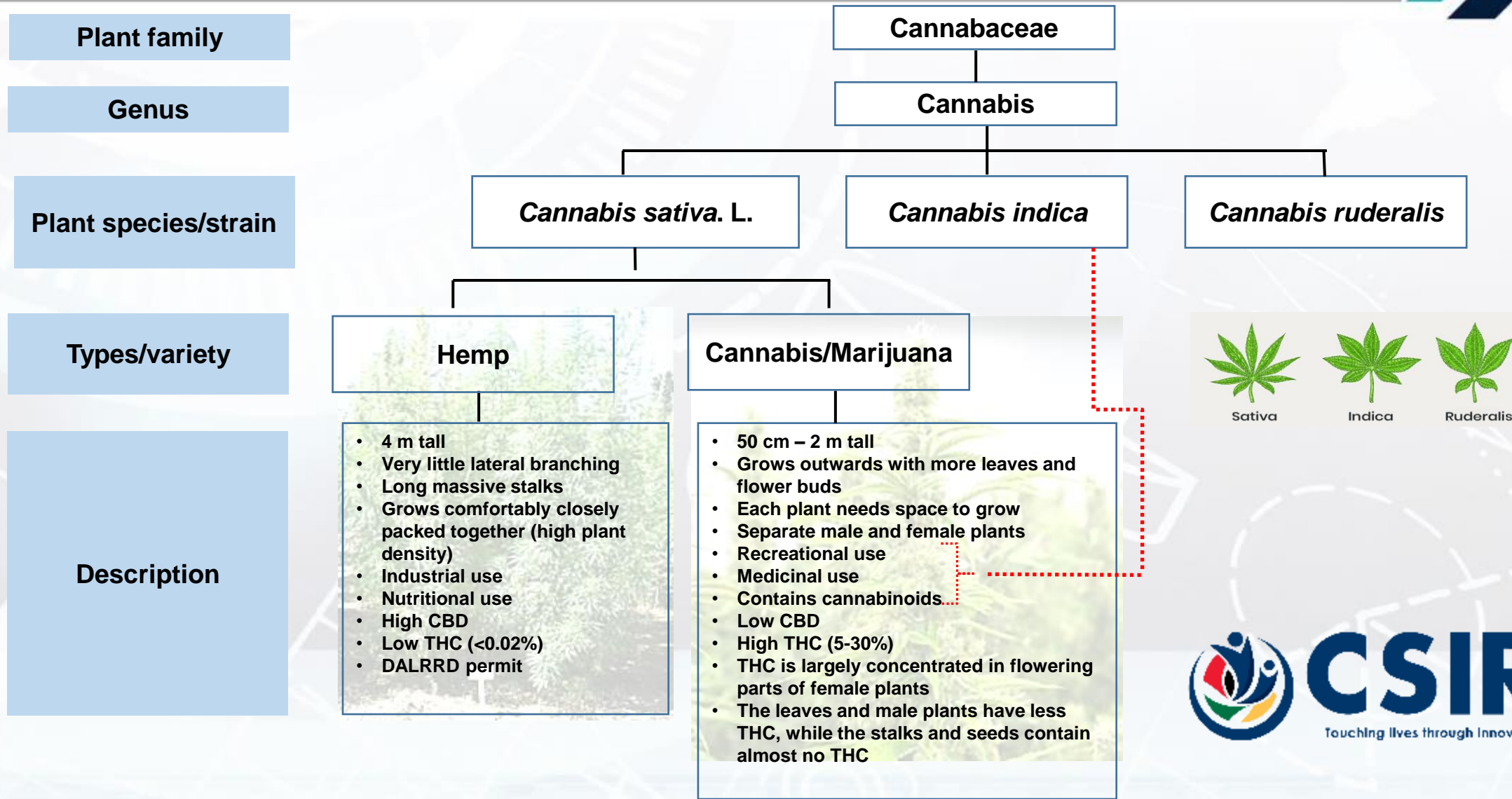
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Touching lives through innovation

Presentation Outline

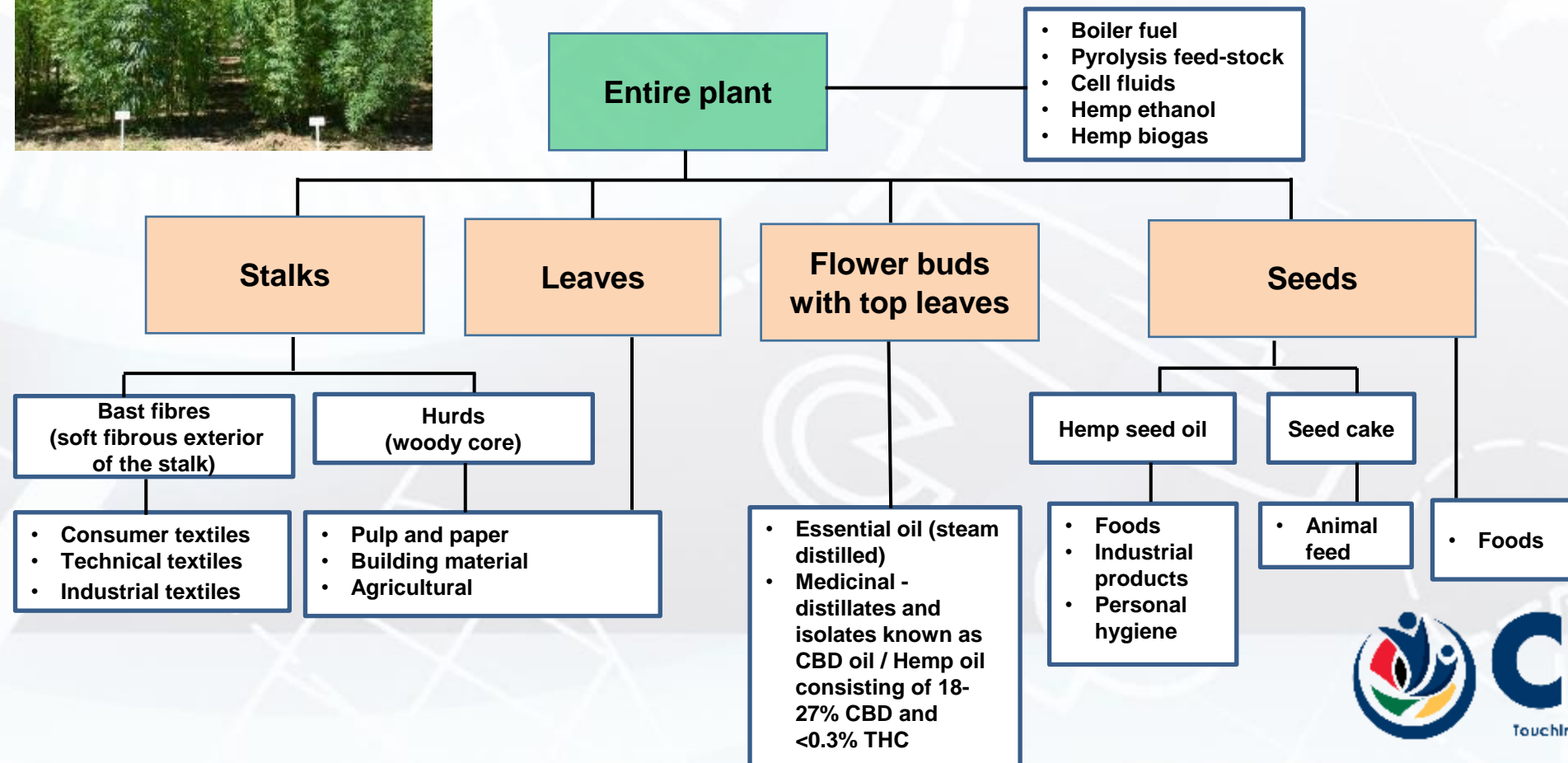


- Difference: Hemp and cannabis
- Economic importance of cannabis and hemp
- SA cannabis industry
- CSIR and partners' incubation programmes for SMMEs
- Process and outcome
- Way forward

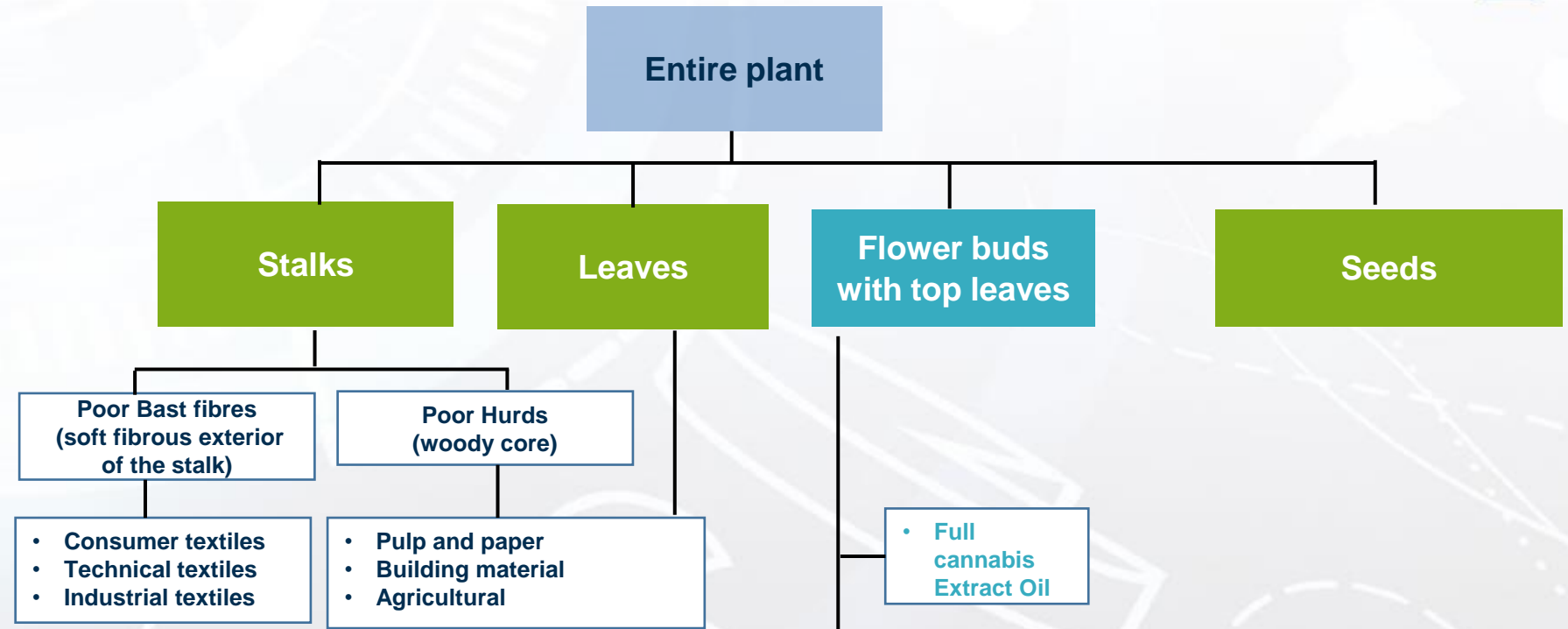
The family of cannabis and hemp



Uses of hemp



Uses of cannabis



Dominant use

- Recreational – smoked, vapourised, added to tea, etc.
- Extracts also prepared for recreational use
- Medicinal – distillates and isolates known as Marijuana oil:
 - 10-15% CBD
 - 50-60% THC

South African cannabis market



- Cannabis market in SA – USD 206.3 million (Prohibition Partners 2019)
- Projected to grow at CAGR of 31.1% to USD 2.4 billion at 2027 (NCMP)

Product Type

Product type	2017 (USD mil)	2027 (USD mil)	CAGR
Flowers	100.7	1 422	30.6%
Concentrates	42.1	705.4	32.8%
Others	16.2	235.9	31.0%

Compound

Product type	2017 (USD mil)	2027 (USD mil)	CAGR
THC	73.0	1 062.0	30.6%
CBD	62.6	1 010.0	32.8%
THC/CBD	23.4	290.7	31.0%

Application

Application	2017 (USD mil)	2027 (USD mil)	CAGR
Medical	107.2	1 527.6	30.7%
• Pain management	37.0	554.5	31.4%
• Neurological health	34.0	451.6	29.8%
• Mental health	25.3	372.6	31.1%
• Others (e.g. cancer)	10.9	148.9	30.1%
Recreational	51.7	835.7	32.3%

South African cannabis industry



- There are more than 900 000 small-scale farmers who have been growing cannabis for years
- Regulatory processes fixed will create over 130 000 jobs
- SA is the biggest market in Africa

Market growth is being driven by several factors

- Increasing acknowledgment of medicinal benefits
- Higher demand for cannabis in the treatment of various diseases
- Growing research and development and investment interest
- Investment interest
- Investments and listing of SA companies.



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Greek Zueni says the government needs to do more to support small-scale farmers to enable them compete in the international market

Challenges faced by South African SMMEs



- Permits and licenses: Regulatory
- Research and development: Quality, efficacy, pricing
- Branding: Markets
- Financing



Products in South African market



CBD infused bath bomb



Hemp infused alcohol



Energy drink



CBD infused beer



Cosmetic cream



CBD gummies



Coffee



Chocolate



Dog food



Ice cream

CSIR and Partners – Incubation programme with SMMEs



Objective

- Assist SMMEs to produce safe, quality and efficacious products that will meet international standards and sell in local and international markets
- Over 20 SMMEs from all over the country incubated at the CSIR
- Cosmetics, food, nutraceuticals to African traditional medicines
- SMMEs will also be trained on business and marketing skills

Support from



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CSIR and Partners Incubation Support to SMMEs



- Call for Expression of Interest – June 2022 – Over 150 SMMEs
- Short-listing of applicants – 30th July 2022
- Presentation of short-listed applicants to the Committee – 12 August 2022
- Short interview with applicants – 25th August 2022 (15 applicants)
- Contract and workplan with SMMEs – 2 September 2022
- Commencement of laboratory work – 30 October 2022
- Regular reporting of progress

Outcome and WAY FORWARD



- Produce safe, quality and efficacious products
- Upscaling of SMMEs – volumes
- Job creation
- Links with private and public financial institutions
- Introduction to local and international markets
- Assist in regularising these SMMEs
- Access to global cannabis networks

Extraction equipment – 100L capacity



Cleaning of Full Extract Cannabis Oil Extract (FECO)



Cleaned and Uncleaned Cannabis Samples, GG (678) 717.0 – 717.4. Samples were cleaned up using SampliQ, AOAC dispersive SPE method

HPLC Gradient separation of cannabis standards

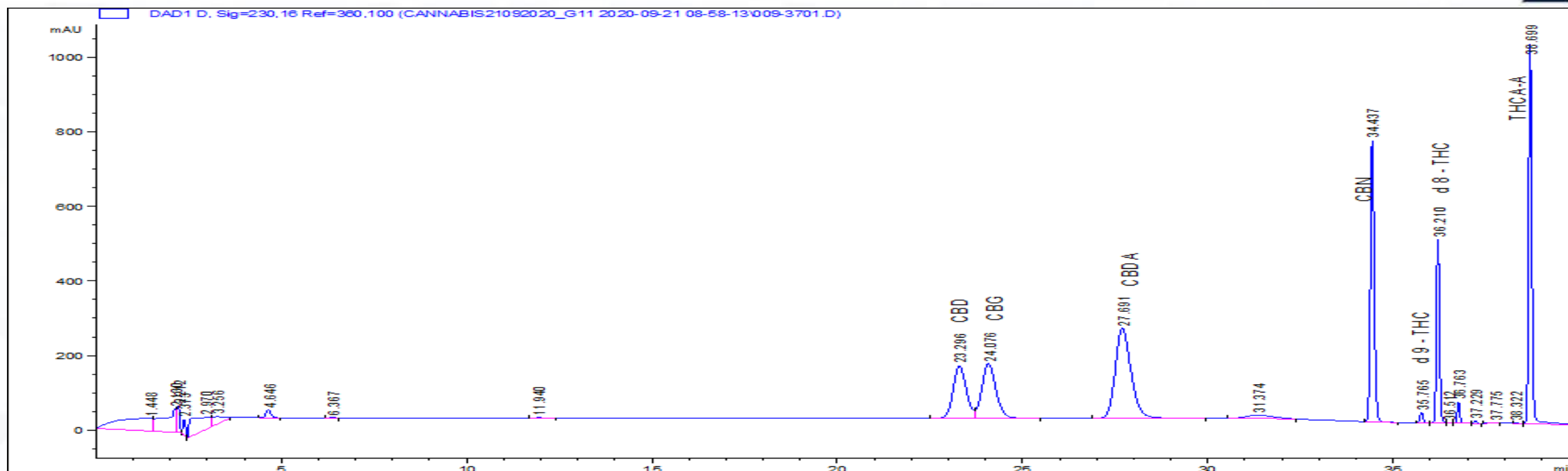


Figure 1: Gradient separation of 7 cannabinoids (CBD, CBG, CBDA, CBN, d8-THC, d9-THC and THCA-A, all at 0.01mg per ml by HPLC

Super Critical Fluid CO2 extraction equipment (CSIR/TUT)



FECO from Supercritical fluid CO₂ Extraction



CSIR unique facilities



The CSIR can provide technical product and process development support to small, medium and micro-sized enterprises in the cannabis sector, with the aim of creating and expanding biomanufacturing activity and associated job creation.



THANK YOU